

Self-Control and Ethical Beliefs on the Social Learning of Intellectual Property Theft*

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Abstract. Social learning theory has been identified as a strong predictor of various computer-related crimes, especially intellectual property theft (Higgins and Makin 2004; Hinduja 2006; Rogers 2001; Skinner and Fream 1997). Undoubtedly, the relationship is more complex, as other factors appear to affect one's proclivity to be influenced by the social learning components. The current study examined survey response data from over two thousand university students to clarify potential interactive effects that measures of an individual's self-control and ethical beliefs might have on the relationship between social learning and music piracy. The results indicated that self-control conditioned the effect that differential association and differential reinforcement had on levels of music piracy. In addition, ethical beliefs in piracy laws conditioned the effect that differential reinforcement and imitation had on levels of music piracy.

Keywords: piracy; intellectual property theft; crime; copyright; social learning; self-control; ethics; morality

Introduction

The tenets of Akers' (1977) social learning theory have been identified throughout the literature as important explanations for numerous types of deviant behavior. Recent research in the realm of intellectual property (IP) theft has produced similar results as the components of learning theory have been found to significantly predict participation in software piracy (Higgins and Makin 2004; Rogers 2001; Skinner and Fream 1997) and music piracy (Hinduja 2006).

The use of social learning theory as a framework for understanding participation in IP theft is a logical one. In order to commit such acts, one must obtain the necessary techniques, which usually requires learning from others some type of computer-related skill (Skinner and Fream 1997), as well as the motives, drives, and rationalizations to induce commission. Furthermore, specific forms of IP theft, such as software piracy and music piracy, allow the offender to receive tangible rewards (e.g., free software or songs) quickly and at minimal risk, further reinforcing that behavior (Higgins and Makin 2004; Hinduja 2003; Hinduja 2006). Imitation of other participants in IP theft that one sees or meets in cyberspace can take place as the actions of more experienced users are copied by those

new to the scene through specific prescribed instruction or through emulation of methods to acquire or exchange unauthorized digital music files. Finally, definitions that characterize the activity as positive, beneficial, and commonly-accepted are very present in the textual interaction among members in online environments where music piracy occurs, and serve to strengthen or at least sustain participation.

Findings from research studies have spawned various policy implementations to change individual attitudes toward IP theft, and to deter individuals from continuing to engage in such acts. For example, the International Federation of the Phonographic Industry (IFPI) designed and implemented formal strategies involving educational components to raise individual awareness about the negative effects of music piracy (e.g., public awareness campaigns) and litigation components to forestall participation (Associated Press 2005; CNN.com 2004; IFPI 2002; IFPI 2005; Slashdot.org 2005). Although such strategies may reduce IP theft to a certain extent, critics argue that such strategies are "insufficient to gain widespread public compliance with the law" (Tyler 1996:224). While numerous possibilities exist as to why this might be the case, one potential reason is that stable traits and beliefs of individuals affect their proclivity to be influenced by

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the social learning components that guide these suggested policies.

Self-control and beliefs regarding the law are two factors that may play a conditioning role. Prior research has found that more stable characteristics of individuals interact with other social elements to produce differential effects on criminal behavior (Evans, Cullen, Burton, Dunaway, and Benson 1997), occupational delinquency (Gibson and Wright 2001), and software piracy (Higgins and Makin 2004). In other words, low self-control and ethical beliefs may condition the effect that social learning components have on levels of IP theft. By examining the nature of these conditional effects, efforts can be made to disentangle the complex nature of this phenomenon and inform the development of policy specifically related to these elements.

The purpose of the current work was to empirically test for potential interactive effects that individual levels of self-control and belief in piracy laws have on the relationship between social learning components and a specific type of IP theft—music piracy. Before describing the nature of the study, this article begins by providing a brief background on music piracy and its perceived consequences on the music industry. Prior research on social learning theory, self-control theory, ethical beliefs, and their relevance to the phenomenon of music piracy is then reviewed. Details related to the sample and research methodology are then provided before the data are analyzed and findings discussed.

What is Music Piracy?

Music piracy is a form of Internet piracy that involves "the act of making available, transmitting, or copying someone else's work over the Internet without permission" (IFPI 2005:18). In this respect, it constitutes IP theft because these actions violate copyright infringement laws (Copyright Office of the United States 2000a). The term "copyright" is defined as the legal right granted to an author, composer, playwright, publisher, or distributor to exclusive publication, production, sale, or distribution of a literary, musical, dramatic, or artistic work (de Fontenay 1999). Copyrights cover both published and unpublished works, and are secured immediately upon the expression of an original work in fixed, tangible form (Copyright Office of the United States 2000a). Each copyright grants the owner explicit and sole permission to modify, distribute, reproduce, perform, or display the work. Accordingly, uploading an unauthorized music file to a web or file server that can be accessed by others through their web browser or through a file transfer program is a form of *distribution*. If the copyrighted work is not owned or authored by the uploader, that person is breaking the law. When an individual requests an unauthorized digital music file from a web or file server, or uses a file exchange program to download music onto his or her hard drive, an exact copy of that sound recording is made on the recipient's computer system. This violates the *reproduction* tenet of the copyright law, as non-owners must have explicit permission to duplicate protected works, whether for profit or merely for personal listening pleasure, and regardless if it is for a transitory or permanent period of time (Copyright Office of the United States 2000a; Copyright Office of the United States 2000b; RIAA 2000a).

According to some estimates, music piracy has had a significant effect on the music industry worldwide. For example, the International Federation of the Phonographic Industry asserts that music sales had declined by over six billion dollars between 1998 and 2003 (IFPI, 2005). Most of this decline has been attributed to the illegal downloading and sharing of music files over the Internet. In 2001, an estimated 99 percent of all music files available online were unauthorized (IFPI 2005). Despite legislation and lawsuits (105th Congress 1997; A & M Records Inc. et al. v. Napster Inc. 2001; CNN.com 2000a; CNN.com 2000b; Crawford 2005; Davis 2003; Duke Law School 2005; Electronic Frontier Foundation 2005; Healy 2003; Jones 2000; Lipton 1998; Mendels 1999; Patrizio 1999; Philipkoski 1999a; Philipkoski 1999b; RIAA 2000b; Spring 2000), the prevalence of music piracy does not appear to be attenuating, as approximately nine out of ten downloaders worldwide in 2004 were still obtaining music files through illegal means (IFPI 2002; IFPI 2005). While perhaps sensationalistic, the economic impact of music piracy has led some to describe it as "the greatest threat facing the music industry worldwide today" (Chiou, Huang, and Lee 2005:161).

The scope and gravity of the impact of music piracy have spurred empirical research in recent years. The majority of this research, however, has focused primarily on identifying its prevalence (Angus Reid Worldwide 2000; Archambault 1999; Pew Internet & American Life Project 2000; Stenneken 1999; Webnoize 2000) or in identifying its relevant antecedents (Banerjee, Cronan, and Jones 1998; Bhattacharjee, Gopal, and Sanders 2003; Chiou, Huang, and Lee 2005; Gopal, Sanders, Bhattacharjee, Agrawal, and Wagner 2004). To note, few studies have developed and applied theoretical frameworks to its study (d'Astous, Colbert, and Montpetit 2005; Gopal et al. 2004; Hinduja 2006). The current work thus seeks to fill the gap in the extant literature base by examining

the relevance of multiple theoretical elements to music piracy.

Theoretical Framework

Social Learning Theory

Building upon Sutherland's (1947) theory of differential association, Ronald Akers (1977) developed what is known as social learning theory. The basic premise of the theory is that "the same learning process, operating in a context of social structure, interaction, and situation, produces both conforming and deviant behavior" (Akers 1998:50). Deviant behavior, however, will likely occur when the individual develops more antisocial ties that create an environment for learning that behavior, as well as providing support for (and thereby reinforcing) such behavior (Akers 1998). In order to clarify this process, Akers expounded upon four concepts central to the theory.

Differential association is assumed to be the primary component through which behaviors are learned, as individuals who interact with antisocial others tend to be more likely to participate in deviant behavior (Sutherland 1947; 1949a; 1949b). Whereas differential association is the primary learning component, differential reinforcement is the "basic mechanism...by which learning most relevant to conformity or violation of social and legal norms is produced" (Akers 1998:57-58; Skinner 1953). Concerning the latter, the frequency with which a behavior occurs is dependent upon the individual's perceived rewards and expected punishments associated with engaging in that behavior (Akers, Krohn, Lanza-Kaduce, and Radosevich 1979:638; Skinner 1957). The final two components, imitation and definitions, develop the notion that individuals model their behavior after those with whom they associate and that, as a result of being exposed to deviance, individuals develop attitudes and rationalizations that support that behavior over more conforming or socially acceptable actions (Akers 1985; Akers 1998).

In sum, proponents of social learning theory contend that in order for criminal behavior to occur, one must acquire the necessary techniques and skills needed to engage in that behavior (Akers 1998; Sutherland 1947). Once a social environment is created consisting of associations with persons inclined to criminality, patterns of imitation and the internalization of definitions can then follow, with reinforcing stimuli later playing a large role in determining perpetuation. Akers further states that the theory links individual and social processes, as structural conditions influence a person's differential associations, models of behavior, definitions conducive or aversive

to crime commission, and differential reinforcements (Akers 1992; Akers 1998). The empirical support garnered for the components of the theory and various forms of IP theft (e.g., Higgins and Wilson 2006a; Higgins and Makin 2004; Hinduja 2006; Rogers 2001; Skinner and Fream 1997) further enhances the plausibility of social learning theory as an explanation for this type of criminal behavior. While this corroborates the inclusion of social learning theory variables in empirical models, the viability of another aspect of the theory is not as clear.

Akers (1998:51) argues that by explaining the social processes through which individuals are more likely to commit deviant acts, social learning theory "is capable of accounting for the development of stable individual differences, as well as changes in the individual's behavioral patterns or tendencies to commit deviant and criminal acts, over time, and in different situations." Recent research, however, has suggested that such stable differences (e.g., self-control), when combined with social learning processes, increases the likelihood of criminal behavior (Evans et al. 1997; Gibson and Wright 2001). These findings suggest interactive effects and thereby call into question the ability of social learning theory to account for individual processes on its own - consequently warranting further investigation. Based upon the extant literature (Gopal and Sanders 1997; Gopal and Sanders 1998; Gopal et al. 2004; Higgins 2005; Higgins and Makin 2004; Higgins and Wilson 2006b; Im and Van Epps 1991; Kievit 1991; Thong and Yap 1998; Wong 1995), two stable individual differences that may bear particular importance to both social learning and music piracy are an individual's self-control and ethical beliefs regarding piracy laws.

Self-Control Theory

The concept of self-control as an explanation for criminal behavior was first developed by Gottfredson and Hirschi (1990) in *A General Theory of Crime*. The primary assumption of the theory is that people are inherently motivated to engage in criminal behavior. Individual differences exist, however, in the ability to suppress these motivations. For them, the most salient individual difference is one's self-control and is composed of six elements: impulsivity, a preference for simple tasks, risk-taking, a preference for physical activity (as opposed to mental activity), self-centeredness, and temper (Gottfredson and Hirschi 1990:89). The key proposition, then, is that those who possess these psychological traits and have the opportunity to engage in criminal behavior are more likely to partake in crime (Gottfredson and Hirschi 1990;

Grasmick, Tittle, Bursik, and Arneklev 1993). An individual's propensity to exhibit these traits is attributed to ineffective parenting during childhood (Gottfredson and Hirschi 1990).

Self-control theory has received considerable attention throughout the literature and both its measures (e.g., Grasmick, Tittle, Bursik, and Arneklev 1993) and its empirical validity (Pratt and Cullen 2000) have been wellsupported. The latter is important because Gottfredson and Hirschi (1990:91) contend that the theory is a versatile one that explains a wide range of deviant behaviors (therefore appropriately termed "a general theory of crime"). Few studies have examined the extent to which self-control predicts IP theft (Higgins and Makin 2004; Higgins and Wilson 2006b; Hinduja 2006), but the results do lend additional support to the versatility of the theory. These results indicate that individuals low in self-control are more likely to engage in IP theft, further illustrating the importance of including measures of self-control into empirical models involving digital piracy.

Contrary to Gottfredson and Hirschi's (1990:232) claim that low self-control is "the individual cause of crime" (italics in original) which "tells us that the search for...correlates of crime other than self-control is unlikely to bear fruit," empirical evidence continues to mount indicating the importance of other theoretical variables. For example, prior research examining both low self-control and social process variables-such as association with deviant peers—have found that the latter continually exhibit independent effects on criminal behavior after controlling for the effects of the former (Evans et al. 1997; Gibson and Wright 2001; Matsueda and Anderson 1998; Pratt and Cullen 2000; Wright, Caspi, Moffitt, and Silva 1999). Specific to the subject matter of the current work, a recent study of 318 undergraduate students revealed that low self-control significantly influenced software piracy participation, and that rudimentary social learning theory variables also had some predictive effect (Higgins 2005; Higgins and Makin 2004). Although the plausibility of incorporating other trait-based factors in addition to self-control is unclear, an important individual difference found to consistently predict intentions to engage in IP theft is one's ethical beliefs regarding piracy laws.

Ethical Beliefs in Piracy Laws

A consistent finding in the literature on IP theft is that one's ethical predispositions to IP theft laws influences the likelihood that one will engage in pirating behavior. Specifically, those who believe that IP theft is morally or ethically appropriate are more likely to engage in the act

(Chiou, Huang, and Lee 2005; Gopal and Sanders 1997; Gopal and Sanders 1998; Gopal et al. 2004; Higgins and Makin 2004; Im and Van Epps 1991; Kievit 1991; Thong and Yap 1998; Tyler 1996; Wong 1995)1. Although these empirical studies were aimed primarily at identifying antecedents to IP theft, theoretical underpinnings are present from elements of social control theory (Hirschi 1969), neutralization theory (Sykes and Matza 1957; Sykes and Matza 1999), and social learning theory (Akers 1985; Akers 1998). For example, Hirschi (1969:203) argues that moral belief in the law is related to deviant behavior in the sense that people with few attachments to conventional society will not see the necessity in obeying the laws or norms of that society. Conversely, Sykes & Matza (1999:85) argue that holding beliefs favorable to law violation are based upon an individual's own rationalizations (e.g., the general acceptance of the five neutralization techniques) and are used to decide whether to follow society's norms. Finally, Akers (1985; 1998) has stated that attitudes—which are directly tied to one's belief system—are a key contributing factor in how behavior is learned from others. Although these approaches differ in the specific processes by which law-abiding beliefs promote deviance, they agree on the notion that such beliefs demonstrate independent effects.

Although proponents of self-control theory likely question the notion that ethical beliefs in the law independently affect behavior, and would argue that any such effects are spurious due to one's low self-control, the current authors follow the assumptions of prior research indicating that additional factors do exert independent effects (Evans et al. 1997; Gibson and Wright 2001; Matsueda and Anderson 1998; Pratt and Cullen 2000; Wright, Caspi, Moffitt, and Silva 1999) and explore the possibility that ethical predispositions are not necessarily influenced by the same processes as personality traits.

To summarize, extant literature suggests that the components of Akers' (1977) social learning theory both apply to and predict intentions to engaging in IP theft (e.g., Higgins and Makin 2004; Hinduja 2006; Rogers 2001; Skinner and Fream 1997). Additional findings, however, also indicate that the relationship between these components and IP theft may be conditioned by individual differences such as low self-control (Evans et al. 1997; Gibson and Wright 2001) or ethical predispositions to the law (Higgins and Makin 2004). Indeed, Higgins and Wilson (2006) recently found that low self-control, differential association, and favorable attitudes were positively related to software piracy, while moral beliefs were inversely related. Generally, they also found that moral beliefs can condition the link between the theories

and piracy (although significant differences among the groups were not found). The current study builds upon the foundation laid by Higgins and Wilson by studying a more popular phenomenon (music piracy) and by assessing the extent to which both self-control and ethical beliefs moderate the relationship between social learning components and music piracy (Higgins and Makin 2004; Higgins and Wilson 2006b; Hinduja 2006; Rogers 2001; Skinner and Fream 1997).

Hypotheses

The current authors accordingly expect the conditional relationships previously found in software piracy research to be salient when considering music piracy. As such, the following hypotheses are given:

- 1. The relationship between the four components of social learning theory on levels of music piracy varies as a function of one's self-control.
- The relationship between the four components of social learning theory on levels of music piracy varies as a function of one's ethical beliefs in music piracy laws.

In addition, it is expected that the individual effects of the social learning components, low self-control, ethical beliefs in the law, as well as relevant demographic characteristics, will be significantly related to levels of music piracy.

Method

Data

A survey instrument designed to determine how these theoretical tenets apply to music pirating behavior was administered in the fall of 2003 to a sample of undergraduate students at a large public university in the Midwest region of the United States. University populations have been used commonly in the criminology and criminal justice disciplines when attempting to test the empirical validity of certain criminological theories (Mazerolle and Piquero 1998; Nagin and Paternoster 1993). Furthermore, studies on the subject of cheating, plagiarism, and software piracy have employed similar methodological strategies (Agnew and Peters 1986; Buckley, Wiese, and Harvey 1998; Eining and Christensen 1991; Im and Van Epps 1991; Wong, Kong, and Ngai 1990). Finally, there is significant evidence

demonstrating that the university environment is rife with participation in digital song-swapping, fostered primarily because of the high-speed, dedicated Internet connections installed in residence halls (Davis 2003; Healy 2003; Hinduja 2006; Latonero 2000).

The survey contained a number of questions pertaining to both past and present downloading behavior in order to provide a comprehensive account of student involvement in music piracy. In addition, multiple measures of each of the four components of social learning theory as well as measures pertaining to an individual's self-control (measured attitudinally²) and moral beliefs regarding music piracy laws were also included. Finally, questions relating to respondents' demographic characteristics, type of Internet connection, and abilities to perform various actions online were included as controls in the study.

So as not to bias the responses, students were initially informed of the *general* purpose of the study, and after completion of the survey were debriefed as to its *exact* purpose. The voluntary and anonymous nature of the research was also emphasized in order to increase the likelihood of accurate and candid feedback from participants. To note, a pre-test was conducted on fifty-two undergraduate criminal justice students to assess the validity and reliability of the measures. The results indicated significant variation in music piracy participation to allow for statistical analysis.

Sample

In order to obtain a sample that would be generally representative of music pirating behavior in the undergraduate population as a whole, a purposive sampling procedure for heterogeneity was employed. This approach entails selecting a criterion that would likely produce variation in the outcome of interest, and then sampling based upon that criterion (Singleton and Straits 1999). For a sample of college students, area of study was the criterion believed to produce substantial variation in music piracy behaviors; thus, a three-stage approach was used to sample across college majors.

First, a list including the fifteen colleges of the university as well as the department and schools within these colleges was obtained. Then, three majors within each college were randomly selected so that specific classes within them could be identified. Finally, between one and two lower-level classes and between one and two upper-level classes were randomly selected from the chosen majors and the university's course catalogue. This sampling procedure produced a list of 185 potential classes eligible for survey administration. Correspondence was

then sent to the professors of these classes describing the nature of the study and requesting twenty minutes of class time to administer the survey. Professors representing 16 classes—relatively well-distributed across majors—gave permission for the researcher to administer the surveys. Despite the fact that permission was given in only 16 of 185 classes, a broad range of student majors were expected to be represented in those 16 courses due to their interdisciplinary content and because some were required for all undergraduates to take. Following listwise deletion of cases with missing data, 2,032 valid responses were obtained, and comprise the sample used in the following analyses.

To note, the study was restricted to undergraduate students because they are more representative of traditional conceptions of the "college population," and because one might argue that they are categorically different in many ways than those in graduate school. Nonetheless, the demographic question related to the respondent's year of study did include a "graduate school" answer choice in case a graduate student was enrolled in a higher-level undergraduate class to earn elective credits. Those who identified themselves as graduate students were removed from the analysis.

Table 1 displays descriptive statistics for the study The majority of respondents were female (56.7%), White (77.9%), and nineteen years of age or younger (57.6%). With regard to educational level, most respondents were freshmen (31.4%), followed by sophomores (28.9%), juniors (24.2%), and seniors (15.5%). Furthermore, almost a quarter of respondents were Social Science majors, and with the exception of Human Ecology and Engineering majors, students from the other five study areas each composed between 10-18 percent of the sample respectively. Finally, an overwhelming majority of the sample (88.9%) had high-speed Internet connections and most had engaged in a variety of Internet-related activities (e.g., shopped online, played games online, created a web page, participated in an online auction).

Measures

Dependent Variable

The primary outcome of interest in the study is the individual's level of participation in music piracy via illegal/unauthorized MP3 files. MP3 files are one of the most popular types of digital music, with hundreds of millions available online at any time (Black 2003; Sharman Networks 2005). They are also the most susceptible to piracy because they are largely without built-in copy pro-

tection mechanisms. That is, they can be created, distributed, duplicated, and burned to data or audio CD with no limitations. To note, these files should not be mistaken for (or confused with) the legal digital music files that are currently available online through legitimate outlets (such as Napster-to-Go, Apple's iTunes, RealNetworks' Rhapsody, Yahoo! Music, MSN Music, eMusic, and Pressplay).

Accordingly, thirteen questions regarding respondents' involvement in music piracy across various time frames were measured and combined into a single score using factor analysis with promax rotation (Eigenvalue=7.201, factor loadings > .59). Specific items composing the score were drawn from prior studies on MP3s conducted by various research firms (Angus Reid Worldwide 2000; Jay 2000; King 2000a; King 2000b; Latonero 2000; Learmonth 2000; Pew Internet & American Life Project 2000; Reciprocal Inc. 2000a; Reciprocal Inc. 2000b; Stenneken 1999; Webnoize 2000) and are included in Appendix A.

Responses—although dependent upon the exact question—were all ordinal in nature with the five categories representing incrementally more involvement in that particular behavior. The resulting measure, hereafter referred to as Level of Music Piracy, is indicative of the respondents' overall immersion in illegal/unauthorized MP3 downloading behavior. The use of such an approach in the current work has been supported by research examining other types of intellectual property theft (Rahim, Seyal, and Rahman 1999; Sims, Cheng, and Teegen 1996; Solomon and O'Brien 1990; Wood and Glass 1995). It should be noted that a constant of 1.69 was added to each subject's factor score to eliminate negative values for music piracy (\bar{x} =1.69, s.d.=1.00). This will allow for a more meaningful understanding of the phenomenon in the subsequent analyses and graphical presentations.

Independent Variables

Social Learning Variables. Fifteen individual questions in the survey were used to measure the four components of social learning theory: differential association, differential reinforcement, definitions, and imitation. Respondents were asked to consider their participation with illegal/unauthorized MP3s and state their level of agreement with each question. Potential responses included: "Strongly Disagree," "Disagree," "I do not participate with MP3s," "Agree," and "Strongly Disagree." Specific items for each learning component are included in Appendix A.

Differential association is a factor score composed of

four items reflecting respondent exposure to MP3 downloading via their real life acquaintances (Eigenvalue=2.42, factor loadings > .70). Differential reinforcement is a factor score composed of four items measuring the respondent's perceived rewards experienced from downloading music (Eigenvalue=2.84, factor loadings > .80). Definitions is a factor score composed of four items measuring the relevance of appropriate reasons and rationalizations in inducing pirating behavior (Eigenvalue=1.99, factor loadings > .66). Finally, *imitation* is a factor score composed of three items reflecting respondents' exposure to MP3 downloading via offline/online media sources and online acquaintances (Eigenvalue=1.69, factor loadings > .58). All items comprising each of the four factors were coded so that higher values indicated more offline or online exposure to music piracy, more definitions favorable to music piracy, and greater perceived rewards experienced from engaging in such behavior.

Low Self-Control. The survey instrument included six questions designed to measure an individual's selfcontrol. Each of the six questions were taken from the Grasmick et al. (1993) scale designed to reflect each of the six elements characteristic of individuals with low self-control. Potential responses to each of the questions were based on a five-point Likert scale ranging from "strongly disagree" to "strongly agree," and items were coded so that higher values indicated lower levels of selfcontrol. Principal components factor analysis, however, revealed that the measure was not unidimensional; only three of the six items loaded on a single factor. Items reflecting preference for simple tasks and preference for physical activity as well as self-centeredness were found to load on a single dimension. Thus, a factor score for these three items was created and used as the low selfcontrol measure (Eigenvalue=1.09, factor loadings > .58).

Ethical Belief in Music Piracy Laws. Four survey items were used to assess beliefs concerning music piracy laws. For each question, respondents were asked to consider circumstances involving their perceptions about the legality of MP3 downloading and whether these perceptions influence their downloading behavior. Potential responses were based on a five-point Likert scale ranging from whether they "strongly disagreed" to "strongly agreed" with each statement. Items were coded so that higher values reflected beliefs more favorable to downloading, and an *ethical beliefs* factor score was computed (Eigenvalue=2.24, factor loadings > .71).

Control Variables. Five variables were included in the study to serve as controls. Three demographic characteristics of the respondent, *gender* (male=1), *race*

(White=1), and age (20+=1), were included to account for potential demographic differences in downloading behavior. Internet connection was a dummy variable (high-speed=1; dialup/no connection=0) reflecting respondent connection speed for their Internet service. Finally, Internet proficiency3 was measured as an intervallevel variable indicating the number of online activities in which the respondent had participated, ranging from zero (coded as 1) to nine or more (coded as 5). Prior research has suggested that software pirates tend to be more male than female, younger than older, more comfortable and experienced with computers than novices, and more likely to own a personal computer than not (Hinduja 2001; Hinduja 2003; Rahim, Seyal, and Rahman 1999; Sims, Cheng, and Teegen 1996; Solomon and O'Brien 1990; Wood and Glass 1995). Other research has found both connection speed and computer usage are correlates of software piracy (Higgins and Makin 2004; Hinduja 2001; Hinduja 2003). As such, these variables are expected to be similarly related to music piracy.

Interaction Terms. Since the aim of the present study is to assess the extent to which low self-control and moral beliefs condition the effect that social learning components have on levels of music piracy, a brief description of the interaction terms is warranted. Following procedures outlined by Aiken and West (1991), product terms were computed for each of the four social learning components and each moderating variable (eight product terms in all). As all six of the variables used to create the product terms were factor scores with means equal to zero, mean centering of the component variables was not necessary. 4

Results

The current research endeavor purposes to empirically examine the extent to which the effects of social learning components on music piracy vary as a function of more stable traits such as low self-control and attitudes toward piracy laws. First provided is a general overview of downloading behavior for the sample. Next, bivariate correlations are presented to assess the nature of the relationships among the variables. Finally, OLS regression techniques are used to determine the existence of any interactions among the theoretical variables.

Participation in Music Piracy

Table 1 reports the study sample's participation in music piracy by showing responses to the question, "How many total MP3s have you downloaded over the course

		N = 2,0	32								
			Total MP3s ever downloaded								
Variable	Sample %	0	1-100	101-500	501-2000	2001+					
Sex											
Male	43.3 %	7.2 %	9.0 %	22.6 %	38.5 %	22.8 %					
Female	56.7	16.1	14.6	30.2	31.3	7.8					
Race											
White	77.9 %	10.7 %	11.1 %	27.2 %	36.3 %	14.7 %					
African American	10.1	24.8	15.5	24.8	22.8	12.1					
Asian	5.6	10.5	19.3	33.3	27.2	9.6					
Other	6.4	13.2	14.0	20.9	35.7	16.3					
Age											
19<	57.6 %	10.4 %	14.3 %	30.0 %	33.8 %	11.5 %					
20>	42.5	14.7	9.3	22.7	35.2	18.1					
Internet Connection											
High speed	88.9 %	10.0 %	11.5 %	27.6 %	36.0 %	15.1 %					
Dialup	8.3	27.4	22.0	20.2	20.8	9.5					
None	2.8	40.4	5.3	26.3	24.6	3.5					
Internet Proficiency											
No activities	2.9 %	42.4 %	11.7 %	13.5 %	25.4 %	7.0 %					
1-2 activities	14.4	22.5	16.7	32.4	21.2	7.2					
3-5 activities	38.9	14.0	14.7	29.8	32.4	9.1					
6-8 activities	31.9	6.2	9.1	26.4	43.1	15.3					
9+ activities	11.9	2.9	6.6	15.4	36.1	39.0					
Major											
Social science	24.8 %	15.3 %	12.5 %	25.0 %	34.0 %	13.1 %					
Business	12.0	10.2	12.7	27.5	34.0	15.6					
Natural science	11.7	13.1	11.0	27.8	33.3	14.8					
Comm. arts/sciences	10.6	6.5	10.6	20.4	10.7	21.8					
Engineering	6.9	7.1	7.9	27.1	37.1	20.7					
Human ecology	5.7	16.5	11.3	35.7	30.4	6.1					
Undecided	10.1	9.7	14.6	30.1	35.4	10.2					
Other	18.2	14.3	13.5	27.8	31.8	12.7					
Base % of sample	100.0 %	12.3 %	12.2 %	26.9 %	34.4 %	14.3 %					

of your life thus far?" Almost half of the study sample (48.7%) reported having downloaded at least 500 songs over the course of their lifetime. Furthermore, the majority of these songs were not obtained from personally-owned music CDs as only 30 percent listed that all or a small amount (30% or less) of their MP3s came from such sources.

Looking at piracy across sample demographics, males, older students, and Whites tended to be more frequently involved in illegal downloading behavior. In accordance with intuition, those with faster Internet connections as well as those most versed in Internet activities were also heavily involved as 15.1 percent and 39 percent respectively reported having unlawfully downloaded over two thousand songs. Finally, those majoring in Engineering

and Communication Arts and Sciences had downloaded more MP3 files. Overall, these results suggest that the study sample was quite active in pirating music files over the Internet.

Bivariate Analysis

Correlations among all of the variables included in the analysis (see Appendix B) revealed that all of the theoretical variables were significantly associated with music piracy, and that these associations were in the expected direction. An examination of the correlations along with tolerance levels for two initial regression models (not reported) indicated that multicollinearity existed among the social learning theory measures. This

Table 2. Differential Association Predicting Music Piracy

N = 2,032

_	ı	Model 1		Model 2						
Variable	b	S.E.	В	b	S.E.	В				
Diff. association	.29 ***	.02	.29	.22 ***	.02	.22				
Low self-control	.06 **	.02	.06	_	_	_				
DA X LSC	06 **	.02	06	_	_	_				
Ethical beliefs	_	_	_	.16 ***	.02	.16				
DA X EB	_	_	_	004	.02	004				
Male	.44 ***	.04	.22	.44 ***	.04	.22				
Age (20+)	.08 *	.04	.04	.09 *	.04	.04				
White	08	.05	03	10 *	.05	04				
Internet connection	.29 ***	.06	.09	.29 ***	.06	.09				
Internet proficiency	.24 ***	.02	.23	.25 ***	.02	.24				
Constant	.45 ***	.09		.46 ***	.09					
R^2		.26 *	**		.28 ***	*				
	***p<.0	01 *	*p<.01	*p<.05						

was particularly apparent for the measures of differential association, differential reinforcement, and their respective interaction terms as their correlations were all near or above .70 and the variance inflation factors for these variables in the initial regression models were all greater than two. This is not too alarming, however, as Akers himself specifically stated that the elements are not conceptually distinct and that interrelationships do exist (Akers 1977; Akers, Krohn, Lanza-Kaduce, and Radosevich 1979). Due to the presence of multicollinearity, eight separate OLS regression models were run (e.g., one model for each learning component with each moderating variable) to test for interactive effects.

Multivariate Analysis

Tables 2 through 5 show the results of the OLS regression models. To answer the primary research question of whether an individual's self-control and/or beliefs toward piracy laws condition the effect that social learning has on levels of music piracy, it should be noted that four of the interaction terms in the models are statistically significant. Specifically, the results indicate that the effect of differential association on levels of music piracy varies as a function of one's self-control (Model 1; B=-.06), the effect of differential reinforcement on levels of music piracy varies as a function of one's self-control (Model 3; B=-.07) and beliefs regarding piracy laws (Model 4;

Table 3. Differential Reinforcement Predicting Music Piracy

N = 2,032

<u>-</u>		Model 3		Model 4				
Variable	b	S.E.	В	b	S.E.	В		
Diff. reinforcement	.40 ***	.09	.40	.36 ***	.02	.36		
Low self-control	.07 ***	.02	.07	_	_	_		
DR X LSC	07 ***	.02	08	_		_		
Ethical beliefs	_	_	_	.12 ***	.02	.12		
DR X EB	_	_	_	.05 **	.01	.06		
Male	.42 ***	.04	.21	.41 ***	.04	.20		
Age (20+)	.10 **	.04	.05	.11 **	.04	.05		
White	05	.04	02	07	.04	03		
Internet connection	.18 **	.06	.06	.20 **	.06	.06		
Internet proficiency	.21 ***	.02	.21	.22 ***	.02	.21		
Constant	.62 ***	.09		.60 ***	.09			
R^2		.33 **	*		.33 ***	:		
	***p<.0	01 **	p<.01	*p<.05				

Table 4. Imitation Predicting Music Piracy N = 2,032Model 5 Model 6 b Variable S.E. В b S.E. В Imitation .09 *** .02 .09 .04 * .02 .04 Low self-control .04 .02 .04 I X LSC -.01 .02 -.01 Ethical beliefs .23 .02 .23 I X EB .04 .04 .02 .44 .04 .22 .43 .21 Male .04 Age (20+) .03 .04 .02 .06 .04 .03 White .02 .05 .01 -.03 .05 -.01 Internet connection .42 .07 .13 .36 *** .06 .11 .26 *** Internet proficiency .27 .02 .26 .02 .25 .30 ** Constant .19 .09 .09 R^2 .24 *** .19 ***p<.001 **p<.01 *p<.05

B=.05), and the effect of imitation or modeling on levels of music piracy varies as a function of one's beliefs regarding piracy laws (Model 6; B=.04).

In order to assess the nature of these interactions, the approach of Aiken and West (1991) was followed and MODGRAPH (Jose 2002) was used to plot the simple regression slopes at three different values for each moderating variable (See Figure 1). In the graphs, the middle or "medium" line represents the simple regression slope when the moderating variable is held at its mean; the line labeled "high" is the simple regression slope when the moderating variable is set at one standard deviation above the mean of the moderating variable; and the line labeled "low" constitutes the simple regression slope when the

moderating variable is set at one standard deviation below the mean of the moderating variable. The nature of the interaction is determined by the divergence—or "fan effect"—of the slope lines.

Based upon Figure 1a, self-control has the greatest impact under low levels of differential association. In other words, individuals with few friends and acquaintances in real life who download music report differential levels of music piracy depending upon their levels of self-control. Those with low self-control report higher levels of music piracy than those with greater self-control. Conversely, self-control makes no difference when individuals have more real-life friends and acquaintances that download music. Thus, greater self-control seems to

N = 2,032													
		Model 7		Model 8									
Variable	b	S.E.	В	b	S.E.	В							
Definitions	.13 ***	.02	.13	.05 *	.02	.05							
Low self-control	.03	.02	.03	_	_	_							
D X LSC	.03	.02	.03	_	_	_							
Ethical beliefs	_	_	_	.22 ***	.02	.22							
D X EB	_	_	_	.03	.02	.03							
Male	.45 ***	.04	.22	.43 ***	.04	.21							
Age (20+)	.03	.04	.01	.06	.04	.03							
White	02	.05	01	05	.05	02							
Internet connection	.41 ***	.07	.13	.35 ***	.06	.11							
Internet proficiency	.27 ***	.02	.26	.27 ***	.02	.26							
Constant	.21 *	.09		.30 **	.09								
R^2		.20 ***	:		.24 **								

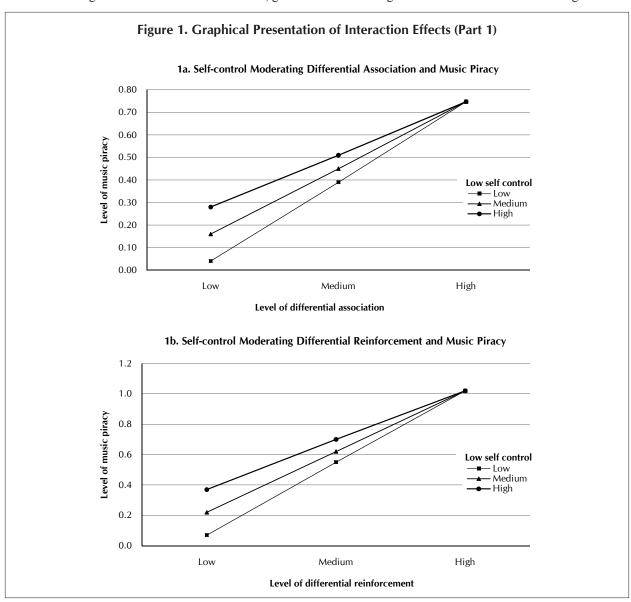
benefit individuals with less real life exposure to music piracy; individuals who associate with others who pirate music engage in high levels of piracy regardless of their level of self-control.

Figures 1b and 1c illustrate the nature of the conditional effects of self-control and beliefs regarding piracy laws on differential reinforcement and levels of piracy. Again, self-control has the greatest impact under low levels of differential reinforcement. Individuals who do not perceive or experience positive rewards from pirating music report differential levels of piracy depending upon their level of self-control. In these cases, those with low self-control also report higher levels of music piracy than those with greater self-control. In this sense, greater

self-control acts as a buffer against the effect of perceived rewards on music piracy under conditions of low reinforcement.

In contrast, beliefs regarding piracy laws exert their greatest impact under high levels of differential reinforcement. Those who find that pirating music is highly rewarding report differential levels of piracy depending upon their views of piracy laws. At this level, individuals who do not believe in the legality of piracy report higher levels of piracy than those who hold more views favorable to the law.

Figure 1d shows the nature of the interaction of beliefs on imitation and music piracy. Here, a small "fan effect" is seen at high levels of imitation. Those with greater ex-



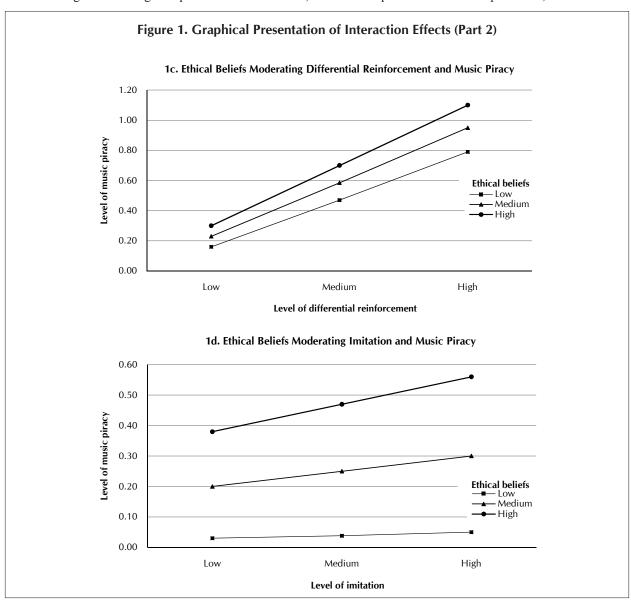
posure to piracy through online and media sources report differential levels of piracy depending upon their beliefs in piracy law. Those with beliefs unfavorable to the law tend to report higher levels of piracy at this level. Thus, belief in piracy laws tends to act as a weak buffer against the effect of online exposure on music piracy when such exposure is high.

When examining the independent effects across all eight models, support is consistently found for the four learning variables, low self-control, and ethical beliefs. When holding the moderating variables at their means, the effects of the learning components are both significant and positively related to music piracy. Likewise, when holding the learning components at their means,

low self-control and ethical beliefs are also generally significant and positive (self-control in Models 5 and 7 are exceptions). Consistent, positive effects are also found for gender, type of Internet connection, and Internet proficiency indicating that these control variables are also important predictors of music piracy.

Conclusion

The current study set out to explore the interactive effects that the components of social learning theory, individual self-control, and ethical beliefs in the law have on levels of music piracy. Specifically tested was whether relationship between one's exposure to, and reinforce-



ment of, music piracy varied as a function of more stable psychological traits and beliefs. The results indicated that self-control conditioned the effect that differential association and differential reinforcement had on levels of music piracy. Similarly, ethical beliefs in piracy laws conditioned the effect that differential reinforcement and imitation had on levels of music piracy. Before policy implications for these findings are discussed, some limitations of the study must be noted.

First, a probability sampling technique was not utilized. While the characteristics of the current sample allow for sufficient examination of music piracy among college students, it is not representative of the total population of college students. Accordingly, conclusions should be drawn only for the current population under study. Nonrespondent bias may have occurred in that those who had pirated music may have been less forthright in their responses than those who did not because of its inherently questionable nature (Seale, Polakowski, and Schneider 1998). Self-serving bias – where individuals demonstrate a tendency to view themselves more favorable than not – may also have been evident among respondent's choices (Babcock and Loewenstein 1997; Cross 1977).

Certain problems were present regarding the measurement of self-control. This was likely due to the fact that only one measure for each of the six traits was taken, increasing the likelihood for the presence of measurement error. The fact that only three of the six dimensions were found to load on a single factor further indicates that our measure may not have fully tapped the concept. Unfortunately, it was not possible to utilize all twenty-four measures of the Grasmick et al. (1993) scale due to the need to constrain the length of the survey. The six self-control measures that were used were selected based on the findings of the pretest.

Relatedly, some of the negative findings associated with the interaction terms where self-control was included as the moderating variable contradict prior findings that suggest a positive interaction with both occupational delinquency (Gibson and Wright 2001) and software piracy (Higgins and Makin 2004). These findings may be due to the fact that self-control and differential reinforcement and differential association were negatively correlated. Again, this may be due to the dimensions of self-control assessed. For example, students who are more self-centered – which corresponds to one of the three dimensions included in the measure—may in general have fewer friends in real life, which could account for the negative correlations.

A few final points are worthy of mention. The criminal justice students in the pretest may have been atypical

of their peer group and perhaps more sensitive to questions related to deviance or crime. The possibility also exists that overall music piracy participation may have been underreported due to the tendency of individuals to provide socially desirable answers (Seale, Polakowski, and Schneider 1998). Recall bias may have affected the accuracy of responses (Himmelweit, Biberian, and Stockdale 1978; Horvath 1982; Morgenstern and Barrett 1974). All of these limitations should be taken into account when interpreting the results of the study.

In spite of these limitations, participation in IP theft appears to be highly influenced by social learning components. The impact of these external factors also appears, to a certain extent, to be conditioned by self-control and morality - which are both internal and less variable in nature. Tittle (1980) has stated that levels of wrongdoing may be decreased if laws are crafted and made known defining the behavior as illegal and prescribing penalties for its violation. The frequency and extent of IP theft online, however, is not sizably reduced through the reactive litigious strategies employed by the music recording industry (Bowman 2003; CNN.com 2004; Dean 2003). The behavior of software pirates tends to be policed by their conscience (e.g., Athey 1993; Athey and Plotnicki 1994; Landsheer, Hart, and Kox 1994), and perceptions related to moral appropriateness (Glass and Wood 1996; Higgins and Makin 2004; Kini, Ramakrishna, and Vijayaraman 2004; Seale, Polakowski, and Schneider 1998; Solomon and O'Brien 1990; Taylor and Shim 1993; Thong and Yap 1998) seem to meaningfully inhibit pressures from sources of behavioral learning. As such, strategies that enhance moral misgivings and that sensitize society to them may be the only viable solution. This can occur through ethics modules in introductory information technology classes, increased oral and written reminders that prick the conscience and remind individuals of acceptable computer and network usage, and increased awareness of recording industry and recording label employees (such as audio engineers, album producers, and marketing professionals) who are victimized when piracy undercuts the profit from CD album sales and legal music downloads that supports their paychecks.

Tyler (1996) argues that individuals will cooperate with laws they believe are legitimate and that cohere with their conceptions of what is right. On the surface, it seems too difficult to address such a fundamental belief and behavior pattern among members of a society that have become accustomed to obtaining software, movies, music, and information for free on the Internet. Nonetheless, it appears essential if respect for intellectual property is to be engendered and maintained, which consequently will

improve not only the economic and creative vitality of America, but also its moral fabric as well.

Endnotes

- 1. For the scope of the current work and the constructs we are testing, we interchangeably use terms such as "morality" and "ethics" (or "moral beliefs" and "ethical beliefs"). We believe that such usage is appropriate in order to connect this research to the larger body of criminological literature on moral beliefs.
- 2. Self-control can be measured by focusing on an individual's attitudes and tendencies, or on specific actions in which he or she participates. Pratt and Cullen's (2000) meta-analysis identified eighty-two attitudinal measures and twelve behavioral measures of self-control, and found evidence demonstrating that employing one type of measure over the other will not significantly affect the predictive capacity of self-control. The choice was therefore made to utilize attitudinal measures because they are more aptly characterized with ethical beliefs towards law than are specific actions that demonstrate self-control.
- 3. To measure Internet proficiency, the respondent was asked how many of the following he or she had done: "changed my browser's 'startup' or 'home' page," "made a purchase online for more than \$100," "participated in an online game," "participated in an online auction," "changed my 'cookie' preferences," "participated in an online chat or discussion (not including email, ICQ, or AOL Instant Messenger, or similar instant messaging programs)," "listened to a radio broadcast or music clip online," "made a telephone call online," "created a web page," and "set up my incoming and outgoing mail server preferences."
- 4. Aiken & West (1991) suggest that subtracting the means from each subject's individual value on both predictors before computing the product term can be useful in addressing problems associated with multicollinearity and the interpretation of regression coefficients.
- 5. It should be noted that when examining interaction effects, their exact contribution to the analysis should be assessed to determine if their inclusion explains a significantly greater portion of the variance than more parsimonious models which excludes the interaction terms. This is done by conducting F tests comparing the proportion of variance explained by the full models with interaction effects to the restricted models excluding them

(Allen, 1997:120). Such tests were conducted for the four models with significant interaction effects, and the results (available upon request) indicated that including the interaction terms explained a significantly greater proportion of variance than their respective, restricted model. Specifically, the F tests were as follows: Differential Association and Low Self-Control (F=13.72; p<.01); Differential Reinforcement and Low Self-Control (F=21.07; p<.01); Differential Reinforcement and Ethical Beliefs (F=5.27; p<.05); and Imitation and Ethical Beliefs (F=6.02; p<.05). The results indicate that for these models, inclusion of the interaction terms significantly enhances their predictive capacity.

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Appendix A. Item Measures of Dependent and Theoretical Variables

Level of Music Piracy (Eigenvalue = 7.20, factor loadings > .59)

Subjects were asked to respond to the following statements based upon their present and prior participation with illegal/unauthorizedMP3s. Possible responses were based on a five-point Likert scale ranging from "0" to "More than 20" for questions 1, 5, 7, & 12; "0" to "More than 100" for questions 2, 4, 6, & 8; "0" to "More than 250" for question 3; "0" to "More than 1,000" for questions 9, 10, & 11; and "0" to "2,001+" for question 13.

- 1) How many MP3 files downloaded in the last week?
- 2) How many MP3 files downloaded in the last month?
- 3) How many MP3 files downloaded since the beginning of 2003?
- 4) How many MP3s do you, on average, download per month?
- 5) How many did you download in an average week exactly one year ago?
- 6) How many did you download in an average month exactly one year ago?
- 7) How many did you download in an average week exactly two years ago?
- 8) How many did you download in an average month exactly two years ago?
- 9) How many MP3 files did you personally download in 2002?
- 10) How many MP3 files did you personally download in 2001?
- 11) How many MP3 files did you personally download in 2000?
- 12) How many total complete music albums in MP3 format have you obtained online?
- 13) How many total MP3s have you downloaded over the course of your life thus far?

Social Learning Components

Subjects were to consider their participation with illegal/unauthorized MP3s and indicate their level of agreement to the questions based on a five-point Likert scale ranging from Strongly Disagree (1), Disagree (2), I do not participate with MP3s (3), Agree (4) and Strongly Agree (5).

Differential Association (Real Life Exposure) (Eigenvalue = 2.42, factor loadings > .70)

- 1) My friends support my MP3 usage.
- I associate with others in real life (e.g. offline) who are supportive of my MP3 usage.
- 3) I was introduced by another person in real life to MP3s.
- 4) I have learned the techniques of using MP3s from my friends.

Differential Reinforcement (Eigenvalue = 2.84, factor loadings > .80)

- 1) It is a great benefit to sample new music through MP3s.
- It is a great benefit to be able to transfer assorted MP3s onto an audio/data CD or a portable MP3 player so that I can have music on-the-go.
- It makes me feel good to download a song that I have wanted.
- 4) It is a great benefit to me to be able to access music freely.

Imitation (Online/Media Exposure) (Eigenvalue = 1.69, factor loadings > .58)

- I have learned the techniques of using MP3s from television or print media.
- I have learned the techniques of using MP3s from online sources (web pages, chat rooms).
- 3) I associate with others online who exchange MP3s with me.

Definitions

(Eigenvalue = 1.99, factor loadings > .66)

- One of the reasons I download MP3s is because I *will not* purchase the music.
- One of the reasons I download MP3s is because I feel the recording industry has been overcharging the general public for music tapes and CDs.
- 3) One of the reasons I download MP3s is because many musicians and the recording industry make millions of dollars anyway, and downloading MP3s of their songs does not really cut into their income.
- One of the reasons I download MP3s is because I think music should be free.

Self-Control

(Eigenvalue = 1.09, factor loadings > .58)

Respondents were asked to reflect on their personality and indicate their level of agreement for each statement. Potential responses were based on a five-point Likert scale ranging from: Strongly Disagree (1), Disagree (2), Neutral (3), Agree (4), or Strongly Agree (5). Items were coded so that higher scores represented lower levels of self-control.

- 1) When things get complicated, I tend to quit or withdraw.
- I try to look out for others first, even if it means making things difficult for myself.
- I feel better when I am on the move rather than sitting and thinking.

Belief in Piracy Laws (Eigenvalue = 2.24, factor loadings > .71)

Respondents were asked to consider situations and circumstances which would make them more likely to participate with illegal/unauthorized MP3s:

- since there are no clear-cut rules, laws, regulations, or even guidelines when it comes to MP3 file exchange.
- because any rules or laws that seek to prevent individuals from exchanging MP3s are misguided and ill-conceived.
- 3) if it were known that law enforcement agencies, universities, and authorities in general couldn't care less about MP3 file exchanges, lack adequate abilities to detect, or combat the activity or have bigger things to worry about.
- Because hardly anyone has been caught or punished or has been subject to even the slightest repercussions for Internet distribution.

Potential responses were based on a five-point Likert scale ranging from: Strongly Disagree (1), Disagree (2), Neutral (3), Agree (4), or Strongly Agree (5).

Appendix B. Correlations among Study Variables

	LMP	DA	DR	ı	D	LSC	LSCxDA	LSCxDR	LSCxI	LSCxD	EB	EBxDA	EBxDR	EBxI	EBxD	м	w	Α	IC	IP	
	(Y)	(X1)	(X2)	(X3)	(X4)	(X5)	(X6)	(X7)	(X8)	(X9)	(X10)	(X11)	(X12)	(X13)	(X14)	(X15)	(X16)	(X17)	(X18)	(X19)	
(Y)	1.00																				
(X1)	.33 **	1.00																			
(X2)	.45 **	.68 **	1.00																		
(X3)	.11 **	04 *	01	1.00																	
(X4)	.14 **	.22 **	.23 **	.26 **	1.00																
(X5)	.05 *	08 **	08 **	.00	.06 **	1.00															
(X6)	05 *	.06 **	.08 **	.00	.07 **	.00	1.00														
(X7)	02	.07 **	.15 **	.01	.05 *	02	.74 **	1.00													
(X8)	02	.01	.01	05 *	.03	.08 **	.01	.00	1.00												
(X9)	.03	.07 **	.05 *	.03	.01	.02	.28 **	.25 **	.24 **	1.00											
(X10)	.27 **	.39 **	.38 **	.15 **	.37 **	01	.04 *	.04	01	.04	1.00										
(X11)	05 *	18 **	24 **	.02	.01	.04	12 **	13 **	03	07 **	07 **	1.00									
(X12)	07 *	23 **	34 **	.04	02	.04	13 **	13 **	02	05 *	12 **	.78 **	1.00								
(X13)	.10 **	.02	.05 *	.14 **	.02	01	02	01	.03	.04	.07 **	.15 **	.12 **	1.00							
(X14)	.08 **	.01	02	.02	.12 **	.03	03	02	.05	.02	.00	.35 **	.33 **	.39 **	1.00						
(X15)	.30 **	.05 *	.09 **	.09 **	.03	.04	01	.01	.00	02	.05 *	.03	.03	.07 **	.06 **	1.00					
(X16)	.05 *	.15 **	.10 **	12 **	.03	06 **	.03	.03	.02	.03	.08 **	03	03	01	.02	.02	1.00				
(X17)	.03	08 **	09 **	.02	.02	02	05 *	05 *	02	.02	06 **	.02	.03	03	.02	.03	.00	1.00			
(X18)	.17 **	.17 **	.21 **	05 *	.02	01	02	01	01	01	.10 **	08 *	08 **	.03	.04	.03	.18 **	11 *	1.00		
(X19)	.34 **	.13 **	.18 **	.06 **	.01	.03	.00	.02	03	01	.05 *	.01	01	.05 *	.08	.24 **	.10 **	* 80.	.13 **	1.00	
								**	0<.01	*p<.	.05 (two-	tailed)									
LMP -	- Level o	f Music P	iracy			1 -	- Imitatio	n		EB = Ethical Beliefs						A = Age (+20)					
DA =	Different	tial Assoc	iation			D	- Definit	ions			М	- Male							et Conne	ction	
DR =	Different	ial Reinfo	rcement			LS	C = Low	Self-Con	trol		W	- White					IP	- Interne	et Proficie	ency	