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## The Role of Restrictiveness of Use in Determining Ethical and Legal Awareness of Unauthorized File Sharing

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# Journal of the Association for Information Systems

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Research Article

## The Role of Restrictiveness of Use in Determining Ethical and Legal Awareness of Unauthorized File Sharing

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### Abstract

*A host of different types of information goods are available for free download from illegal file sharing sites. As far as price is concerned, no company can compete against "free." Hence, managers, researchers, and policy makers are interested in determining factors other than price that might influence consumers' file sharing behavior. Moral consideration is one factor that might sway individuals to pay for files they could otherwise obtain for free. To help better understand how moral consideration works in the context of file sharing, this research examines how people form perceptions of the legality and ethicalness of downloading music files through file sharing. We propose that when people receive files in a more restrictive manner (e.g. streaming vs. downloading) they are less likely to recognize file sharing as being unethical or illegal. We conduct five studies to test our theory of restrictiveness. The results consistently indicate that consumers' perceptions of legality and ethicalness of file sharing are associated with restrictiveness of use. In particular, while file sharing with different levels of restrictiveness still transfers intellectual property from one individual to another, increased restrictiveness results in consumers being less likely to identify file sharing as being illegal or unethical. This in turn has a great impact on their actual engagement in the unauthorized file sharing activities. We find the relationships are significant even when controlling for several other elements such as gender, age, income, and prior knowledge about how and where to go on the internet to participate in file sharing.*

**Keywords:** MP3, File Sharing Downloading, Ethics, Public Policy, Intellectual Property, Restrictiveness, Property Rights, Marketing, Copyright, Deviance.

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\* Paul Pavlou was the accepting senior editor. This article was submitted on 5<sup>th</sup> August 2011 and went through two revisions.

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# The Role of Restrictiveness of Use in Determining Ethical and Legal Awareness of Unauthorized File Sharing

## 1. Introduction

Unauthorized file sharing is proving to be an eminent issue of our time (Clark, 2010; Gopal, Bharracharjee, & Sanders, 2006). Record companies estimate they are losing nearly one billion dollars yearly to unauthorized downloading of music (e.g., Bainwol & Sherman, 2007). Consequently, unauthorized consumer file sharing has gained a significant portion of the press and governmental hearings (e.g., Hitt, 2007; MGM v. Grokster 2005; WSJ, 2012). Many people obviously prefer to freely obtain rather than pay for music. However, most firms' business models still necessitate selling music files to consumers. Thus, there is significant interest in understanding other factors that might influence consumers' music file sharing behavior.

Moral considerations are one factor that might affect consumers' music file sharing behavior, assuming economics and morality work in tandem. A growing stream of research on consumer ethical decision making and property rights suggests that ethical and legal considerations are important determinants of file sharing (e.g., Cheng, Sims, & Teegen 1997; Chiou, Huang, & Lee 2005; D'Astous, Colbert, & Montpetit, 2005; Gopal, Sanders, Bhattacharjee, Agrawal, & Wagner, 2004; Kopp & Suter, 1998; Levin, Dato-on, & Rhee, 2004; Mittelstaedt & Mittelstaedt, 1997; Nunes, Hsee, & Weber, 2004; Rob & Waldfogel, 2006; Sims, Cheng, & Teegen, 1996; Tan, 2002; Thong & Yap, 1998). In general, this research has focused on the ethical and legal debate, asking why people are willing to make unethical or illegal decisions about intellectual property that they would not make about other kinds of property. We contribute to knowledge by suggesting that the problem often lies earlier in the cognition process. Before people can choose whether to behave ethically and legally, they must have cues that alert them that the decision has ethical content or legal implications (see, e.g., Coyle, Gould, & Gupta, 2009). In the absence of these cues, they use some other type of reasoning to make file sharing decisions.

In Section 2, we espouse theory to describe how typical people form perceptions of ethics and copyright law. In Section 3, we outline the use of focus groups and in-depth interviews with laypersons to identify one factor that precedes laypersons' deontological and teleological beliefs about both the legality and ethicalness of file sharing downloading: the restrictiveness of the use. In Sections 4, 5, and 6, we report three studies that test our theory. We find support for the major theory tenet that consumers' perceptions of legality and ethicalness appear to depend on factors beyond just actual current legal interpretation of copyright law. In Section 7, we discuss the implications of the research, offer suggestions for future research and practice, and, in Section 8, we conclude the paper.

## 2. Literature Review

Moral reasoning has been a topic of academic inquiry since at least Plato and Aristotle. It became an issue in MIS in the late 1960's with the ACM's code of professional conduct and the first federal prosecution for a U.S. computer crime in 1967 (Parker, 1968). Empirical analysis of ethical issues in MIS began a decade later when Vitell and Davis (1990) explored MIS professionals' perceptions of ethical behavior. Vitell and Davis found that, while there was opportunity for unethical behavior, MIS managers were generally perceived as behaving ethically. Later research combined the theory of reasoned action (see Fishbein & Ajzen, 1975) with various ethical scales to find that both individual and situational issues influence the intention to behave ethically (e.g., Banerjee, Cronan, & Jones, 1998), consistent with more general theories of ethical reasoning (e.g., Hunt & Hansen, 2007; Hunt & Vitell, 1986, 2006; Logsdon, Thompson, & Reid, 1994). Studies have found that unethical and/or illegal uses of technology are rampant, particularly in terms of unauthorized copying of information (e.g., Phukan & Dhillon, 2000).

A common element in these studies is the implicit assumption that subjects are using moral reasoning to make decisions with ethical content. That is, there is some presumption on the part of the researcher that (1) there is a morally correct and a morally incorrect behavior and (2) the resulting question of interest is why people would pursue the morally incorrect course of action. This is exemplified in Banerjee et al. (1998) who had subjects answer questions about scenarios: "The scenario also needed to involve an ethical issue with the action choice of the subject in the scenario clearly ethical or

unethical. Scenarios were excluded from use in the study when there was a significant split of the panel's opinions regarding whether the subjects acted ethically or unethically" (p. 38). The perspective of ethically correct action is only valid to the degree that decision makers realize they are making moral decisions because, as Jones (1991, p. 380) points out, "a person who fails to recognize a moral issue will fail to employ moral decision-making schemata and will make the decision according to other schemata, economic rationality, for example".

However, there is evidence to suggest that people do not always recognize moral issues. For example, Derry (1987) found that one-third of subjects reported never facing a moral conflict at work. Butterfield et al. (2000) found that subjects did not recognize harm to others when evaluating ethically ambiguous scenarios. The results were actually quite stunning: "only 8 percent of the respondents (11 out of 143) who were assigned to the condition where the protagonist's questionable action could lead to complete financial ruin for the competitor raised harm to the competitor as an issue of concern" (Butterfield, Trevin, & Weaver, 2000, p. 1004).

If people would not naturally recognize the ethical and legal dimensions of an issue, then assuming that they can recognize legal and ethical issues might lead to problematic data collection. For example, Coyle, Gould, & Gupta (2009) discuss the limitation of using the term "music piracy" versus "filesharing" or "downloading" in their study. They conclude, "It may be that [the term] music piracy *primed* some respondents to *think* of the phenomenon in ethical terms. This would be problematic in instances where respondents *did not* previously *consider* their downloading and/or filesharing of copyright-protected music as piracy" (Coyle et al., 2009, p. 1037, emphasis added).

To reconcile people's inability to respond appropriately to moral dilemmas, Rest (1986) proposes four steps to moral behavior: (1) recognizing moral issues, (2) making moral judgments, (3) establishing moral intent, and (4) implementing moral actions. Steps 2-4 have been well studied, but step 1 has largely been ignored not only in MIS, but in ethics research in general (Butterfield et al. 2000). We propose that the breakdown in the file sharing domain occurs because there are not strong signals to help potential file sharers identify the inherent moral issue.

The issue *vis-à-vis* legal decisions are very similar. Many people are not well informed about copyright law. Instead, they may be unknowingly violating the law when they share files. Phukan and Dhillon (2000) found that 7 percent of IT professionals at small companies did not know that it is "usually illegal to copy commercial software for uses other than backup or archival purposes" (p. 242). What's more, the researchers had to ask this question of IT professionals because "an earlier pilot study revealed that most respondents were largely unaware of IS ethics issues other than those involving copying of software and confidentiality of data" (Phukan & Dhillon, 2000, p. 240). The same study found that 90 percent of IT professionals did not read the licensing agreements that accompany commercial software. In the absence of strong signals about intellectual property issues, it is difficult for individuals to recognize them.

The important take away from this review is that to ask questions about how ethical and legal issues impact decision making of any type, and file sharing specifically, we must first ask whether people are identifying the issue as an ethical and legal issue. Then we must ascertain what leads a person to identify a file sharing as an ethical and legal issue.

### 3. Theory Development

This section theorizes what signals alert people to the fact that file sharing may be a legal or ethical issue. We started with focus groups. Thirty-four undergraduate students participated in one of two focus groups at different U.S. universities on consumer media file sharing exchanges in partial fulfillment of a course requirement. We incorporated the focus group findings into exploratory, in-depth laddering interviews of two dozen students, adopting a mean end theory approach. The purpose of the exploratory research was to develop a scale of file sharing restrictiveness from the consumers' view.

Focus group participants, for the most part, indicated that they were concerned with the legality and ethicalness of file sharing. In turn, they appeared to largely base their legal and ethical judgments on

a construct we refer to as “restrictiveness”. The focus group and depth interview participants generally felt that (1) the less time they have a file, the more legal and ethical it is to participate in file sharing. Similarly, they feel that (2) shared files bound to a specific computer are more legal and ethical than shared files that are distributable over several computers. Finally, (3) making personal use of the files is more legal and ethical than allowing others to use the files.

Based on these findings, we theorized that restrictiveness plays an important role in people’s perceptions of both the legality and the ethicality of file sharing. Restrictiveness is a measure of the range of activities that one might engage in with a file (Lerner & Tirole, 2005). Restrictiveness has been shown to play an important role in the legal issues surrounding copyright (Lerner & Tirole, 2005), and we argue that it also does so for ethical issues. People equate restrictiveness in time, space, and control with the legality and ethicalness of file sharing.

After probing beyond the obvious, a very interesting pattern began to emerge. Drawing on this exploratory research, we created a scale of restrictiveness. Levels were distinguished by the amount of control the file sharer has over the shared file, or the different kinds of uses and further distribution the file was available for, from streaming to burning CDs for others. We recognize, of course, that additional levels likely exist beyond those presented here.

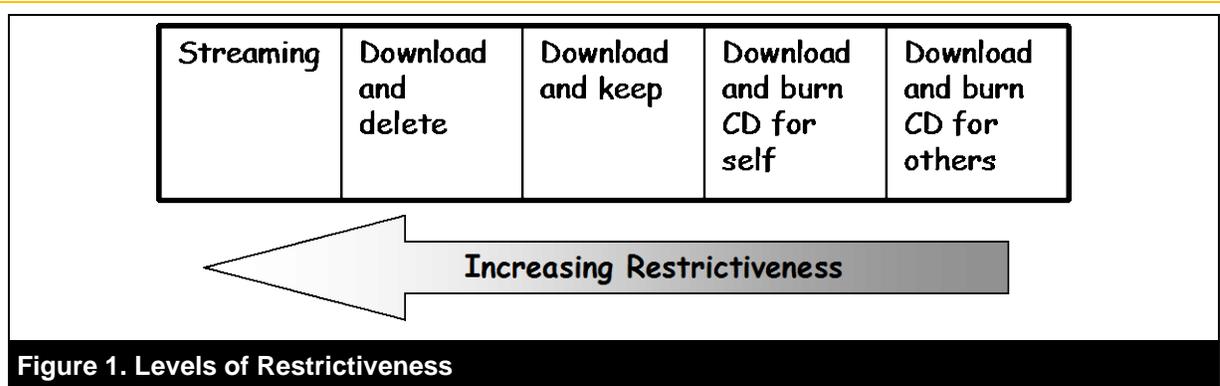
“Streaming” was the most restrictive level we tested. In streaming, the typical person only has the file for the time it is being played. In this sense, it is owned instantaneously, and then ownership reverts. Moreover, a stream is limited to the specific computer (or at least IP address) that is receiving the stream. Finally, streaming offers almost no control of the file, and, in fact, the streaming source can stop the stream at any point.

The second level of restrictiveness was “download and delete”. This means that a typical person downloads the file to his or her computer, samples it a few times, then deletes it. The typical person thus has possession of the file for some time, but the time is limited. Similarly, the file is bound to the specific computer on which it is downloaded. There are then more control rights because the typical person can choose how to store it and when to use and delete it.

The third level of restrictiveness was “download and keep”. This means the typical person downloads the file with no intention of ever deleting it. Obviously, this results in a much longer temporal possession of the file. It is still bound to a specific computer and the level of control remains the same, but the duration of control increases.

The fourth level, added after the first study, was “download and burn to a CD for self”. In this case, consumers probably view the duration of ownership as being longer than download and keep because they perceive CDs as being more durable than computer hard drives. Even if the intention is to keep, hard drives are subject to viruses, dropping, heat, accidental deletion, and crashing. If you drop a CD from a great enough height or subject it to great enough heat or put it near industrial lasers, you can destroy it, but you actually have to try, whereas hard drives are relatively fragile. CDs also have special portability. Consumers can play them in the computer that burned them, and in other places as well, such as a home, car stereo, or friend’s house. Finally, the consumer’s control over the file is not lessened and may be increased in two ways. Control can be exercised over more time and across more space. Control can also be increased by the simple act of assigning a song to a collection that is on a CD. Rather than a song being a singular thing, it may now be part of a compilation. The result is increased artistic control. It is not necessary that artistic control be increased; so long as it is not decreased, a burnt CD is less restrictive than an MP3 on a particular computer.

The last category of restrictiveness was “download and burn CD for others”. This is like burning a CD for oneself, but is an even greater exercise of control because the typical person has now not only appropriated the property rights of “use”, but has also appropriated the property right of “excludability”. In other words, the typical person has chosen not only to exercise control over their own copy of the song, but also to exercise control over someone else’s ability to have a copy of the song. “Others” could include one friend (as we test in Studies 1 through 3), or up to 100 friends (as we examine in Study 4) or more. In review, the five discussed levels of restrictiveness are depicted in Figure 1.



To test these exploratory research findings for validity and reliability, we conducted five subsequent studies, presented in Sections 4, 5, 6, and the appendices, which provide quantitative corroboration of each prior study's findings and, at the same time, provide further elaboration of the underlying relationships and rationale through additional qualitative data. Johnson and Onwuegbuzie (2004, pp. 18-19) point out that "adding qualitative interviews to experiments as a manipulation check and perhaps as a way to discuss directly the issues under investigation and tap into participants' perspectives and meanings will help avoid some potential problems with the experimental method". Consistent with the dialectic alternative, the mixed-methods research design employed here attempts to "utilize their competing insights within a single analysis" with the goal of synthesis "in a form of understanding that goes beyond the original originations" (Hudson and Ozanne 1988, p. 519). Thus, we use a within-stage, mixed-model research design in each of the studies (e.g., Cresswell, 2003; Hudson & Ozanne, 1988; Johnson & Onwuegbuzie, 2004; Tashakkori & Teddlie, 1998). The mixed-methods design permits the generation and explanation of insights into how consumers view the property rights transfer of seemingly intangible market offerings. Other prior research on unauthorized file sharing exchanges used variations of the mixed-methods approach (e.g., Levin, Dato-on, & Rhee, 2004).

### 3.1. How Restrictiveness Triggers Ethical Reasoning

Jones' (1991) issue contingent model suggests that moral intensity is a key trigger in causing people to recognize moral situations. Moral intensity is an aggregate measure of the characteristics of the moral issue. Moral intensity has six components: magnitude of consequences, social consensus, probability of effect, temporal immediacy, proximity, and concentration of effect. In the file sharing context, probability of effect, temporal immediacy, proximity, and concentration of effect are constant. This file is shared with a probability of one, it is shared immediately, the impacts are remote, and the effect is concentrated on a single entity: the copyright holder. Social consensus about the appropriateness of file sharing is a very noisy variable.

Thus, a main lever for variance in moral intensity in the file sharing context is the magnitude of the consequences, and those are well tracked by restrictiveness. The more restrictive the use of the item, the less valuable the item is (Lerner & Tirole, 2005), and hence the less harm that is being done to the erstwhile owner of the item. As indicated in the five discussed categories of restrictiveness of use, the restrictiveness can include either appropriation of use or excludability. Thus, as restrictiveness increases, moral intensity should decrease and people will be less likely to recognize file sharing as an ethical issue. Stated formally:

**H1:** *An increase in the restrictedness of use increases the likelihood that consumers believe a file sharing scenario is ethical.*

### 3.2. How Restrictiveness Triggers Legal Reasoning

We now turn to explaining how people invoke legal reasoning with respect to file sharing. Again, we propose that the antecedent is restrictiveness. However, in this case we argue from the point of legal scholarship. There are great parallels between legal and ethical reasoning, which makes sense because law and morality should generally influence one another.

The Copyright Act of 1976, 17 U.S.C. defines copyright and its limits. Chapter 1, § 107, states that “the fair use of a copyrighted work... is not an infringement of copyright”. Then it specifies four factors for courts to consider when trying to determine whether a particular use is fair: “(1) the purpose and character of the use, including whether such use is of a commercial nature or is for nonprofit educational purposes; (2) the nature of the copyrighted work; (3) the amount and substantiality of the portion used in relation to the copyrighted work as a whole; and (4) the effect of the use upon the potential market for or value of the copyrighted work”.

This clause establishes that there are exceptions to the exclusive right of copyright holders. These exceptions have to be taken case-by-case, usually on the basis of prior court decisions. Judges and juries have not always concluded that file sharing, even of copyrighted material, is illegal depending on the specifics of the case. For example, in *Perfect 10 v. Google* (487 F.3d 701 (9th Cir 2007)) the court affirmed that, “Perfect 10 has succeeded in showing it would prevail in its prima facie case that Google’s thumbnail images infringe Perfect 10’s display rights” (p. 15464)<sup>1</sup>. However, the court then ruled that Google’s use of the copyrighted images was fair use. Thus, even though it was established that Google was downloading and distributing copies of Perfect 10’s copyrighted images without Perfect 10’s consent, the courts found that this was not illegal because Google was not doing it to sell images and because Google transformed the images into thumbnails. Thus, the sharing of other people’s copyrighted files is only illegal sometimes.

Again, we find a threshold argument that suggests that the use of the file will have to surpass some threshold to be recognized as illegal; the threshold may—or may not—be written into current law. We propose that restrictiveness of use is an appropriate construct on which to base this threshold. Google’s sharing of images was not illegal because of the restrictiveness of the use Google was placing on them. Google limited the size of the images and did not try to sell the images. Fair use is determined in part by the effect on the potential market for the product, which decreases in restrictiveness. Thus, the more restrictive the use, the more likely it is to be fair use, and hence not illegal.

In addition, the use of restrictiveness has the added benefit of tying legal and ethical norms together. It reduces the cognitive burden on the potential file sharer by allowing him or her to make two decisions simultaneously. That parsimony is good for the decision maker, it is good for us as modelers of the behavior, and it matches what our focus group participants claimed to believe. Stated formally, we propose:

**H2:** *An increase in the restrictedness of use increases the likelihood that consumers believe a file sharing scenario is legal.*

Before proceeding, we note that all the different levels of restrictiveness presented in this research are equally illegal according to United States Code Title 17 Section 501: “Anyone who violates any of the exclusive rights of the copyright owner ... is an infringer of the copyright or right of the author, as the case may be”. In Section 504.c.1, the USC states that the “copyright owner may elect, at any time before final judgment is rendered, to recover, instead of actual damages and profits, an award of statutory damages ... in a sum of not less than \$750”. As the actual damages from copying a song is the retail price, which is usually less than \$5, statutory damages are almost always awarded. For the U.S. courts, legality is not a function of restrictiveness for music downloads. Examples include the recent action by the U.S. Government to shut down dozens of streaming music and video websites (Los Angeles Times, 2010), and the German court ruling that Google must filter streaming YouTube videos for copyright abuse (O’Brien, 2012). As a result, according to our logic, people are making their judgments of legality based on something that is completely irrelevant.

<sup>1</sup> Online at: <http://www.eff.org/files/filenode/Perfect10vGoogle9thCir12-2007.pdf>

### 3.3. Control Variables

#### 3.3.1. Gender

Research has found that, in general, women are more ethically sensitive than men (e.g., Glover, Bumpus, Sharp, & Munchus, 2002; White, 1999). If women are more ethically sensitive, then they are more likely to perceive moral content in the file sharing scenarios. As a result, they would be more likely to invoke moral reasoning, resulting in the ability to perceive a situation involving the receiving of copyrighted material from an unauthorized source to be unethical or illegal. Thus, a greater percentage of women (versus men) might find the situation to be unethical or illegal because they are more likely to engage (or engage in more) ethical reasoning.

#### 3.3.2. Age

Research has proposed that age is positively related to consumers' positive moral development (e.g., Gopal et al., 2004; Rawwas & Singhapakdi, 1998; Ruegger & King, 1992). Thus, older individuals are more likely to recognize moral content, and thus engage in moral reasoning. Engagement in moral reasoning leads to the increased possibility of perceiving the file sharing scenario to be unethical or illegal.

#### 3.3.3. Other Control Variables

Many control variables can exist. Here, we include mention of two possible control variables: income and knowledge related to file sharing. Budget constraint as seen through income is an important factor. Economically, people with less income will more likely consider unauthorized file sharing in the first place, which might induce them to believe the file sharing is legal.

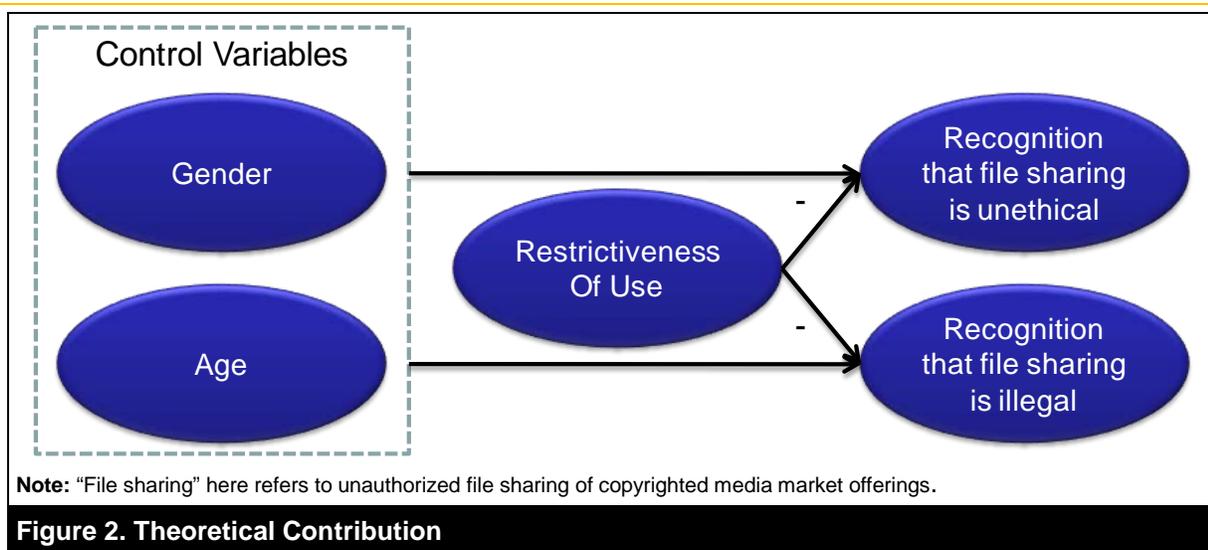
As mentioned in the introduction, there is the potential for primed or induced effects in studies on file sharing depending on which terms are used (e.g., piracy, illegal sharing versus unauthorized sharing, etc)<sup>2</sup>. Asking respondents about their actual past file sharing engagement would control for any priming/inducement. However, such information is difficult to acquire. However, respondents' knowledge about where and how to share files is closely related to their ability to participate, and thus a proxy for past participation. For example, inexperienced users likely do not even know where to download the unauthorized shared files. Related knowledge control variables could include knowledge related to how to use or locate "stuff" on the Internet in general, and legal knowledge on intellectual property or copyright laws.

### 3.4. Overall Model

We have argued that restrictiveness of use affects both the moral intensity and beliefs about fair use in a given episode of file sharing. Therefore, increased restrictiveness makes it less likely that that people will believe file sharing to be illegal or unethical. This logic allows us to frame our contribution in Figure 2. We test this theoretical model in Study 1. By extension, we test the impact of recognition of the unethical nature and illegality (from the model) on actual downloading behavior/use in Study 2. Study 3 includes several additional control variables and a between-sample experimental design using interval scaling of the ethicalness and legality variables.

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<sup>2</sup> We thank the anonymous reviewer who suggested that while we do not used keywords such as "piracy", asking respondents whether the behavior is legal still could induce them to think about the issue of piracy. Thus, it is possible that, when subjects actually shared the file, they were not thinking about the moral issues, but, when they answered the survey question, they were alerted to the moral dimensions of file sharing.



#### 4. Study 1: Appropriation of Use Restrictiveness and Ethical/Legal Perceptions

In Study 1, the focus was to test the path between appropriation of restrictiveness (i.e., consumers having less control over property rights) and perceptions of ethicalness (H1) and legality (H2). In particular, we examined how the scale of restrictiveness influences consumers' perception of ethicalness and legality. We adopted the simplest, nominal form: ethical versus not ethical, legal versus not legal. The scales were re-examined in interval form in study 3 and Appendices 2 and 3. The restrictiveness hypothesis implies that each increasing level of restrictiveness will have a higher propensity toward rating the scenario as ethical or legal. That is, respondents, on average, view less restrictive planned use as being less ethical or legal.

##### 4.1. Method

Respondents comprised 473 consumers from 20 states in the United States (out of approximately 600 invited, for a 77% response rate) who completed the within-sample experimental design study. Respondents were part of an online survey panel that is a representative sample of American adults. We acquired access to them through Qualtrics.com. Respondents were 25 percent ( $n = 118$ ) aged 18 to 24, 13 percent ( $n = 61$ ) aged 26 to 34, 12 percent ( $n = 57$ ) aged 35 to 44, 33 percent ( $n = 154$ ) aged 45 to 54, 12 percent ( $n = 55$ ) aged 55 to 64, and 6 percent ( $n = 28$ ) aged 65 and plus; the sample contained approximately the same number of male and female respondents.

To decrease respondent concerns about social desirability and reporting their behavior, respondents were told: "There are many choices available to consumers. Please indicate your personal viewpoint on whether each of the following potential media alternatives is ethical and/or legal. All responses are anonymous and confidential". The order of scenarios was randomized across different web pages to minimize the possibility of order effects.

We chose a within-subject experimental design in Study 1 given our focus on understanding how consumers' perception changes across scenarios. (A replication [robustness check] of Study 1 using separate interval scale dependent variables is located in Appendix 2.) The descriptions of the experimental conditions were as follows.

*Scenario 1: Streaming (i.e., listening to online) a song several times from a website (such as Bittorrent, Morpheus, Gnutella or KaZaA) not affiliated with the producer/record label.*

*Scenario 2: Downloading a song from a website (such as Bittorrent, Morpheus, Gnutella or KaZaA) not affiliated with the producer/record label, and deleting it after listening to it several times.*

*Scenario 3: Downloading a song from a website (such as Bittorrent, Morpheus, Gnutella or KaZaA) not affiliated with the producer/record label, and keeping it on your computer after listening to it.*

*Scenario 4: Downloading a song from a website (such as Bittorrent, Morpheus, Gnutella or KaZaA) not affiliated with the producer/record label, keeping it on your computer after listening to it, and making a CD copy for yourself to use.*

*Scenario 5: Downloading a song from a website (such as Bittorrent, Morpheus, Gnutella or KaZaA) not affiliated with the producer/record label, keeping it on your computer after listening to it, and making a CD copy for friends to use.*

For measurement, respondents rated whether each of the five scenarios was (1) ethical and legal, (2) ethical but not legal, (3) not ethical but legal, or (4) not ethical and not legal (i.e., dependent variables). Respondents indicating different answers to the scenarios would subsequently receive a series of free response questions asking why they answered the scenarios differently. Respondents that indicated consistent answers were branched to different questions.

Control variables included measurement of gender (male/female) and age (using 10-year bracket categories), file sharing service (e.g., Bittorrent), and price (i.e., free). The scenarios used the same unauthorized file sharing service examples (e.g., “such as Bittorrent, Morpheus, Gnutella or KaZaA”) to prevent participants from assuming that different scenarios might occur with different file sharing services (e.g., an authorized service such as Apple’s iTunes for one scenario and an unauthorized service such as Bittorrent for another). Specifying a list of examples can sometimes increase the likelihood of containment bias in research; however, because the focus here is on differences between scenarios, not providing a context would more likely create a “fatal” bias in the research. We note that, even if a few respondents felt differently about the example list in the scenarios and other unauthorized file sharing sources, the potential difference should be consistent across the scenarios—which is the focus of the research. And the specified file sharing servers all normally distribute content for free, and thus price is inherently held constant at zero.

## 4.2. Results and Discussion

Given binary-dependent variables (i.e., not ethical vs. ethical, not legal vs. legal), we first used binary logistic regression; the model indicates adequate fit for the ethical (Hosmer statistic = .472) and legal (Hosmer statistic = .930) categorical dependent variables (Hosmer & Lemeshow, 2000) (see Table 1). The ratio-change in the odds of believing the scenario to be ethical for a one-level increase in restrictiveness was equal to 1.56. Thus, the results support H1. The corresponding ratio-change for legal was 1.44, which supports H2.

**Table 1. Logistic Regression Supports Relationship Between Restrictiveness and H1. Ethicalness, H2. Legality of Use**

	Dependent = = Ethical					Dependent = = Legal				
	B	S.E.	Wald	Sig.	Exp(B)	B	S.E.	Wald	Sig.	Exp(B)
Constant	-2.36	0.16	207.53	<0.01	0.05	-0.69	0.15	22.63	<0.01	0.50
Restrictiveness	0.45	0.03	169.87	<0.01	1.56	0.37	0.03	123.76	<0.01	1.44
Gender (Female)	-0.32	0.09	11.55	<0.01	0.73	-0.55	0.09	37.07	<0.01	0.58
Age	-0.12	0.03	6.03	<0.01	0.93	-0.23	0.03	63.74	<0.01	0.79

**Note:** Exp(B) represents the ratio-change in the odds of the event of interest for a one-unit change in the predictor. Pseudo R square values are 0.16 for ethicalness and 0.13 for legality, which equate to Cohen d scores of 0.32 and 0.22 which are regarded as significant small effects. For the dependent variables, 0 = not ethical, 1 = ethical or 0 = not legal, 1 = legal. For restrictiveness, 5 = streaming, 4 = download and delete after listening, 3 = download and keep on computer after listening, 2 = download, keep, and make CD for self, 1 = download, keep, and make CD for a friend. For Gender, 0 = male, 1 = female. For age, 1 = 18-24, 2 = 25-34, 3 = 35-44, 4 = 45-54, 5 = 55-64, 6 = 65+.

To provide a more-detailed analysis of the change between scenarios, we used a repeated-measures linear mixed model to account for the gender covariate (with study scenario as a fixed factor). The repeated measures model showed a main effect for the restrictiveness level of the experimental design scenarios for ethicalness ( $M_{\text{Scenario1}} = .55$ ,  $M_{\text{Scenario2}} = .38$ ,  $M_{\text{Scenario3}} = .28$ ,  $M_{\text{Scenario4}} = .23$ ,  $M_{\text{Scenario5}} = .17$ ,  $F(6, 2344) = 39.1$ ,  $p < .001$ ) and legality ( $M_{\text{Scenario1}} = .50$ ,  $M_{\text{Scenario2}} = .48$ ,  $M_{\text{Scenario3}} = .34$ ,  $M_{\text{Scenario4}} = .28$ ,  $M_{\text{Scenario5}} = .21$ ,  $F(6, 2344) = 41.4$ ,  $p < .001$ ). The results provide support for the two restrictiveness hypotheses: there was a strong, negative relationship between the level of restrictiveness of planned use and the perceived ethicalness (H1) and legality (H2) of participating in unauthorized exchanges (see Table 2). Analysis of variance of the average change in each person's perceptions between each scenario in Table 2 indicates the differences were significant.

**Table 2. Expanded Test of the Restrictiveness Hypothesis**

Scenarios and covariates	Dependent = = Ethical			Dependent = = Legal		
	$\mu$	SE $\mu$	Sig.	$\mu$	SE $\mu$	P
1. Streaming	0.38	0.03	<0.001	0.29	0.03	<0.001
2. Download and delete	0.22	0.03	<0.001	0.27	0.03	<0.001
3. Download and keep	0.12	0.03	<0.001	0.13	0.03	<0.001
4. Keep and burn CD for self	0.07	0.03	0.024	0.07	0.03	<0.01
Gender covariate <i>direct effect</i>	-0.06	0.01	<0.001	-0.12	0.02	<0.001
Age covariate <i>direct effect</i>	-0.24	0.02	<0.001	-0.05	0.01	<0.001

**Note:** "Scenario 5. Keep and burn CD for others" is used as the referent. "Age" (i.e., generational cohort group) is a 6 point scale, where 1 = 18 to 25 years old, 2 = 25 to 34 years, 3 = 35 to 44 years, 4 = 45 to 54 years, 5 = 55 to 64 years, and 6 = 65 and older. For "Gender," 0 = Male, 1 = Female. Thus, a negative estimate for the gender variable is interpreted as a lower dependent variable score for women in comparison to men (i.e., women report the activities as less ethical and legal, on average), and is consistent with extant literature. Partial eta square scores were .31 for ethicalness and .25 for legality.

As to the gender variable, the ratio-change in the odds of believing the scenario to be ethical (-.32) or legal (-.55) for females (vs. males) in Table 1, as well as the results in Tables 2 and 3, all suggest that females, on average, are more ethically sensitive than males. The results are consistent with prior research on the ethical sensitivity of women versus men in general (e.g., Glover et al., 2002; White, 1999). That is, as a group, women consistently rated the unauthorized downloading scenarios as less legal and less ethical than the men as a group did (i.e., a greater percentage of women rated them as illegal or unethical than the corresponding percentages of men).

As to the age variable, we find that older consumers, on average, more often rated the scenarios as not ethical or not legal. Consistent with the literature (e.g., Gopal et al., 2004; Rawwas & Singhapakdim 1998; Ruegger & King, 1992), our results suggest that older consumers appear to be more ethically sensitive than younger consumers in their evaluation of the scenarios (see Table 1). Still, a fair number of women and older consumers indicated a number of the scenarios to be ethical or legal. In short, we note the significance of the restrictiveness controlling for age and gender variables.

### 4.3. Open-Ended Responses

Respondents who indicated a difference in legality and/or ethicalness between the three experimental scenarios were later asked in the online survey (using branching based on the combination of their answers to prior questions): "You mentioned that **streaming a song (online)** and **downloading and keeping a song** (each from sites like KaZaA) are different (ethically and/or legally). What is the difference due to, in your opinion?"

Content analysis of free responses from these participants indicates that the overriding reason for the difference in responses is the physical nature of the scenario. People seem to equate restrictiveness with ethicalness and legality, which the following responses show:

*Streaming does not give the user the ability to "possess" the intellectual property, thus negating any implications of ownership (Participant #354).*

*Merely listening to a song is not unethical, it's the act of intentionally keeping it without authority that is unethical and illegal (Participant #248).*

*Streaming a song is just listening to it. Downloading it is taking it and having it for one's own personal use. Downloading music from sites like KaZaA or Limewire is considered by the law as stealing (Participant #284).*

*Listening is about the same as hearing it on the radio. Keeping it you can make CDs (Participant #662).*

Thus—and regardless of current copyright law or literature—subjects with similar personal moral development assigned different ethical and legal dimensions to different stages of perceived property rights transfer. That is, the perceived restrictiveness of a transfer (i.e., streaming a song online versus listening to a tangible CD) affected consumers' ethical and legal stances. This result suggests that many consumers may feel they are acting consistently with their ethical and legal views when they participate in forms of unauthorized file sharing because they do not “see” a “physical” transfer of property rights. Indeed, many consumers seem to believe in the hypernorm “thou shalt not steal” (see Donaldson & Dunfee, 1999), but participate in unauthorized file sharing activities because they do not perceive them as not stealing.

## 5. Study 2: Ethical/Legal Perceptions and Unauthorized File Sharing Downloading Behavior

Study 1 suggests that people use restrictiveness to make judgments about the legality and ethicalness of file sharing. Study 2 re-examined the relationship using a random assignment between-subject design. Study 2 also examined whether perceptions of ethicalness and legality influence actual participation in unauthorized peer-to-peer music file sharing.

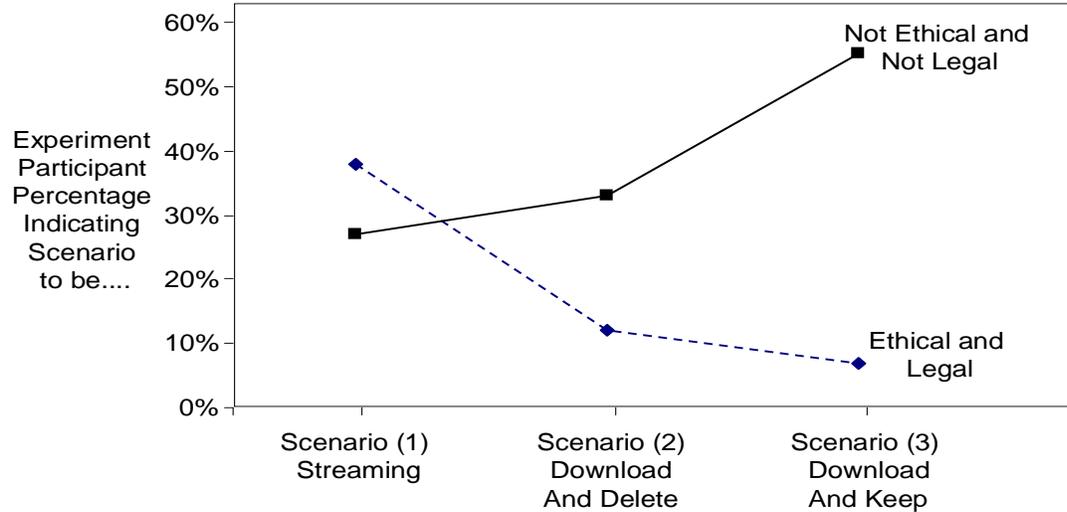
### 5.1. Method

Participants comprised 196 (out of 211, for a 93% response rate) students at a major U.S. Midwestern university who were randomly assigned to a three-level (restrictiveness: streaming, download and delete, download and keep) between-subject experimental design. College consumers are ideal for this study because research and industry reports indicate that college students are responsible for over 25 percent of unauthorized music media file sharing downloads, or 1.3 billion unauthorized music downloads in 2006 alone (Bainwol & Sherman, 2007). Indeed, the number of unauthorized downloads has increased since then (David, 2010). As a result, the university setting has become a target for the legal focus on unauthorized consumer file sharing.

Apart from the differences noted in this section, the process and instrument scenarios were identical to those in Study 1. Participants were asked how many times they had participated in the file sharing scenarios over the past 12 months. A categorical scale was used, given that most consumers cannot (or prefer not to) report exact downloading figures from memory. The actual distribution of responses across the categories was as follows: zero = 58.1 percent; 1 to 10 songs = 13 percent; 11 to 25 = 9.3 percent; 26 to 50 = 6.3 percent; 51 to 100 = 3.4 percent; 101 to 200 = 8.1 percent; 201 to 500 = 0.3 percent; 501 to 1,000 = 0.1 percent; 1,001 to 5,000 = 0.1 percent; 5,001 to 10,000 = 0 percent; more than 10,000 = 1.3 percent. The participation scores were then collapsed into a 0/1 (none/some) score for simplicity (as used in results reported in Table 5).

### 5.2. Results and Discussion

As highlighted in Figure 3 (and detailed in Table 3), there was a substantial shift in ethicalness/legality perception (of the same unauthorized file sharing exchanges) between the three restrictiveness scenarios.



Note: For other possible combinations, see percentages in Table 4.

**Figure 3. Theoretical Model Test Indicates Shift between Scenarios**

Chi square analysis of the results shown in Table 3 indicates further support for the restrictiveness hypotheses. Effect size differences were significant between scenarios 2 and 1 ( $\chi^2(3) = 24.7, p < .001$ ), scenarios 3 and 2 ( $\chi^2(3) = 13.9, p < .001$ ), and scenarios 3 and 1 ( $\chi^2(3) = 31.3, p < .001$ ) (see Table 3).

**Table 3. Between-Subject Study Restrictiveness Holds True**

Percent of participants indicating the condition scenario to be...	Scenario 1. Streaming (%)	Scenario 2. Download and delete (%)	Scenario 3. Download and keep (%)
Ethical and legal	38	12	7
Not ethical but legal	15	10	14
Ethical but not legal	20	45	34
Not ethical and not legal	27	33	55

Note: Data are in percentages for each of the three samples/conditions. The combined N = 367 of the between-sample experimental design. As to the significance in effect size differences between scenarios, for Scenarios 2 and 1,  $\chi^2(3) = 24.7, p < .001$ . For Scenarios 3 and 2,  $\chi^2(3) = 13.9, p < .001$ . For Scenarios 3 and 1,  $\chi^2(3) = 31.3, p < .001$ .

Regarding participation in unauthorized downloading of copyrighted material, the percentages of past-reported and future-predicted participation show a strong, positive association between the restrictiveness of the scenario, the ethical/legal perceptions, and participation, which Table 4 shows. While there is some variance, the table presents an interesting relationship. Participation levels were highest for participants indicating all of the experimental designs to be both ethical and legal, and lowest for participants indicating all of the experimental designs to be both not ethical and not legal. Consider Group 4, for example, in which the ethical/legal perception changed from the first experimental design (streaming) to the third experimental design (downloading and keeping). At the same time that there was a change in perception for Group 4, there was also a change in indicated participation (see Table 4).

**Table 4. Ethicalness and Legality as Predictors of File Sharing**

Indicated perceptions across scenarios		N	Indicated participation in*	
Streaming online	Download and keep		Streaming online (%)	Download and keep (%)
1. Ethical and legal	Ethical and legal	(38)	63	53
2. Ethical and legal	Not ethical or not legal	(43)	44	35
3. Not ethical, but legal	Not ethical, but legal	(33)	24	23
4. Not ethical, but legal	Not ethical, not legal	(15)	53	33
5. Ethical, but not legal	Ethical, but not legal	(17)	24	24
6. Ethical, but not legal	Not ethical, not legal	(2)	**	**
7. Not ethical, not legal	Not ethical or not legal	(29)	21	32
8. Not ethical, not legal	Not ethical, not legal	(19)	7	14

**Note:** For parsimony, the first and third scenarios are compared. Other comparisons (e.g., S1 and S2 or S2 and S3) indicate the same general relationships between perceptions and participation. Scenario 1 = Streaming, Scenario 3 = Downloading and Keeping after Listening.

\* Participation figures are all in percentages. For instance, 63 is to be interpreted that 63% of the group indicated participating in the behavior described in that experimental condition scenario.

\*\* Results are not reported due to sample size limitation (n=2).

Additionally, the logistic regression of the fundamental categorizations (i.e., “ethical vs. not ethical” and “no downloaded files” vs. “downloaded files”) indicates that the changes in participation across scenarios of differing ethical perceptions are statistically significant. The ratio-change in the odds of downloading (versus not downloading) for a person viewing the activity as not ethical were 0.61 times the odds of a person who viewed the activity as ethical. That is, people were more likely to participate in unauthorized file sharing when they believe it is ethical. Also, consistent with the first study, females were less likely to download than are males (see Table 5). Since almost all of the student respondents indicated the same age category, the age variable was not significant and thus is not included.

**Table 5. Logistic Regression Indicates Ethical View Results in Increased File Sharing Participation**

Parameter	B	S.E.	P (Wald)	Sig	Exp(B)
Constant	0.81	0.27	4.83	0.03	2.24
Not Ethical	-0.48	0.24	4.50	0.03	0.61
Not Legal	-0.10	0.23	0.20	0.65	0.90
Gender (Female)	-0.51	0.22	5.57	0.02	0.60

**Note:** The Hosmer Lemeshow statistic (.745) indicates the model adequately fits the data. To recall, the categorical dependent variable takes the form of (0 = did not participate in unauthorized music file sharing, 1 = did participate in unauthorized music file sharing.) A calculated (pseudo) adjusted R square score of .13 is defined as a significant moderate effect (Cohen, 1998). Running separate analyses for “not legal” and “not ethical” indicate the same results, but with improved Hosmer statistic (.0.992) for “not ethical.”

The results reported in Table 5 support the idea that there is a relationship between the ethical view and actual downloading behavior. Thus, not only are more consumers likely to view situations that are more restrictive as ethical, but they are more likely to participate in those situations. Interestingly, this did not hold true across resampling of the coefficient for the legal rating. That is, the sample did not provide external validity in this one instance, so care must be taken in generalizing the negative coefficient for the “not legal” variable. Another interpretation is that believing the scenario to be illegal is less effective across resampling distributions than believing the scenario to be unethical. In short, the results suggest that people’s view on ethics does have an impact, in general, on their participation in unauthorized file sharing. Thus, the perceived restrictiveness of intellectual property rights of media market offerings would seem to result in many people participating in peer-to-peer files sharing. As Figure 3 shows, there is a significant shift in the participants’ ethical/legal rating between the scenarios.

## 6. Study 3: Ruling Out Other Antecedents (Vs. Restrictiveness) for Perceived Ethicalness and Legality

Study 3 separated the dependent variable rating of ethicalness and legality using interval scales (vs. Studies 1 and 2 in which we measure the two dependent variables together categorically), which permitted the examination of the influence of legality on ethicalness and ethicalness on legality when considering the restrictiveness of use antecedent. Study 3 also contributed to the investigation of several alternative antecedent explanations/controls for the ethicalness and legality ratings. For example, one alternative influence is budget constraints in purchasing as represented through annual income (Varian 2005). Thus, we included income as a control variable. Gender and age were again included as control variables, consistent with Studies 1 and 2. Six knowledge-related antecedent/control variables were also included in the experiment. The first was participants' knowledge related to legal knowledge regarding intellectual property. The second was participants' knowledge related to how to locate 'stuff' in general on the internet. The third was participants' knowledge related to how to download current artists' music for free from peer file sharing servers. The fourth was participants' knowledge related to legal knowledge about copyright laws. The fifth was participants' knowledge related to where to go online to find peer file sharing servers that have free music file copies of current artists' music. The sixth was participants' knowledge related to how to use the Internet in general.

### 6.1. Method

Participants comprised 294 (45% female, 55% male) individuals enrolled at a major U.S. Southwestern university. Subjects were part of the university subject pool and received course credit for participating. The amount of credit was not dependant on the nature of responses, and responses were kept separate from identities to ensure confidentiality. The response rate was 98 percent (out of 300 invitations). Participants were randomly assigned to a 5 (restrictiveness: "streaming," "download and delete," "download and keep copy for self," "download, keep, and make electronic copy for five friends," "download, keep, and make copies for 50 friends") x 2 (dependent variable focus: rating ethicalness, rating legality) between-subject design. We note that random assignment to the five regressor conditions (restrictiveness) served as an ideal instrumental variable in controlling for endogeneity concerns (e.g., Angrist & Krueger, 2001; Morton & Williams, 2010). The descriptions of the experimental conditions were as follows:

*[Scenario 1] Please consider the following scenario: streaming (i.e., listening to online) a song several times from a website (such as Bittorrent, Morpheus, Gnutella or Kazaa) not affiliated with the producer/record label.*

*[Scenario 2] Please consider the following scenario: downloading a song from a website (such as Bittorrent, Morpheus, Gnutella or Kazaa) not affiliated with the producer/record label, listening to it several times, and then deleting it.*

*[Scenario 3] Please consider the following scenario: downloading a song from a website (such as Bittorrent, Morpheus, Gnutella or Kazaa) not affiliated with the producer/record label, listening to it several times, then making a digital copy for yourself to use again later on a ipod/music player.*

*[Scenario 4] Please consider the following scenario: downloading a song from a website (such as Bittorrent, Morpheus, Gnutella or Kazaa) not affiliated with the producer/record label, listening to it several times, then emailing a copy of it to 5 friends.*

*[Scenario 5] Please consider the following scenario: downloading a song from a website (such as Bittorrent, Morpheus, Gnutella or Kazaa) not affiliated with the producer/record label, listening to it several times, then emailing a copy of it to 100 friends.*

Each scenario then asked on a seven point scale either "To what extent do you think that this activity is ethical?" (1 = Very Unethical, 7 = Very Ethical) or "To what extent do you think this activity is legal?" (1= Very Illegal, 7 = Very Legal).

Participants answered the same demographic (gender, age, income) and six knowledge-related control variables topics listed in the previous section on a subsequent webpage. Then, participants answered one of two additional control questions regarding ethicalness and legality of the file sharing. Participants randomly assigned to one of the five ethicalness rating scenarios answered a separate legal consideration control question on a subsequent webpage that stated:

*Imagine that you are looking for a popular new song. While searching for a copy of it online, you came across a copy that someone has uploaded to a file sharing server (like KaZaA, Piratebay, or Limewire, etc) that you could download for free. In thinking about whether to download the free copy versus search on Amazon or iTunes, to what extent would you consider...whether it is legal to download the file? (1 = no consideration, 7 = strong consideration).*

Participants who had been randomly assigned to one of the five legality rating scenarios instead answered a separate ethical consideration control question on a subsequent webpage that stated:

*Imagine that you are looking for a popular new song. While searching for a copy of it online, you came across a copy that someone has uploaded to a file sharing server (like KaZaA, Piratebay, or Limewire, etc) that you could download for free. In thinking about whether to download the free copy versus search on Amazon or iTunes, to what extent would you consider...whether it is ethical to download the file? (1 = no consideration, 7 = strong consideration).*

## 6.2. Results and Discussion

First, we ran ANOVA on reported between-subject rating scores with ethicalness versus legality focus of the dependent variable entered as a categorical variable. The ANOVA revealed a significant main effect for restrictiveness ( $F(4, 295) = 3.7, p = .006$ ) and a non-significant effect for the contrast of the ethicalness versus legal focus of the dependent variable rating ( $F(1, 295) = .77, p = .38$ ). (We note the adjusted R square increased, from .08 with no control variables to 0.17 with all the control variables shown in Table 6). The third and sixth control variables on “how”  $F(1, 295) = 11.7, p = .001$  and “where” ( $F(1, 295) = 4.10, p = .044$ ) to download music files from peer file sharing servers were also both significant. See Table 6 for more details.

**Table 6. Combined ANOVA Indicates Restrictiveness Impacts Ethicalness and Legality Perceptions Controlling for Demographics and File-Sharing Knowledge**

Variable	DF	F	P value
Corrected model	19	2.93	0.001
Intercept	1	16.53	0.001
Restrictiveness	4	3.68	0.006
Ethical vs. legal DV focus	1	0.77	0.379
Age	1	0.28	0.595
Gender	1	0.41	0.524
Income	1	0.37	0.541
Legal knowledge about intellectual property	1	2.56	0.111
How to find stuff on the internet, in general	1	1.14	0.286
How to download current artists' music for free from peer file sharing servers	1	11.70	0.001
Legal knowledge about copyright laws	1	2.58	0.110
Where to go online to find peer file sharing serves that have free music files of current artists	1	4.10	0.044
How to use the Internet	1	0.18	0.672

Second, we split the sample based on the ethicalness versus legality focus of the dependent rating variable. We then ran partial correlation of the dependent variable (ethicalness or legality) and restrictiveness of use controlling for age, gender, income, the six knowledge variables, and the additional control variable consideration of legality for scenarios focused on ethical rating or the additional control variable consideration of ethicalness for scenarios focused on legal rating (see Tables 7 to 10). The purpose of this additional analysis was to permit deeper insight into the relationship between restrictiveness of use and perceived ethicalness while attempting to control for any confounding due to legal considerations of the file sharing, and likewise the relationship of restrictive of use and perceived legality controlling for any confounding due to ethical considerations of the file sharing.

**Table 7. Partial Correlation vs. Zero-Order Correlations Indicates Restrictiveness Impacts Ethical Rating Controlling for Legality Consideration and other Control Variables**

Partial Correlations	1.	2.
1. Ethical rating	1.00	
2. Restrictiveness of use	- 0.27***	1.00

**Note:** N = 143 participants randomly assigned to one of the five ethical rating scenarios. Partial Correlation control variables are the 10 additional variables (V3 to V12) listed in the zero order correlation below.

**Table 8. Partial Correlation vs. Zero-Order Correlations Indicates Restrictiveness Impacts Ethical Rating Controlling for Legality Consideration and other Control Variables**

Zero order correlations	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
1. Ethical rating	1.00										
2. Restrictiveness of use	-0.30***	1.00									
3. Legal consideration	0.15*	-0.18**	1.00								
4. Age	-0.14	0.06	-0.07	1.00							
5. Gender	-0.09	-0.02	-0.11	-0.23***	1.00						
6. Income	-0.04	-0.03	0.01	0.25	-0.26	1.00					
7. Legal knowledge about intellectual property	0.06	-0.03	-0.15*	-0.01***	-0.15	0.27***	1.00				
8. How to find stuff on the internet, in general	-0.07	-0.10	0.00	-0.11	-0.08	0.19	0.36***	1.00			
9. How to download current artists' music for free from peer file sharing servers	0.29***	- 0.16**	0.12	-0.14*	-0.23	0.13	0.24***	0.33***	1.00		
10. Legal knowledge about copyright laws	-0.03	- 0.03	-0.12	-0.06	-0.08	0.25***	0.76***	0.37***	0.24***	1.00	
11. Where to go online to find peer file sharing serves that have free music files of current artists	0.21***	- 0.15*	0.12	-0.14*	-0.20	0.16	0.17	0.32***	0.85***	0.23***	1.00
12. How to use the Internet	-0.05	- 0.04	0.02	-0.08	-0.09	0.07	0.24***	0.72***	0.33***	0.26***	0.30***

**Note:** N=143 participants randomly assigned to one of the five ethical rating scenarios.

**Table 9. Partial Correlation vs. Zero Order Correlations Indicates Restrictiveness Impacts Legal Rating Controlling for Ethical Consideration and other Control Variables**

Partial correlation	1.	2.
1. Legal rating	1.00	
2. Restrictiveness of use	- 0.18**	1.00

**Read:** N=131 participants randomly assigned to one of the five legal rating scenarios. Partial Correlation control variables are the 10 additional variables (V3 to V12) listed in the zero order correlation below.

**Table 10. Partial Correlation vs. Zero Order Correlations Indicates Restrictiveness Impacts Legal Rating Controlling for Ethical Consideration and other Control Variables**

Zero order correlations	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
1. Ethical rating	1.00										
2. Restrictiveness of use	-0.14*	1.00									
3. Legal consideration	0.07	0.04	1.00								
4. Age	0.09	0.08	0.03	1.00							
5. Gender	-0.06	-0.13	-0.11	-0.30***	1.00						
6. Income	0.03	0.15*	-0.02	0.34***	- 0.21**	1.00					
7. Legal knowledge about intellectual property	0.05	0.13	-0.19*	0.14*	- 0.15*	0.12	1.00				
8. How to find stuff on the internet, in general	-0.02	-0.14*	-0.09	- 0.05	0.13	0.02	0.22***	1.00			
9. How to download current artists' music for free from peer file sharing servers	0.21***	-0.09	0.12	-0.09	- 0.11	- 0.05	0.22***	0.47***	1.00		
10. Legal knowledge about copyright laws	-0.05	-0.01	-0.12	-0.05	- 0.17**	0.04	0.55***	0.35***	0.32***	1.00	
11. Where to go online to find peer file sharing serves that have free music files of current artists	0.04***	-0.07	0.12	- 0.06	- 0.08	- 0.06	0.29***	0.45***	0.76***	0.43***	1.00
12. How to use the internet	-0.05	-0.16	-0.13	- 0.03	0.17*	- 0.05	0.16*	0.72***	0.33***	0.21***	0.28***

**Note:** N=131 participants randomly assigned to one of the five legal rating scenarios.

As Tables 7 and 8 show, the partial correlation analysis reveals a significant relationship between restrictiveness of use and the rating of perceived ethicalness ( $r = -0.27, p < 0.01$ ), controlling for the legal consideration in addition to controlling for age, gender, income<sup>3</sup>, and the six knowledge variables. Moreover, comparing the partial correlation and the zero order correlation, we find little change in the coefficient, which suggests that the relationship is mostly independent of the other elements. Thus, the effect of restrictiveness of use on ethicalness was not confounded by any relationship between legal consideration and perceived ethicalness (zero order  $r = .15, p = .06$ ).

We find a similar story hold true for restrictiveness of use and legality. As Tables 9 and 10 show, the partial correlations reveal consistent significant relationship between restrictiveness of use and the rating of perceived legality ( $r = -0.18, p = 0.05$ ) controlling for the ethical consideration, in addition to controlling for age, gender, income, and the six knowledge variables. Moreover, comparing the partial correlation and the zero order correlation, we find little change in the coefficient, suggesting that the

<sup>3</sup> Post hoc examination indicates that interactions between income and ethical or legal focus are not statistically significant. We note that this might be due to the college setting of the sample.

relationship is mostly independent of the other elements. Thus, the effect of restrictiveness of use on legality was not confounded by any relationship between ethical consideration and perceived legality (zero order  $r = 0.07$ ,  $p = 0.41$ ).

And, we notice that the partial correlation scores were significant in Tables 7-10 controlling for the “how” and “where” to participate in peer file-sharing knowledge variables (V9 and V11), again suggesting that induced effects and endogeneity are not a major concern.

In all, the findings are a stark contrast to current law and industry/policy assumptions about consumer behavior as it is related to unauthorized peer-to-peer music file sharing. Thus, industry executives and managers, policy makers, and others need to consider restrictiveness of use of the activity at hand when considering what influences consumer perceptions related to unauthorized peer-to-peer music file sharing.

## 7. Discussion

The results of our three studies consistently demonstrate that typical people do not think file sharing is unethical per se, or even illegal per se. Regardless of whether this belief is consistent with current laws, this is what people seem to believe. Typical people appear to have some threshold that must be surpassed before they engage moral or legal reasoning (that indicates that it is unethical and illegal), as evident in Studies 1 and 3. Moreover, when most people recognize the ethical and legal dimension, they appear to curb their file sharing behavior, as evident in Study 2. We note that several robustness checks indicate support for the findings of the three studies, as seen in Appendices 2, 3, and 4. For instance, more restrictive file sharing did not exceed thresholds, which supports Study 1, and was not perceived as being unethical or illegal (Appendix 2). However, consumers perceived sharing with wild abandon as being illegal and unethical (Appendix 3). And, some people chose to engage in file sharing anyway, but those people understood that they were making ethical and legal decisions (Appendix 4).

The results of the three studies suggest that the current RIAA's position that file sharing is wrong ignores important distinctions that typical people make. As such, the current RIAA position is likely to be less persuasive than a position that accords with people's habitual perspective. Further, it seems reasonable to assume that people generally do not like to be told that their moral positions are wrong. Some even see the RIAA's position as persecution. The result is more likely to galvanize people against the industry than to persuade them not to participate in file sharing. Moreover, the results in Study 5 indicate that advertisements focusing on the fear of prosecution would appear to be ineffective.

Gundlach and Murphy (1993, p. 36) argue that “focus on ethics in exchange has received limited emphasis” and they look to “ethics and law as mechanisms for guiding exchange”. The results of the three studies presented here all indicate that ethical and legal perceptions of a particular exchange scenario are important components of consumers' decision to participate in the exchange. Moreover, the consumers' ethical and legal perceptions are influenced by the restrictiveness of the exchange, regardless of the appropriateness or correctness of such decision processing.

### 7.1. Implications for Industry and Policy

From the perspective of business and policy, our results show that typical people's engagement in file sharing downloading depends on their perceptions about the ethicalness and legality of the particular file sharing scenario. In short, most people do monitor themselves and behave somewhat in accordance with their moral code. Further, most people do not think massive sharing is either legal or ethical. This is true for the majority of survey respondents even though a small minority indicated that they feel it is cool to be deviant (so that the threat of prosecution only seems to fuel their participation). The findings of the three studies are consistent with the growing policy view that “the nation's current system of protecting intellectual property is ill-suited to the modern economy” (Hitt, 2007, p. A1). These findings lead to immediate policy suggestions regarding both uploading and downloading activities.

First, typical people are more sophisticated in their view toward file sharing than the industry gives them credit for. For example, a current industry promotion shown at the front of movies and on

YouTube<sup>4</sup> to discourage file sharing states, “You wouldn’t steal a car” and then states that file sharing is stealing—we note in spite of research that suggests legal interventions are not effective (Gopal et al., 2004). Our results indicate that typical people do not see it that way. In the words of the commentators on the YouTube video:

*I would steal a car... if it was as easy as touching the car and then 30 seconds later I own the car and the person who owns the car gets too [sic] keep it too... (Username “Aporjib”).*

*Downloading is not stealing. Notice how when you steal something the original owner doesn't have it anymore, but when you download something, you and the original owner have it (Username “Xylyze”).*

Some might suggest that a more realistic/representative commercial say, “You wouldn’t read a communal paper in the local coffee shop”, which appears to be closer to how typical people appear to see it (given the results of this research), and is of course something that many people might do. This carries implications for the massive literature on information goods (defined as anything that can be digitized—such as books, journals movies, software, art, conversations, etc), that, as Varian (2005) points out, is interested in understanding what the terms and conditions of subsequent use of purchased or licensed information goods are. The results suggest that most consumers view that there ethically and legally should be some allowance for subsequent reuse, but that such reuse should also have boundaries. Further research is needed to more clearly establish what the boundaries are for restrictiveness of use.

Second, industry practitioners attempting to develop campaigns based on the results contained in this article should be aware that research has found that consumers more often follow social norms rather than requests from corporations (Goldstein, Cialdini, Griskevicius, 2008). Thus, a potential RIAA antipiracy campaign could say, “Research shows that most people think it is unethical to make copies of music for 100 other people. However, this is just what file sharing exchanges like BitTorrent do. While the computer programmers who create these services make it hard to do what you think is right, we would like to show you how you can limit your file sharing to an ethical amount”. Then provide instructions on how to limit the file sharing capabilities of the program. We feel this would be much more effective in reducing file sharing than the campaign described above, which generates sentiment best summed up by “Freakiq” as:

*This ad is the reason I download. If I were to buy a movie I would have to see this s\*\*t, but if I download it I don't have to (Username “Freakiq”).*

Third, consumers’ restrictiveness judgments appear to be compounded by notions of “time” and “location”. That is, while most consumers believe in something like the hypernorm “thou shalt not steal” (see Donaldson & Dunfee, 1999), stealing, as an activity, becomes increasingly fuzzy in intellectual property rights that are (for the most part) bound by time and location (i.e., geography). For instance, copying a song, software code, or t-shirt graphic before the copyright expires is stealing, but after the copyright expires it is not stealing. Geographically, the file sharing exchange may include consumers using servers in different countries with different laws and different cultural beliefs about the ethics involved. The differences in time and geography make it more difficult for consumers to recognize when stealing is taking place. Less recognition results in increased participation, decreased copyright stability, and ultimately, decreased the efficiency and effectiveness of social systems for consumers.

Fourth, we suggest that a more-effective approach to limiting file sharing is to educate people about how much they are really sharing and with whom they are really sharing. While people do monitor themselves, technology is essentially a black box to most people. Thus, they do not really know how much file sharing they are doing. Extending our findings on downloading behavior to their logic regarding uploading, we propose that, if sharing technologies showed people that they were actually making copies for 100 people and allowed them to limit their sharing networks, then most would likely

<sup>4</sup> <http://www.youtube.com/watch?v=fS6ncGEyszC>

limit their sharing. Rather than tell people that their opinion is wrong, we should help them to limit themselves as our results suggest they will if they are aware of what they are doing. This “enables these participants to make the best possible choices for themselves” (Gundlach, 2001, p. 529). The results of this research indicate that individuals limit their engagement in file sharing behavior based on their personal moral code. This suggests that most people would limit their volume of sharing if they were offered a technology that allowed them to do so. They would not stop it, but they would curtail it. However, though people apparently would limit their sharing if they could, current technologies do not yet allow it directly. One type of limit that is probably easier to build is geographical—identifiable by IP address. This sort of approach is not a zero sum game. Instead, it creates value for many of the stakeholders. Typical people as users of technology have more freedom to fulfill their own moral objectives. Record labels and artists benefit from reductions in the amount of unauthorized sharing. While we believe that this approach will not end file sharing, it can limit its scope—and perhaps more effectively than randomly suing people, which recent trade reports indicate might not be as effective as once anticipated (e.g., McBride & Smith, 2008). Internet service providers (ISPs) might obtain reductions in the bandwidth used. This is extremely important because ISPs have the technical skills and contacts to interface with the sharing networks. Producers of sharing software benefit because their software is more attractive to consumers and they are better protected from legal liability for its use. Government policymakers benefit because they can come to the table with a solution that appeals to both industry and consumer voters. As to how one might go about actually implementing this implication, we would suggest following the suggestions found in Shapiro and Varian (1998) on free versioning.

## 7.2. Directions for Future Research

While this paper adds to scientific understanding of why consumers do or do not participate in unauthorized peer-to-peer file sharing exchanges, refinements and extensions of its investigation need to be made on many fronts. For example, research is needed to find out (1) what positive or negative emotions consumers experience when choosing to participate (or not) in file sharing activities, and (2) the extent to which they enjoy the experienced emotions, given their particular views on the legality and ethicalness of the activities. Further, consumers’ acceptance of relativism versus absolutism may affect the proposed model in ways that could guide policy. Likewise, while this study has investigated downloading behavior, research is needed that explores unauthorized uploading behavior as well. Are uploading participation intentions affected by restrictiveness levels in the same way that downloading participation intentions are affected?

Another avenue of future research would be to examine to what extent the findings apply more generally to the extensive, growing field of “information goods” and the literature surrounding it. Many market offerings are becoming intangible or transparent, such as academic journals, newspapers, magazines, books, software, video games, photography, and art (see, e.g., Varian, 2005, for more description). Moreover, in addition to affecting other information goods, these phenomena might also affect marketing activities. Consider, for instance, branding in the new media. How do consumers perceive the transfer of property rights when products are advertised over the Internet, especially when consumers participate in the advertisement formation?

Related, future research could also examine restrictiveness of use in combination with versioning (e.g., Shapiro & Varian, 1998; Varian, 1997). Wu and Chen (2008) propose that versioning could be one method of helping to reduce piracy of information goods. Versioning takes into account the proposal by Nunes, Hsee, and Weber (2004) that cost structure affects consumers’ inclination toward participation in music piracy. Future research could evaluate to what extent perceived value varies across restrictiveness of use, and thus whether versioning according to restrictiveness decreases piracy better than versioning according to other criteria without consideration of restrictiveness. There are likely many avenues for research to explore that combine the concepts of versioning and restrictiveness of use. Radiohead’s experience is instructive: they realized an album for download and allowed people to pay what they wanted to pay. While Radiohead will not make the exact figures public, they do say, “it’s been a really nice surprise and we’ve done really well out of it” (BBC News, 2008), which suggests that, while people probably did not pay the full CD price, they paid whatever their own internal models of fairness required. It seems feasible that the findings for pricing hold similarly true for sharing. However, concerns remain that need to be examined regarding whether

most people will take something without paying because they believe someone else will pay for it (free-riding for public goods). One related avenue for exploration would be to consider the emerging crowd-funding phenomenon<sup>5</sup>, which might be closer to economic reality of proper incentives and proper pay-offs. On the other hand, to what extent (or under what circumstances) does suing people who engage in illegal behavior work as an effective deterrent or credible threat to the people who share music without authorization? To recap, future research examining versioning and restrictiveness of use as they jointly affect file sharing would provide valuable additional insight into the tandem effects of economic and moral considerations related to exchanges of information goods.

Research is also needed that investigates phenomena and concepts such as patent or copyright questions of intangible market offerings, in particular types of channels of distribution (e.g., grey markets). For instance, the territorial restrictions that once defined copyrights and patents are now either fuzzy or altogether absent when discussing property rights transfer using technologies such as Morpheus where there is no single point of distribution (i.e., server “supernodes”), but rather direct global connections between consumers (see MGM v. Grokster, 2005). In these situations, which country’s ethical and public policy stances do—or should—apply to market exchanges in a global online context where there is no physical point of contact? And even in instances when there are physical points of contact, there is no consensus yet on which ruling should be applied, which will be accepted by consumers, or which can be enforced (e.g., see “Annex 1C: Agreement on Trade-Related Aspects of Intellectual Property Rights” in World Trade Organization, 1994, pp. 319-351; World Intellectual Property Organization, 2004, pp. 240-364).

## 8. Conclusion

The traditional way of thinking about ethicalness in file sharing inherently assumes that people are using moral reasoning. For example, Gupta, Gould, and Pola (2004, p. 268) state that “consumers who are less concerned with ethics are more likely to pirate than others”. Likewise, Levin, Dato-on, and Rhee (2004, 48) conclude that “downloaders have lesser ethical concern” than respondents who don’t download. This position assumes that people are consciously choosing to be unethical—that they think about the moral implications and choose to violate both the laws of the land and the norms of society. Our work here calls this position into question.

The results of our studies suggest that typical people often do not really know whether file sharing is ethical and/or legal and that they must make judgments based on the particular circumstances and their own limited, or nonexistent, copyright law expertise. In particular, this research investigates the general, unexplored perspective exemplified by Von Lohmann (2007) who says, “I don’t think we’ve suddenly had a massive morality shift, where tens of millions of Americans who wouldn’t shoplift a CD in a store have suddenly lost their moral compass and are rampaging out there, eager to break the law”. We believe that people believe that intellectual property does not follow the same rules as physical property (Walden, 2005), and so it should not be surprising to find that their means of evaluating what is legal does not parallel their means for evaluating legal and ethical behavior *vis-à-vis* physical property. Thus, we propose that variation in ethical and legal perceptions arises not only between individuals, but also between circumstances.

Thus, while the U.S. Congress judiciary committees and other nations’ legislatures and courts currently deliberate on the future of property rights transfer of market offerings as authorized through patent and copyright law, additional research related to the property rights transfer of market offerings, in general, and intangible market offerings, in particular, is needed. This article provides an initial theoretical framework of consumers’ beliefs about property rights transfer. Additional research is needed to refine and expand the framework. The results of the exploratory research here indicate that many consumers base their ethical and legal judgments, at least in part, on elements of the product’s restrictiveness of use, and, in turn, participate in accordance with these judgments. Thus, we would all benefit from additional related research on (1) which of consumers’ characteristics or decision making rules affect their perceptions of property rights transfer, and (2) under what conditions and for what period of time property rights should, indeed, be granted to individuals or organizations seeking to exchange.

<sup>5</sup> <http://www.practicalcommerce.com/articles/3140-13-Crowdfunding-Sites-for-Social-Cause-Entrepreneurs>

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## Appendices

### Appendix A.

**Table A-1. Ethicalness and Legality Summary Statistics**

Study	Scale type	Summary statistics			
		Cat 1 %	Cat 2 %	Cat 3 %	Cat 4 %
	<b>Categorical scaling</b>				
Study 1	1 = Ethical & Legal, 2 = Ethical but Not Legal, 3 = Legal but Not Ethical, 4 = Not Legal & Not Ethical	36%	13%	24%	27%
Study 2	1 = Ethical & Legal, 2 = Ethical but Not Legal, 3 = Legal but Not Ethical, 4 = Not Legal & Not Ethical	32%	15%	23%	29%
	<b>Interval scaling</b>	<b>Mean</b>	<b>St Dev</b>	<b>Min</b>	<b>Max</b>
Study 3	Very Unethical 1, 2, 3, 4, 5, 6, 7 Very Ethical	3.06	1.48	1	7
Appendix 2	Very Unethical 1, 2, 3, 4, 5 Very Ethical	2.80	1.16	1	5
Appendix 3	Very Unethical 1, 2, 3, 4, 5 Very Ethical	2.37	1.16	1	5
Study 3	Very Illegal 1, 2, 3, 4, 5, 6, 7 Very Legal	3.30	1.73	1	7
Appendix 2	Very Illegal 1, 2, 3, 4, 5 Very Legal	2.79	1.24	1	5
Appendix 3	Very Illegal 1, 2, 3, 4, 5 Very Legal	2.18	1.09	1	5

**Note:** Summary statistics are at the aggregate, total study level combining all restrictiveness scenarios, which number/type of scenarios varied by study.

## Appendix B. Robustness Check: Degrees and Separation of Ethicalness and Legality

Some research has operationalized ethical judgment—and, at times, even perceived legality—as something having more than nominal properties. Several focus group participants and survey respondents also spoke of the ethicalness or legality in terms of degrees. This appendix provides a robustness check by examining legality and ethicalness using interval scaling. It also checks whether restrictiveness is uni- or multi-dimensional in nature. That is, are the three elements of restrictiveness (i.e., physicality, repeat use, and sampling) a single phenomenon in the theoretical model presented in Figure 1? Or, do they have different effects (i.e., is the construct multidimensional) on how consumers form their ethical and legal stances for the experimental conditions?

### Method

Respondents comprised 55 (out of 80, for a 69% response rate) students at a Southwestern university who completed the within-sample experimental design study. The process and scenarios were identical to those used in Study 1. The scale for ethicalness and legality dependent variables were five point interval scales, with ethicalness (1 = very unethical, 2, 3, 4, 5 = very ethical) and legality (1 = very illegal, 2, 3, 4, 5 = very legal) measured separately (versus study 1 in which they were combined). Respondents who indicate different ethical or legal stances across the scenarios were subsequently asked to score whether the difference is, in their view, due to differences in the level of product physicality, repeat use, or sampling—or to list a different reason.

### Results and Discussion

A repeated measures linear mixed model was constructed to analyze the results, with the study scenario as a fixed factor. The model was ran twice, with legality and ethicalness as dependent variables. For both models, a subject unique identifier was entered as a random factor. As predicted, the repeated measures model showed main effects for the dependent variable Legality (MScenario1 = 3.92, MScenario2 = 3.10, MScenario3 = 2.73, MScenario4 = 2.61, MScenario5 = 2.29, MScenario6 = 2.12),  $F(6, 306) = 356.2$ ,  $p < .001$ ) and Ethicalness (MScenario1 = 3.79, MScenario2 = 3.19, MScenario3 = 2.85, MScenario4 = 2.65, MScenario5 = 2.40, MScenario6 = 1.94),  $F(6, 305) = 413.8$ ,  $p < .001$ ). Partial eta square values were 0.32 for the ethicalness model and 0.63 for the legality model. See Table B-1.

**Table B-1. Restrictiveness Effects Hold Using Interval Scales**

	Legality		Ethicalness	
	Estimate	<i>P</i>	Estimate	<i>P</i>
<b>S1. Streaming</b>	3.92	<.001	3.78	<.001
<b>S2. Download and delete</b>	3.10	<.001	3.19	<.001
<b>S.3 Download and keep</b>	2.73	<.001	2.85	<.001
<b>S4. Download and burn CD for self</b>	2.61	<.001	2.65	<.001
<b>S5. Download and burn CD for others</b>	2.29	<.001	2.40	<.001

The results indicate there is a strong, positive relationship between the level of restrictiveness and perceived ethicalness and legality. Separately, the respondents identification of which of the three listed subsets of product restrictiveness—product physicality, repeat use, and sampling—was entered into each of the models as separate covariates. The results are not statistically significant, thereby suggesting these subcategories of restrictiveness do not create differences. Also, there were no free responses indicating other rationales. The robustness checks lend credence to the proposed model contained in Figure 1 and the results of Study 1.

## Appendix C. Robustness Check: Excludability Restrictiveness and Ethical Or Legal Perceptions

In this appendix, we provide a robustness check on the potential boundaries of the excludability element of the restrictiveness theory. We propose that excludability operates in a similar manner to appropriation of use along the restrictiveness continuum. That is, we argue that control over greater excludability affects perceptions of ethicalness and legality. For example, we theorize that typical people, on average, perceive sharing a file with one hundred friends as less ethical and legal than sharing the same file with one friend, etc. While many scholars we approached personally agree with this theorizing (on one hundred friends vs. one friend), they were often perplexed when asked to explain why they feel that way. We propose the reason many people agree with the example is that there is a negative relationship between the level of excludability control (in the restrictiveness of use continuum) and the perceived ethicalness or legality of downloading through unauthorized file sharing.

### Method

Respondents comprised 94 (of 170 invited, for a 55% response rate) consumers of a multi-national sample with diverse respondent geographic location (6% in Australia, 6% in Canada, 23% in China, 48% in Hong Kong, 6% in India, 112% in United States), age (17% age 18-24, 48% age 25-34, 28% age 35-44, 5% age 45-54, 2% age 55+), gender (45% female, 55% male), and income (26% less than 30,000 U.S. dollars, 31% 30 to 60,000 U.S. dollars, 21% 60,000 to 90,000 U.S. dollars, 9% 90,000 to 120,000 U.S. dollars, and 13% more than 120,000 U.S. dollars) who completed the within-sample experimental design study.

The first five survey scenarios are identical to those used in the first study and second appendix. Six new excludability scenarios were added that only differ from each other in the number of friends (i.e., 5, 15, 25, 50, 75, 100) for whom copies of the file were burned for. And consistent with Appendix 2, the dependent variable scale was separated into two separate five-point interval scales for ethicalness (1 = very unethical, 2, 3, 4, 5 = very ethical) and legality (1 = very illegal, 2, 3, 4, 5 = very legal).

### Results and Discussion

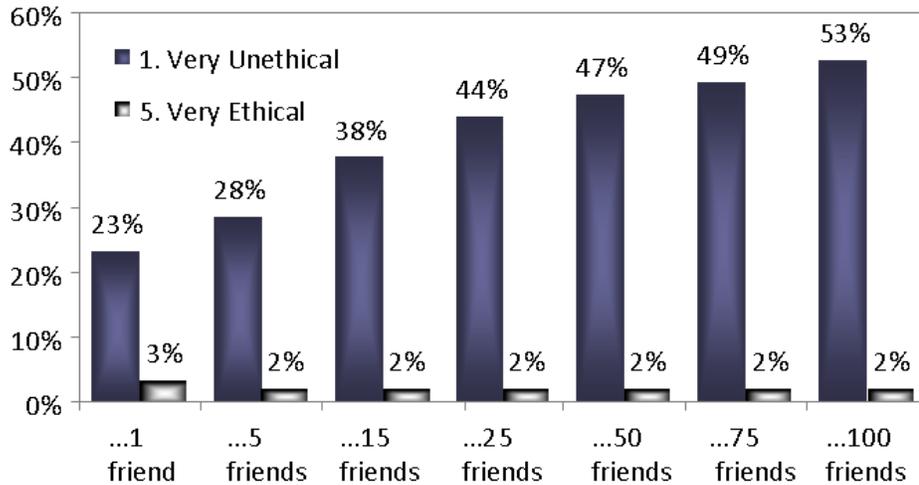
While the global consumer sample provided further confirmation of the prior studies' results, perhaps one of the most interesting results is that there might be a threshold boundary to the effect of the excludability control on the perceived ethicalness and legality. Consistent with prior studies, a repeated measures linear mixed model indicates that the difference in average score between scenarios is statistically significant for both dependent variables (ethicalness, legality) for the "streaming online" through "downloading, keeping, and making a CD for one friend." The overall excludability effect is statistically significant in the linear model shown in Table C-1 for legality ( $M_{Legal} = 1.77$ ,  $F(7, 632) = 17.5$ ,  $p < .001$ ) with an overall partial eta score of 0.61 and the model shown for ethicalness ( $M_{Ethical} = 1.90$ ,  $F(7, 632) = 15.5$ ,  $p < .001$ ) with an overall partial eta square score of 0.68, which indicates that two-thirds of the ethical rating variance was explained by the restrictiveness categorization.

**Table C-1. Fixed Effects Diminish As Excludability Control Increases**

Download, keep, and make a CD for...	Legality		Ethicalness	
	Estimate	P	Estimate	P
Intercept	1.51	<.001	1.61	<.001
... yourself	1.04	<.001	.99	<.001
...1 friend	.63	<.001	.74	<.001
...5 friends	.24	.06	.31	<.001
...15 friends	.11	.38	.15	.27
...25 friends	.05	.70	.08	.58
...50 friends	.03	.85	.04	.78
...75 friends	<.01	1.0	.01	.92
...100 friends	<.01	1.0	.01	.92

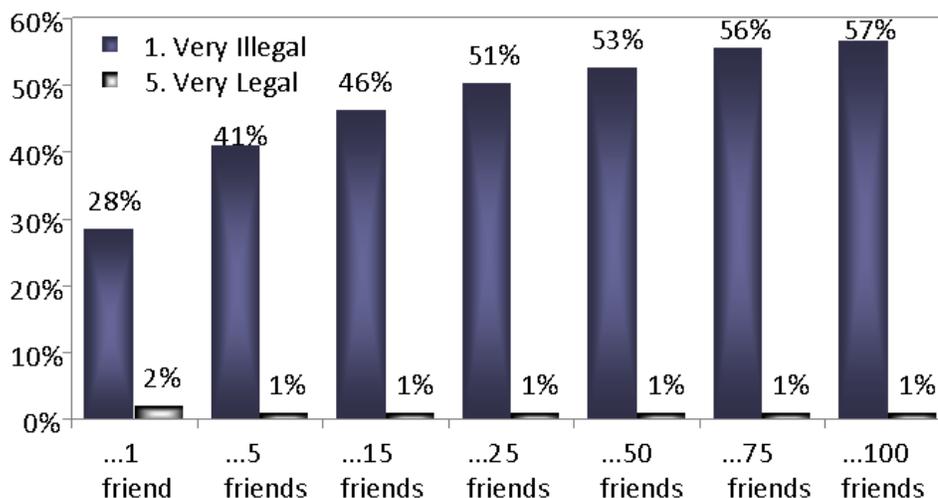
However, the statistical significance level of the difference between the scenarios drops off between 15 and 25 friends as seen in Figures C-1 and C-2.

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**Figure C-1. Percent of Multinational Sample Indicating Sharing is “Very Unethical” Increases Across Sharing Levels**

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**Figure C-2. Percent of Multinational Sample Indicating Sharing is “Very Illegal” Increases Across Sharing Levels**

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