

2004

Deterrence factors for copyright infringement online

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DETERRENCE FACTORS FOR COPYRIGHT INFRINGEMENT ONLINE

A Thesis

Submitted to the Graduate Faculty of the
Louisiana State University and
Agricultural and Mechanical College
in partial fulfillment of the
Requirements for the degree
Master of Mass Communication

in

The Manship School of Mass Communication

by
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B.A., Tbilisi State University, Tbilisi, 1997
May 2004

ACKNOWLEDGEMENTS

First of all, I would like to express my enormous gratitude to Dr. Xigen Li, my thesis chair. His invaluable advices made it possible for me to complete my project. He has inspired and guided me through every step of my research.

I would like to thank Dr. Renita Coleman, whose insightful comments made it much easier for me to complete the project.

I would like to express profound thanks to Dr. Ralph Izard, whose advice, support and encouragement were priceless throughout my stay in the Louisiana state University.

I also want to thank to those who contributed to my presence at Louisiana State University and the Manship School of Mass Communication. These are Maia Mikashavidze, Dean, Caucasus School of Journalism and Media Management; Margie Freaney, Academic Director, Caucasus School of Journalism and Media Management; Dr. John Hamilton, Dean, Manship School of Mass Communication. I am grateful because being involved in the graduate program has given me a wonderful opportunity to participate as a member of Western educational infrastructure and the Western intellectual culture.

I specially thank my friends Anna Keshelashvili, Badri Koplatadze and Guga Sulkhanishvili for creating ideal conditions for study.

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ABSTRACT

The purpose of this study was to investigate deterrence factors for online file-sharing by analyzing different conditions that affect compliance with the law through survey of the students in a large university in Southern U.S.

The findings show that certainty of punishment, stigma of the label, knowledge of the laws and consensus with the rule negatively correlated with both actual and likely future file-sharing activities of the users.

CHAPTER 1

INTRODUCTION

The purpose of this study is to investigate deterrence factors for online file-sharing by analyzing different conditions that affect compliance with the law through survey of the students in a large university in Southern U.S.

The Internet has grown tremendously in recent years. It is growing so fast that researchers are not able to keep up with its current size and its growth capabilities. Reports show that 40 million people connected to the Internet by 1995. By the millennium, this number has reached 100 million, and researchers predict that by 2005 one billion users will be connected to the Internet (Applegate et al., 1999). As of 1999 at least 33 percent of homes in the United States had Internet access.

The development of computing and communications technologies has altered considerably the way in which communities function. It has created benefits for education, recreation and commerce and has drastically changed the nature of modern workplaces and employment patterns (Grabosky & Smith, 2001). At the same time, the Internet has created unprecedented opportunities for crime (Grabosky & Smith, 1998, Grabosky, Smith & Dempsey, 2001, Grabosky & Smith, 2001).

One new type of crime is cyberpiracy, which is “the appropriation of new forms of intellectual property that have been created or popularized within cyberspace” (Wall, 2001, p.5). These are computer programs, which in the form of the digital code create “virtual products,” such as images, music, office aides and interactive experience (Wall, 2001). The appropriation of these “virtual products” does not deprive the owner of their

use (Smith & Hogan, 1999), which is one of the legal definitions of theft. However, the threat to owner comes from the dilution of their control over intellectual property. The term “dilution” is used in intellectual property laws to describe the reduction in value caused by unrestricted use (Wall, 2001).

The common targets of cyberpiracy are movies, computer games, and computer programs. The most popular objects of piracy, however, are songs encoded in MP3 format.

Today copyright conglomerates are trying to deter the cyberpiracy by suing individual file-sharers. This way they are trying to set example for everyone and scare people away from sharing copyrighted material.

The study attempted to test different factors producing deterrent effect on file-sharing and show what are the deterrence factors for file-sharing online. The researcher chose general deterrence model for explaining the different factors that affect compliance with the law.

Before carrying out the study, the researcher reviewed literatures on the following topics: cyberpiracy, legal framework of copyright infringement and general deterrence model.

The researcher chose to undertake a large pilot study before launching a full-scale project. One of the advantages of conducting a pilot study is that it might give advance warning about where the main research project could fail, where research protocols may not be followed, or whether proposed methods or instruments are inappropriate or too complicated.

These are important reasons for undertaking the pilot study, but there are additional reasons, for example convincing funding bodies that research proposal for the main study is worth funding

CHAPTER 2

LITERATURE REVIEW

In the following sections, the researcher will review relevant literature on the topics of cyberpiracy, legal framework of copyright infringement online and general deterrence model.

2.1 CYBERPIRACY

2.1.1 The Technology Behind the Cyberpiracy

The MP3 (full name MPEG-1 Audio Layer 3) is an audio compression format, which works by drowning out various tones which are imperceptible to the listener (Thomas, 1999). It thereby compresses the file without any noticeable deterioration in sound quality and digitally codes the remainder for storage. Digitalization is the process of converting information that is comprehensible to a human into information, which can be understood by a computer. This facilitates the process of supplying music on the internet, as it takes less memory space on the computer and is easier to download (Carey & Wall, 2001). As long as the appropriate free software is available, then the music can be downloaded from the internet to either be played through the computer's sound system or downloaded to a portable MP3 player or onto a CD-ROM or mini-disc.

It is useful to split MP3 distributors into two categories, legal and pirate. The legal, professionally-run internet music providers, such as Apple's iTunes, do not infringe copyright laws and carry only licensed files. Of much greater concern to the major record labels are the pirate providers, which post unlicensed recordings of copyrighted material in MP3 (Carrey & Wall, 2001).

There are different ways in which a person can supply and obtain uncopyrighted material on the Internet. It is possible to create a web page, from which any visitor can download the files. This method was popular in the late 90s, but now is rarely used. The second, easier method is the use of what is commonly called peer-to-peer file-sharing technology.

To copy MP3 files through file-sharing programs, users must first access Internet sites and download the software to their individual computers. After the software has been installed, users are able to gain access to the peer-to-peer file-sharing system (Landau, 2002). After this, they can make MP3 music files stored on individual computer hard drives available for copying by other users, search for MP3 music files stored on other users' computers and transfer exact copies of the contents of other users' MP3 files from one computer to another via the Internet (Landau, 2002).

2.1.2 The People behind the Cyberpiracy

Just how many people are using these programs to trade files? The first and most famous file - sharing program, Napster, had 10.8 million unique users in March 2001 (Alderman, 2001). The number of users since then has increased tremendously. From March to August of 2001 the increase in usage was 500 percent (Pastore, 2001). On October 5, 2003 www.slyck.com, which monitors file-sharing applications showed 7, 85 million simultaneous users on nine different file-sharing networks.

Data gathered from surveys fielded during March - May of 2003 show that a striking 67% of Internet users who download music say they do not care about whether the music they have downloaded is copyrighted. A little over a quarter of these music

downloaders - 27% - say they do care, and 6% said they don't have a position or know enough about the issue (Madden & Lehnhart, 2003).

42% of downloaders share files. File-sharers are 21% of the Internet user population – or about 26 million people. File-sharers are equally as likely to be men or women, and equally as likely to be white, black or Hispanic (Madden & Lehnhart, 2003). They are more likely to be younger, with 31% of the youngest adults aged 18 to 29 sharing files. The percentage of file-sharers among Internet users drops steadily with age, with 18% of those 30 to 49 sharing files down to 15% of those Internet users 50 and older (Madden & Lehnhart, 2003).

2.2 LEGAL FRAMEWORK OF COPYRIGHT INFRINGEMENT

2.2.1 Types of Copyright Infringement

Cyberpiracy, together with other methods of unauthorized use of a copyrighted work, are monitored by copyright law. The unauthorized use of a copyrighted work constitutes infringement, which entitles the owner to monetary or injunctive relief. There are three basic types of copyright infringement: direct infringement, contributory infringement, and vicarious liability (Cunard & Wells, 1997).

Direct infringement occurs when a party violates any of the exclusive rights given to the copyright owner. Contributory infringement is a form of third-party liability that stems from the notion that one who directly contributes to another's infringement should be held accountable. Vicarious liability offers a second theory of third-party liability that allows the copyright owner to hold an individual accountable for the infringing actions of another (Jacover, 2002).

2.2.2 Digital Millenium Copyright Act

In 1998 the United States Congress updated copyright law for the digital age in preparation for ratification of the World Intellectual Property Organization (WIPO) treaties and passed the Digital Millennium Copyright Act (DMCA), addressing several significant copyright-related issues (Lohmann, 2002).

Key among the topics included in the DMCA are provisions concerning the circumvention of copyright protection systems, fair use in a digital environment, and online service provider liability, including details on safe harbors, damages, and "notice and takedown" practices (Lohmann, 2002).

2.2.3 Legal Actions against Online Copyright Infringement

Various copyright conglomerates, such as the American Society of Composers, Authors and Publishers (ASCAP), Broadcast Music, Inc (BMI), and the Recording Industry Association of America (RIAA), have aggressively pursued legal remedies on the Internet with various success (Jacover, 2002)

In the first major move against the online file-sharing, RIAA commenced an action against Napster, Inc., seeking to at least force the company to prevent material owned by its members from being catalogued on the Napster database. On July 26th, 2000, U.S. District Judge Marilyn Patel ruled in favor of the record industry and ordered Napster to stop allowing copyrighted material to be swapped over its network by midnight two days later. Napster appealed several times, postponing its shutdown, but was forced to stop operations by the end of 2001 (Menn, 2003).

Two years later, however, Judge Stephen Wilson of U.S. District Court in Los Angeles ruled that two other file-sharing networks, Grokster and Streamcast could not be

held liable for copyright infringement committed by their users. These networks, unlike Napster, do not have the centralized structure and cannot directly control which files are swapped using their applications (Landau, 2002).

In January 2003, the RIAA won a landmark case against Verizon, forcing the company, under the provisions of the 1998 Digital Millennium Copyright Act, to release the names of subscribers who were suspected of copyright infringement. Verizon appealed the ruling, citing customer privacy concerns and the lack of court oversight required for the subpoena process. However, the ruling was ultimately upheld and paved the way for the recording industry and other copyright holders to begin suing individuals believed to be infringing on copyright protections.

In July 2003 RIAA started to sue individual file traders. According to the September 19 Reuters report, RIAA says this is a long-term campaign, aimed at reducing online copyright infringement and it hopes that rigid enforcement of copyright laws will prevent users from sharing files online and ultimately greatly reduce the number of online file sharers.

RIAA tries to deter future online copyright infringement by strictly following the law. Deterrence Model explains when the compliance can be achieved through general deterrence.

2.3 DETERRENCE MODEL

2.3.1 Overview of Deterrence Model

According to Merriam Webster's Collegiate Dictionary, deterrence is "the inhibition of criminal behavior by fear especially of punishment." In Sociology of Crime deterrence refers specifically to the prevention of future crime by an individual or the

overall population (Silver, 2002). The term became popular with the Classical School of thought in the 1800's and it again attained recognition in the late 1960's (Silver, 2002).

The deterrence theory was first conceived by the members of the Classical School of thought. Previously evil spirits were considered as the cause of crime. In 1764, Cesare Beccaria, member of the Classical School of thought, offered a more rational explanation in his book "On Crimes and Punishments." He based the new theory on the concepts of hedonism and rational choice. (Silver, 2002). Beccaria and other Classicists, most notably Bentham argued that people are hedonistic, they seek pleasure and avoid pain and that they make choices when evaluating the costs and benefits of their actions before committing a crime.

Certainty, celerity, and sufficient severity are the three main principles that make up the foundation of Classical theory. Criminal behavior should be punished and the punishment should be swift and harsh enough to outweigh the imagined benefits to be obtained by the perpetrator (Brown et al, 2001). However, if the penalty is excessively cruel, this will result in opposition of the desired deterrence effect.

Applied sanctions can be legal or extralegal in nature. Thus, corrective measures can include formal sentencing by law enforcement as a legal means, or shame, embarrassment, and ostracism as extralegal means (Brown et al, 2001)

In the nineteenth century, positivists challenged deterrence theory and replaced it with the theory of biological predisposition. This Positivist School of thought believed that criminals were in some way dissimilar to noncriminals. Positivists thought there was a biological or physical reason why some people were different from others (Brown et al, 2001).

In the late 1960's the biological approach was replaced by sociology and deterrence reappeared as an accepted rationale for punishment. Scholars such as William Chambliss (1966), Jack Gibbs (1968) and Charles Tittle (1969) reframed deterrence logic within the context of criminological and sociological theories of deviance (Mendes & McDonald, 2001).

There are two types of deterrence general and specific. General deterrence is directed at all of society, thus when others are punished for a particular behavior, the public observes and learns from this and in turn refrains from committing deviant acts. Conversely, specific deterrence is aimed at the individual person, so when they are punished for a criminal act, this averts them from committing future crimes (Brown et al, 2001).

Since the study focuses on the attempts of the copyright protection agencies to deter online copyright infringement by punishing few file-sharers, it is appropriate to focus on the general deterrence.

Deterrence model states that the deterrent effect of the criminal law varies considerably under different conditions, and the potential for more effective crime control within the deterrence model is limited by reasonably well known parameters. Although the deterrence model is not self-sufficient as a crime-control policy, it does offer the variables that greatly affect compliance with the law (Wood, 1974).

Deterrence studies focusing on the certainty and severity of sanctions have been a staple of criminological research for more than thirty years (Nagin & Pogarsky, 2001). Two prominent findings from this literature are that punishment certainty is far more consistently found to deter crime than punishment severity, and the extra-legal

consequences of crime seem at least as great a deterrent as the legal consequences (Nagin, 1998; Williams & Hawkins, 1986). Going back to Beccaria, punishment swiftness (“*celerity*”) has been accorded co-equal status with certainty and severity in theory, yet empirical tests of the celerity effect are scant.

2.3.2. Severity

Evidence for severity (Piquero and Rengert, 1999; Klepper & Nagin, 1989; Nagin & Paternoster, 1993; Decker et al 1993) and celerity (Howe & Loftus, 1996; Legge and Park, 1994; Yu, 1994) effects is inconclusive.

Severity is often found to be of a little consequence for deterrence theory. After considering the results from a deterrence studies from the 70s, Anne Witte remarked that “changes in the probabilities and of conviction and imprisonment have a greater effect on crime rates than do changes in expected sentence length” (Witte, 1983, p. 3). There is very little evidence that severity of penalties are inversely related to the level of offences (Decker & Kohfeld, 1990). Deterrent effects of severity are still disputed (Mendes & McDonald, 2001).

2.3.3. Celerity

Celerity, as deterrence prediction is grounded in psychological investigations of "Pavlovian conditioning" (Nagin & Pogarsky, 2001). In such studies, experimenters effectively suppressed animal behaviors with negative reinforcements occurring within six seconds following the targeted behavior. Criminology has adopted this finding as the basis for a celerity effect -- that is, in similar fashion, delay should diminish the deterrent efficacy of a legal sanction. This analogy, however, neglects the fact that humans possess a far greater cognitive capacity than animals for connecting acts with temporally remote

consequences (Nagin & Pogarsky, 2001). It is difficult to see how such experimental findings support the assumption that difference among jurisdictions or types of crime can be attributed even in part to contrasts in the celerity of punishment (Gibbs, 1975).

2.3.4 Certainty

While no conclusive evidence has been discovered on punishment severity and celerity, certainty of punishment has been consistently found to deter criminal behavior (Parker and Grasmick, 1979; Paternoster, et al., 1985; Horney & Marshall, 1992). Beliefs that lawbreakers are caught and punished are negatively correlated with official and self reported delinquency (Crother, 1969). There is convincing evidence that motorists can be deterred from alcohol-impaired driving, and increasing certainty of punishment is an effective intervention (Shepherd, 2001). There can be substantial changes in the amount of crime from changes in the certainty of punishment. The most direct evidence comes from the public reaction to police strikes in Liverpool in 1919 and Montreal in 1967, which were followed with widespread looting (Andenaes, 1952). Similarly, when German occupation army arrested the entire police force of Copenhagen in 1944, robbery and larceny increased ten times (Andenaes, 1966).

2.3.5 Stigma

Deterrence effects, however are not limited to legal sanctions. Extra-legal sanctions play equally important role in securing compliance (Grasmick et al. 1993). In addition to formal punishments imposed by the state, actors contemplating law violation also take into account the possibility and likely magnitude of stigma – socially imposed embarrassment or self-imposed shame that they are doing something unacceptable (Grasmick & Kobayashi, 2002). Shame and embarrassment are emotions that cause pain

(Scheff, 1988), just like state-imposed legal sanctions cause pain. This type of punishment represents one of the potential costs that rational decision-makers take into account in deciding whether to break the law (Grismick & Bursik, 1990).

The pain of shame and embarrassment can occur even if the act is undetected by agents of formal control. Actors might feel guilty for acts they have committed, and they might be embarrassed because of reactions from peers and significant others, even in the absence of formal sanctions (Grismick & Bursik, 1990).

Researchers consistently found that the threat of stigma has one of the strongest inverse effects on involvement in illegal behavior. (Tittle & Rowe 1973; Hollinger & Clark 1982,; Cochran et al. 1999).

2.3.6. Consensus with the Rule

Other important point to consider while studying deterrence is the public knowledge of the rule. People are deterred by what they think is the certainty of capture and stigma, not what the certainty and stigma is objectively (Henshel & Carey 1995). Evidence suggests that the general public is quite unaware of specific legal penalties or changes in them (Biddle, 1969). At the same time, clarity of the law was found to have a deterrent effect on would be offenders (Chiricos & Waldo 1970; Van Den Haag, 1969; Wilkins 1969). Wood (1974) suggested that knowledge is more effective if it is followed with the agreement. ‘Deterrent effects may be facilitated by unambiguous, creditable and persuasive information that avoids hostile reactions and achieves contact with the target reactions at the appropriate time and place. Many people find it easier to abide by reasonable rules than to avoid those’ (Wood, 1974 p.45).

2.4 SUMMARY

Deterrence model implies that the impact of the criminal law manifests a deterrent effect that varies considerably under different conditions and the potential for more effective crime control within the deterrence model is limited by reasonably well known parameters. (Wood, 1974)

Certainty, celerity, and severity were the three main principles that make up the foundation of the deterrence model (Brown et al, 2001). While no conclusive evidence has been discovered on punishment severity and celerity, certainty of punishment has been consistently found to deter criminal behavior (Parker and Grasmick, 1979; Paternoster, et al., 1985; Horney & Marshall, 1992).

Research has revealed that extra-legal sanctions are just as effective in deterring future violations as legal measures. Stigma represents one of the potential costs that rational decision-makers take into account in deciding whether to break the law (Grismick & Bursik, 1990).

Since people are deterred by what they think is the certainty of capture and stigma, not what the certainty and stigma is objectively (Henshel & Carey 1995), it seems reasonable to research public's knowledge of the law. Deterrent effects may also be facilitated by unambiguous, creditable and persuasive information that avoids hostile reactions and achieves contact with the target reactions at the appropriate time and place (Wood, 1974).

For legal measures to be effective, the file-sharers have to believe that their actions will be punished. For a fuller deterrent effect, they must also perceive their

actions as shameful and something not worthy publicizing. Finally knowledge of the law and consensus with the rule will further increase the deterrent effects of legal sanctions.

This study will attempt to answer the question, what are the factors of deterrence for online file-sharing. It will contribute to the studies in general deterrence and help build the policy for more effective deterrence of online copyright infringement.

CHAPTER 3

HYPOTHESES

The purpose of this study is to examine capabilities of deterrence for online file-sharing and study factors that might facilitate deterrence. The researcher formulated four hypotheses.

H1a. The perception of the certainty of punishment will have a negative correlation with the user's current file -sharing activities.

H1b. The perception of the certainty of punishment will have a negative correlation on the user's likely future file -sharing activities.

Certainty of punishment has been consistently found to deter criminal behavior (Parker & Grasmick, 1979). In case of file-sharing, however, it is not clear what the perceived certainty of punishment is. With more than 26 million users sharing files on the Internet, users can break the law more or less freely, confident that they will not be caught. On the other hand, many users might not feel very confident after hearing much publicized cases of lawsuits against file-sharers.

It is expected that those who have a higher perception of the certainty of punishment will be deterred easier than those who think the risk is low.

H2a. The perception of the stigma of cyberpiracy will negatively correlate with the user's actual file -sharing activities.

H2b. The perception of the stigma of cyberpiracy will negatively correlate with the user's likely future file -sharing activities.

One of the most pervasive characteristics of a target population that affects compliance with the law is the stigma of the criminal label. Conviction of crimes is a sufficient threat to deter many people from enjoying a status among law-abiding citizens, regardless of the character of criminal sanctions (Wood, 1974).

No studies have measured whether the label of a cyberpirate is associated with the stigma or not. It is expected that file-sharing will not be perceived as stigmatic. Deterrent effect will be higher for those, who would rather not publicize their file-sharing activities.

H3a. Perceived clarity about the law obtained from media and the Internet will have a negative correlation with the user's current file-sharing activities.

H3b. Perceived clarity about the law obtained from media and the Internet will have a negative correlation with the user's likely future file-sharing activities.

H4a. Consensus with the rule will negatively correlate with the user's current file-sharing activities.

H4b. Consensus with the rule will negatively correlate with the user's likely future file-sharing activities.

Ignorance of the law is technically not an excuse in a court, but deterrent effects may be facilitated by unambiguous and persuasive information. Communication that shows a rule is reasonable and certain not only aids direct deterrence but encourages public participation in its enforcement. The reasonableness of a law, its intensive dissemination and, above all, its effective communication to the target audience contribute to consensus and ultimately to compliance (Wood, 1974).

General public is usually unaware of specific legal penalties or changes in them (Biddle, 1969) Moreover, many users of file-sharing networks do not realize that they are

breaking the law by sharing copyrighted material (Sharman, 2002). At the same time, some users who know or think they know the copyright law, perceive it as outdated and not fit for the digital era (Wall, 2001). Some even actively campaign against it. Below is the excerpt from a weblog by Steven Shaviro (2003), professor of English at the University of Washington:

Not only do I think that violating copyright laws through file-sharing is not wrong. I think it is our positive moral obligation to violate such laws. Anybody who enjoys listening to music has a moral obligation to disseminate the sources of his or her pleasure as widely as possible, by making digital copies, sharing files, and so on and so forth. The same goes for books, movies, or any other digitizable medium of art, entertainment, or pleasure.

This study followed the assumption of Wood (1974) and Henshel (1994) that the higher level of clarity and consensus with the rule will have a deterrent effect on users' actual or future file-sharing activities.

CHAPTER 4

METHOD

This chapter is a discussion of the research method including the explanation of survey method, design of the study, hypothesis and some relevant definitions.

4.1 SURVEY

This study employed survey to test deterrence factors for copyright infringement online.

Survey research is an important and useful method of data collection. The survey is also one of the most widely used methods of media research, primarily because of its flexibility (Wimmer & Dominick, 2000).

To insure that all the steps in the survey process are in harmony, researchers should conduct one or more pilot studies to detect any errors in approach. Pilot studies save time, money and frustration because an error that could void an entire analysis sometimes surfaces at this stage (Wimmer & Dominick, 2000).

4.1.1 Pilot Studies

The term pilot study is used in two different ways in social science research. It can refer to so-called feasibility studies which are "small scale version[s], or trial run[s], done in preparation for the major study" (Polit et al., 2001: 467). However, a pilot study can also be the pre-testing or trying out of a particular research instrument (Baker 1994: 182-3). One of the advantages of conducting a pilot study is that it might give advance warning about where the main research project could fail, where research protocols may not be followed, or whether proposed methods or instruments are inappropriate or too complicated. These are important reasons for undertaking a pilot study, but there are

additional reasons, for example convincing funding bodies that your research proposal for the main study is worth funding (Teijlingen & Hundley, 2001).

Pilot studies are likely to be "underdiscussed, underused and underreported" (Prescott and Soeken, 1989 p60). Despite this they are a crucial element of a good study design. Conducting a pilot study does not guarantee success in the main study, but it does increase the likelihood (Teijlingen & Hundley, 2001).

Pilot studies fulfill a range of important functions and can provide valuable insights for other researchers. There is a need for more discussion amongst researchers of both the process and outcomes of pilot studies (Teijlingen & Hundley, 2001).

Since this is a pilot study, convenience sample was used for the research. Because of this, the results cannot be generalized. However, it is possible to maximize internal validity of a questionnaire and thus increase the usefulness of collected data.

Procedures for improving the internal validity of a questionnaire include identifying and eliminating ambiguities and difficult questions, establishing that replies can be interpreted in terms of the information that is required and checking that all questions are answered (Polit et al., 2001).

4.2 RESEARCH DESIGN

The population of interest of this study is college students, who are the most frequent file-sharers. A college student is defined as a person who engages in studies in a higher education institution. This study will choose the student body of a large university in the Southern U.S. as its population. It is ideal to use college students nationwide as the population of study to increase external validity. However, since this was a pilot study, external validity could not be achieved. Instead, the researcher based this study on the relatively large number of students, which allowed the study to be more manageable and produce meaningful results that have certain level of explaining power, even though it lacks external validity.

The one-page questionnaire contained 20 questions. The survey data was used to measure the dependent variable Actual File-Sharing Activities and Likely Future File-Sharing Activities as well as independent variables Knowledge of the Law, Consensus with the Rule, Perceived Certainty of Punishment and Perceived Stigma of Label.

4.2.1 Operational Definitions

Many statistical analyses distinguish between dependent variables and independent variables. We may be interested to know how the distribution of a dependent variable changes according to the level of independent variables. The dependent variable is sometimes called Y variable and the independent variable is called X variable (Freund & Wilson, 1997).

Dependent variables:

Actual file-sharing activities. File-sharing activities include logging on to the peer-to-peer networks and sharing digital material with others. Actual file-sharing

activities were measured with two items: 1) frequency of use of file-sharing applications; and 2) quantity of shared files.

Likely future file-sharing activities. Likely future file-sharing activities was defined as an intent or likelihood to start or continue sharing files. Likely future file-sharing activities were measured with an index of two items 1) increase of file-sharing applications; and 2) perceived likelihood to start/continue file-sharing activities.

The items for each dependent variable were measured with a five-point scale. Absence of actual or likely future file-sharing activities was coded as 5 and strong presence was coded as 1.

Independent variables:

Perceived certainty of punishment. Perceived certainty of punishment refers to the belief that file-sharers are caught. Perceived certainty of punishment was measured with an index of three items: 1) belief that that it is easy find out who is sharing files online; 2) belief that there is a big chance to be caught sharing files online; and 3) belief that many users are caught sharing files.

Perceived stigma of the label. Perceived stigma of the label refers to the shame and embarrassment user will feel if others find out that he or she is sharing file online. Perceived stigma of the label was measured with an index of three items: 1) stigma with the friends; 2) stigma with the parents; and 3) stigma with the professors.

Perceived clarity about the law obtained from media and the Internet. Perceived clarity about the law obtained from media and the Internet was measured with an index of three items: 1) information user was getting from traditional media; 2) information user

was getting from the Internet; and 3) how clear the user was about what the copyright law said about online file-sharing.

Consensus with the rule. Consensus with the rule was define as how much user agreed with the copyright laws concerning online file-sharing. Consensus with the rule was measured with an index of two items: 1) belief that the laws are reasonable; and 2) belief that the laws are up-to date.

CHAPTER 5

FINDINGS

By testing the four hypotheses, this chapter will present the results of data analysis.

5.1 RESULTS OF HYPOTHESES TESTING

Out of 300 respondents, 58% were males. Half reported good computer skills and 30% reported excellent computer skills. 11% of the students were freshmen, 19% sophomore, 49% junior and 17% senior. 45% of the respondents had access to high speed internet at home

5.1.1 Certainty of Punishment

H1a, that the perception of the certainty of punishment will have a negative correlation with the user's current file-sharing activities was strongly supported and results were statistically significant. The hypothesis was tested by looking at the relationship between the independent variable, perceived certainty of punishment and the two dependent variable, frequency and quantity of file-sharing.

Pearson's correlation showed strong negative relationship between the perceived certainty of punishment and the user's frequency of sharing files ($r = -.84, p < .05$). There was also a strong correlation between the perceived certainty of punishment and quantity of shared files ($r = -.88, p < .05$).

Results indicate that the strong belief that the file-sharers are caught resulted in a reduced number of shared files and reduced time sharing files online. The effect of certainty of punishment was slightly stronger for the quantity of shared files.

H1b, that the perception of the certainty of punishment will have a negative correlation with the user's likely future file -sharing activities was strongly supported. The results were statistically significant.

Pearson's correlation showed strong negative relationship between the perceived certainty of punishment and the user's likely future file -sharing activities ($r = -.78$, $p < .05$). Results indicate that the strong belief that the file-sharers are caught reduces the likelihood to start or continue sharing files online.

5.1.2 Stigma of the Label

H2a, that the perception of the stigma of the label will have a negative correlation with the user's current file -sharing activities was strongly supported and results were statistically significant. The hypothesis was tested by looking at the relationship between the independent variable, perceived stigma of the label and the two dependent variable, frequency and quantity of file-sharing.

Pearson's correlation showed strong negative relationship between the perceived stigma of the label and the user's frequency of sharing files ($r = -.79$, $p < .05$). There was also a strong correlation between the perceived stigma of the label and quantity of shared files ($r = -.87$, $p < .05$).

Results indicate that the higher perception of the stigma of the label resulted in a reduced number of shared files and reduced time sharing files online. The effect of the stigma was stronger for the quantity of shared files.

H2b, that the perception of the stigma of the label will have a negative correlation with the user's likely future file -sharing activities was strongly supported. The results were statistically significant.

Pearson's correlation showed strong negative relationship between the perceived stigma of the label and the user's likely future file-sharing activities ($r = -.82, p < .05$). Results indicate that the stronger perception that file-sharing is something shameful and embarrassing greatly reduces the likelihood to start or continue sharing files online.

5.1.3 Perceived Clarity about the Law obtained from Media and the Internet

H3a, that Perceived clarity about the law will have a negative correlation with the user's current file-sharing activities was supported and results were statistically significant. The hypothesis was tested by looking at the relationship between the independent variable, knowledge of the laws and the two dependent variable, frequency and quantity of file-sharing.

Pearson's correlation showed a negative relationship between the perceived clarity about the law obtained from media and the Internet and the user's frequency of sharing files ($r = -.64, p < .05$). There was also a correlation between the Perceived clarity about the law and quantity of shared files ($r = -.61, p < .05$).

Results indicate that the higher perception of the clarity of the law of the law resulted in a reduced number of shared files and reduced time sharing files online. The effect of the perceived clarity of the law was slightly stronger for the frequency of sharing files online.

H3b, that the level of perceived clarity about the law obtained from media and the Internet will have a negative correlation with the user's likely future file-sharing activities was strongly supported. The results were statistically significant.

Pearson's correlation showed strong negative relationship between the perceived clarity of the law and the user's likely future file-sharing activities ($r = -.76, p < .05$).

Results indicate that higher perceived clarity of the law reduces the likelihood to start or continue sharing files online.

5.1.4 Consensus with the Rule

H3a, that the consensus with the rule will have a negative correlation with the user's current file-sharing activities was supported and results were statistically significant. The hypothesis was tested by looking at the relationship between the independent variable, consensus with the rule and the two dependent variable, frequency and quantity of file-sharing.

Pearson's correlation showed a strong negative relationship between the consensus with the rule and the user's frequency of sharing files ($r = -.84, p < .05$). There was also a strong correlation between the knowledge of the law and quantity of shared files ($r = -.83, p < .05$). Results indicate that the stronger consensus with the rule resulted in a reduced number of shared files and reduced time sharing files online.

H3b, that the consensus with the rule will have a negative correlation with the user's likely future file-sharing activities was strongly supported. The results were statistically significant.

Pearson's correlation showed strong negative relationship between the consensus with the rule and the user's likely future file-sharing activities ($r = -.72, p < .05$). Results indicate that the stronger consensus with the rule reduces the likelihood to start or continue sharing files online.

5.2 MULTIPLE REGRESSION MODEL

A hierarchical multiple regression analysis was conducted with four independent variables entered in the equation to predict the frequency, quantity and likelihood of file-sharing: certainty of punishment, stigma of the label, knowledge of the law and consensus with the rule.

The full model with all five predictors was responsible for strong variance in the frequency of file-sharing ($R^2 = .79$, $F = 280$, $p < .05$), Consensus with the rule was a strong predictor ($\beta = .41$, $p < .05$) and certainty of punishment ($\beta = .37$, $p < .05$) were strong predictors. Stigma of the label was a moderate predictor ($\beta = .19$, $p < .05$). Clarity of the law was not a significant predictor of frequency.

The full model with all five predictors was also responsible for strong variance in the quantity of file-sharing ($R^2 = .86$, $F = 462$, $p < .05$), Certainty of punishment ($\beta = .42$, $p < .05$) and Stigma of the label ($\beta = .38$, $p < .05$) were strong predictors. Consensus with the rule ($\beta = .27$, $p < .05$) and clarity of the law ($\beta = .12$, $p < .05$) were moderate predictors.

Finally, the full model with all five predictors was also responsible for strong variance in the likely future file-sharing activities ($R^2 = .80$, $F = 300$, $p < .05$), Clarity of the law ($\beta = .45$, $p < .05$) and Stigma of the label ($\beta = .63$, $p < .05$) were strong predictors. Consensus with the rule and certainty of punishment were not significant predictors of likely future file-sharing.

CHAPTER 6

DISCUSSIONS AND CONCLUSIONS

The data and the results of analysis indicate that all four dependent variables: certainty of punishment, stigma of the label, clarity of the laws and consensus with the rule negatively correlated with both actual and likely future file-sharing activities of the users.

The findings show that deterrence of online copyright infringement is possible. However, rigid enforcement of the law is not sufficient for achieving full deterrent effect, although it is a necessary requirement.

First it has to be noted that current deterrent strategies do not seem to be working well. Survey showed that 77% of the students were sharing files, more than of these were sharing files frequently. Clearly, majority of students currently are not deterred by the threat of copyright conglomerates like RIAA. It seems that different strategy, other than suing few individual file-sharers need to be employed to increase compliance with the laws.

The first step for securing compliance with the law is to ensure that law-breakers are punished and that they know that their actions will have consequences. Data shows that there is a strong link between the belief that file-sharers are punished and both actual and likely future file sharing.

It is important to note that overall skepticism was observed concerning the certainty of punishment. It seems that most of the students do not believe that file-sharing will have negative consequences for them. In a sense, they are right, because the overwhelming majority of 20 million people who currently share files online are not

punished. Since it will be very hard to imagine that law enforcement organs could apprehend significant percentage of file-sharers, the more rational way would be to focus on the other factors that influence deterrence.

The more viable way to for increasing deterrence for file-sharing online would be to increase the clarity of the law and work on increasing consensus with the rule. Findings show that both of these factors are influencing actual and likely future file-sharing activities. At the same time students are ambiguous about what the laws say and whether or not these laws are reasonable and up-to date. Communication that shows a rule is reasonable would aid direct deterrence but it would have other benefits as well. It would encourages public participation in its enforcement. The reasonableness of a law, its intensive dissemination and, above all, its effective communication to the target audience contribute to consensus and ultimately to compliance.

Data shows that one of the most effective deterrents is the extra-legal punishment. Fear of shame and embarrassment is at least as strong a deterrent as fear of being caught. Effects of the stigma of the label are usually weaker with the younger people. However, our findings show that stigma does have a deterrent effect on the students as well. Its just that most of them do not consider that file-sharing is bad and do not think that others would disapprove of it. It is logical to hypothesize that the higher level of consensus with the rule would in turn increase stigma of the label, although this goes beyond the scope of this project.

One interesting finding is that the knowledge of the law the law was the less important factor in frequency of file-sharing. Consensus with the rule, however, was a very strong predictor. This might be attributed to the fact that most avid file-sharers

spend more time on the Internet, and therefore have chance participate in ongoing discussions on the web. Since copyright laws are one of the most discussed topics on the Internet, with hundreds of sites are dedicated to supporting or opposing copyright laws that concern file-sharing online, they get to know the law or parts of the law better. But knowledge does not always contribute to consensus. If the sources that give users information about the laws portray them as unreasonable and outdated, it would decrease consensus.

Due to the limited scope of this study, there are some aspects that can be improved in future research.

First, as mentioned in previous chapter, the students surveyed were neither random samples nor the whole population. Only through random sampling can we confidently claim that the samples are representative of the population. Although the findings of this study are to certain extent expected to reflect the perceptions and beliefs of students, the scope presented is limited.

Second, the research did not take into consideration other age groups other than students. Because younger age groups have their specifics, random sample of various age groups would give a better picture of the perceptions and beliefs of the respondents and what the deterrent factors are.

These limitations are bounded in the character of the study. The future project will consider the findings of this pilot study and will employ random sampling of the different age groups to probe further into the issue.

REFERENCES

- Alderman, J. (2001) Sonic Boom: Napster, MP3, and the New Pioneers of Music. Perseus
- Andanaes J. (1952) General Prevention – Illusion or Reality? *The Journal of Criminal Law, Criminology and Police Science* 43(1):176-98
- Andanaes J. (1966) The General Preventive Effects Of Punishment. *University of Pennsylvania Law review* 114:949-83
- Applegate, L.M., McFarlan, F.W., & McKenney, J.L. (1999) *Corporate Information Systems Management*. Boston: Irwin McGraw-Hill.
- Baker, T.L. (1994), *Doing Social Research*. New York: McGraw-Hill Inc.
- Biddle, W.C. (1969) Legislative Study of the Effectiveness of Criminal Penalties. *Crime and Delinquency* 15(20):354-58
- Brown, S., Esbensen, F., & Geis, G. (2001) *Criminology: Explaining Crime and Its Context*. Cincinnati, OH: Anderson Publishing Company.
- Carey, M. and Wall, D. (2001) MP3: The Beat Bytes Back. *International Review of Law Computers and Technology*, 15(4): 1.
- Chambliss, W. (1967) Types of deviance and the Effectiveness of Legal Sanctions. *Wisconsin Law Review* 43(4):703-19
- Cochran, J., Chamlin, P. Woods M., & Sellers, C. (1999) ‘Shame, Embarrassment, and Formal Sanction Threats: Extending the Deterrence= Rational Choice Model to Academic Dishonesty. *Sociological Inquiry* 69:91–105.
- Crother, C. (1969) Crimes, Penalties and Legislatures. *The Annals of the American Academy of Political and Social Science* 25(3): 147-58
- Decker, S. Wright, R and Logie, R. (1993) Perceptual Deterrence among actual residential burglars: a research note. *Criminology* 31(1):135-147.
- Decker, S. & Kohfeld, C. W. (1990) Certainty, severity and probability of crime: A logistic analysis. *Policy Studies Journal* 19 (1), 2-21
- Gibbs, J P. (1975) *Crime, Punishment, and Deterrence*. Amsterdam, The Netherlands:Elsevier Scientific Publishing Co.
- Gottfredson, M. & T. Hirschi (1990) *A General Theory of Crime*. Stanford, CT: Stanford University Press.

- Grabosky, P.N. and Smith, R.G (1998) *Crime at the Digital Age: Controlling Telecommunications and Cyberspace Illegalities*, New Brunswick: Transaction Publishers
- Grabosky, P.N., Smith, R.G and Dempsey, G. (2001) *Electronic Theft: Crimes of Acquisition in Cyberspace*, Cambridge: Cambridge University Press.
- Grabosky, P.N. and Smith, R.G (2001) Telecommunications Fraud in the Digital Age: the Convergence of Technologies in D.S. Wall (ed) *Crime and the Internet*, New York, NY, Routledge
- Grasmick, H., Blackwell, B., Bursik, R, & Mitchell S. (1993) “Changes in Perceived Threats of Shame, Embarrassment, and Legal Sanctions for Interpersonal Violence, 1982–1992.” *Violence and Victims* 8:313–25.
- Grasmick, H. & Bursik, R (1990) Conscience, Significant Others, and Rational Choice: Extending the Deterrence Model. *Law and Society Review* 24:837–60.
- Hollinger, R. and Clark, J. (1982) ‘Formal and Informal Social Control of Employee Deviance. *Sociological Quarterly* 23:333–43.
- Howe, E. S. and Loftus, T. (1996) Integration of Certainty, Severity and Celerity Information if Judged Deterrence Value: Further Evidence and Methodological Equivalence. *Journal of Applied Social Psychology* 26(3):226-242.
- Jacover, A. (2002) I Want My MP3! Creating a Legal and Practical Scheme to Combat Copyright Infringement on Peer-to-Peer Internet Applications. *Georgetown Law Journal*, 19(2): 110-121
- Klepper, S, and Nagin, D. (1989) Certainty and Severity of Punishment Revisited. *Criminology* 27(4):721-746.
- Landau, M. (2002) Digital Downloads, Access Codes, and US Copyright Law, *International Review of Law, Computers And Technology*, 16 (2), 149–170,
- Legge, J. S. & Park, J. (1994) Policies to Reduce Alcohol-Impaired Driving: Evaluating Elements of Deterrence. *Social Science Quarterly* 75(3): 594-606.
- Lohmann, F (2002) Unintended Consequences: Three Years Under the DMCA. white paper <http://www.educause.edu/issues/issue.asp?Issue=DMCA> Accessed on October 12, 2003.
- Mendes, S. & McDonald, M. (2001) Putting severity of punishment back into deterrence package. *Policy Studies Journal* 29 (4), 588-610

Menn, J (2003) *All the Rave: The Rise and Fall of Shawn Fanning's Napster*. Chicago, IL, Crown Business.

Merriam Webster's Collegiate Dictionary, Tenth Edition, (1996) Springfield, MA: Merriam-Webster Incorporated.

Nagin, D. and Paternoster, R. (1994) Personal Capital and Social Control: The Deterrence Implications of Individual Differences in Criminal Offending. *Criminology* 32:581-606.

Nagin, D., & Pogarsky, G., (2001) Integrating celerity, impulsivity, and extralegal sanction threats into a model of general deterrence: Theory and evidence. *Criminology*, 39, 865-892.

Parker, J, & Grasmick, G. (1979) Linking actual and perceived certainty of punishment. *Criminology* 17(3): 366-379.

Pastore, M. (2001) Net Users Finding P2P Music Alternatives Website at: http://cyberatlas.internet.com/big_picture/applications/article/0,1323,1301_901921,00.html. Date accessed: October 2, 2003

Paternoster, R, Saltzman, L. Waldo, G. & Chiricos, T (1985) Assessments of risk and behavioral experience: an exploratory study of change. *Criminology* 23(3):417-433.

Piquero, A.R., and Rengert, G.F (1999) Studying Deterrence with Active Residential Burglars. *Justice Quarterly* 16(2):451-471.

Polit, D.F., Beck, C.T. and Hungler, B.P. (2001), *Essentials of Nursing Research: Methods, Appraisal and Utilization*. 5th Ed., Philadelphia: Lippincott Williams & Wilkins

Scheider, M. (2001) Deterrence and the base rate fallacy: An examination of perceived certainty. *Justice Quarterly*, 18, 63-86.

Shaviro, S. (2003) RIAA lawsuits. Website at: <http://www.shaviro.com/Blog/archives/000122.html>. Date accessed: October 9, 2003)

Shepherd, J (2001) Criminal deterrence as a public health strategy. *Lancet*; 358 (9294): 1717-1725

Silver, E. (2002) *Deterrence and Rational Choice Theories*, Pennsylvania State University.

Tittle, C. and Rowe, A. (1973) 'Moral Appeal, Sanction Threat, and Deviance: An Experimental Test. *Social Problems* 20:488-98.

Thomas, A. (1999) MP3—devil or angel: an analysis of compression. *Entertainment Law Review*. 13(1) 25-51

Wall, D.S. (2001) Cybercrimes and the Internet in D.S. Wall (ed) *Crime and the Internet*, Routledge

Williams, K & Hawkins, R (1992) Wife assault, costs of arrest, and the deterrence process. *Journal of Research in Crime and Delinquency* 29(3)292:310.

Witte A. D. (1983) Economic Theories. In S. H. Kalish (Ed.) *Encyclopedia of crime and justice*. New York, NY: Free Press

Yu, J. (1994) Punishment celerity and severity: testing a specific deterrence model on drunk driving recidivism. *Journal of Criminal Justice* 22(4): 355-366.

Zimrig, F. and Hawkins, G. (1968) Deterrence and Marginal Groups. *Journal of Research in Crime and Delinquency* July 5: 100-104

APPENDIX A

QUESTIONNAIRE

You started to use file sharing applications, such as Napster, Kazaa or Limewire in the year of _____

How often do you use file sharing applications?

1=every day 2=quite often 3=sometimes 4=seldom 5=never

How many files did you share for the past month?

*1=more than 5 thousand 2=thousand to 5 thousand 3=hundred to thousand 4=one to hundred
5=zero*

Please answer the questions using the following scale:

1= Strongly Agree 2= Agree 3= Neutral 4= Disagree 5= Strongly Disagree

Your use of file sharing applications increased during the last six months

1 2 3 4 5

I am likely to start/continue using file sharing applications

1 2 3 4 5

I am clear about what copyright laws say about online file sharing

1 2 3 4 5

I get the information about what copyright laws say about online file sharing from TV, radio or newspapers

1 2 3 4 5

I get the information about what copyright laws say about online file sharing from the Internet

1 2 3 4 5

I think copyright laws that concern online file-sharing are reasonable

1 2 3 4 5

I think copyright laws that concern online file-sharing are up-to date

1 2 3 4 5

Many users, who share copyrighted files on file-sharing applications, are punished

1 2 3 4 5

It is easy for law enforcement agencies to catch file-sharers online

1 2 3 4 5

There is a big chance of being caught if I share copyrighted files online

1 2 3 4 5

I would not want my friends to find out if I was sharing copyrighted files online

1 2 3 4 5

I would not want my parents to find out if I was sharing copyrighted files online

1 2 3 4 5

I would not want my professors to find out if I was sharing copyrighted files online

1 2 3 4 5

Your year in school Freshman Sophomore Junior Senior Graduate

What do you (or intend to) major in? _____

Gender Male Female

Your computer skill

1=Excellent 2=Good 3=Medium 4=Poor 5=Very poor

APPENDIX B

SURVEY CONSENT FORM

This research is being conducted by Nico Nergadze, Masters student in the Manship School of Mass Communication. It is a survey on Deterrence capabilities of online copyright infringement.

We are asking students in this class to complete a brief survey about their attitudes towards file sharing. The survey should take about five minutes to complete.

All responses will be held strictly confidential. Any published materials based on the survey will contain no information that would identify particular students. The study will be made anonymous by separating surveys from responses.

By filling the survey you are consenting to be in this research project. You have the right to withdraw at any time or you have the right not to respond to questions you choose. If you have any concerns on the content of this survey, please contact Nico Nergadze at 344-2134, email: nnergadze@lsu.edu.

This project has been approved by **LSU INSTITUTIONAL REVIEW BOARD FOR HUMAN RESEARCH SUBJECT PROTECTION**.

Signature:

The study has been discussed with me and all my questions have been answered. I may direct additional questions regarding study specifics to the investigators. If I have questions about subjects' rights or other concerns, I can contact Robert C. Mathews, Institutional Review Board, (225) 578-8692. I agree to participate in the study described above and acknowledge the investigator's obligation to provide me with a signed copy of this consent form.

Signature _____ Date _____

VITA

Nico Nergadze was born in Tbilisi, Georgia on December 12, 1978. He graduated from Tbilisi State University Sociology Department with the Bachelor degree of Arts in 1997. He worked as a graduate assistant in the Manship School of Mass Communication at Louisiana State University in 2002-2003. He received a scholarship from the International Center For Journalists for earning a Master degree of Mass Communication at Louisiana State University. Before leaving for the United States, in 2002, he worked as a teaching assistant at the Caucasus School of Journalism and Media Management in Tbilisi, Georgia. Was an editor of monthly newsletter for TACIS Information and Communication Programme. Currently he is a candidate for the Master degree of Mass Communication at Louisiana State University.