
Does File Sharing Lead to Legal Sales? Student Attitudes on Music Piracy

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Abstract

The illegal downloading of copyrighted music has created an economic crisis for the recording industry. However, there is some evidence that suggests that illegal downloading does not always have a negative impact on the sale of recorded music. A questionnaire is administered to college freshmen in their English composition class in 2006 and 2011. It was determined that college freshmen will download music that they would never consider buying and will buy music that they have downloaded illegally if they like it. This suggests that the recording industry's effort to combat digital piracy may have been counterproductive.

Keywords: computer ethics, music piracy, digital piracy, intellectual property, student attitudes, intellectual property right.

1. INTRODUCTION

Since the advent of the World Wide Web, digital piracy has become a major issue for content providers, and the music industry has been one of the providers that are hardest hit by it. Ever since the development of the original Napster web site, music sales have dropped 53%; the Recording Industry Association of America (RIAA, 2012b) estimates that 30 billion songs were downloaded illegally and the NPD group (2010) estimates that only 37% of the music downloaded in 2009 were acquired legally. The Institute for Policy Innovation (IPI, 2007) estimates that music piracy cost the U. S. economy \$12.5 billion, resulting in a loss of over 70,000 jobs.

The music industry, mostly through the RIAA, has employed a range of different strategies in its attempts to combat illegal downloading, including lawsuits that shut down the original Napster (RIAA, 2012b; The New York Times, 2007, 2002) and Grokster (Leeds, 2005) and that led to a \$105 million settlement with LimeWire (Sisario, 2011). Additionally, the RIAA

has filed lawsuits against college students and others who have committed large-scale copyright infringement (Associated Press, 2012), sending pre-litigation letters to suspected offenders offering them an opportunity to settle. This strategy may have backfired; discussions that the author has had with students over the years have shown that even individuals who are sympathetic to the music industry's situation do not believe that these lawsuits were necessary or appropriate. Additionally, it proved unprofitable for the RIAA: they spent \$64 million to recover \$1.4 million in damages (Electronista 2010).

This strategy was complicated by their need to have universities and internet service providers (ISPs) identify the potential defendants in these cases, leading to additional court cases (RIAA v Verizon 2008). Colleges were generally reluctant to identify students against whom the RIAA wished to take legal action; however, they generally cooperated in blocking illegal file sharing. In 2007, the RIAA sent out pre-litigation letters to Ohio University (Redden 2007), asking the University to identify

individual offenders. The University forwarded the letters but refused to identify the individuals (Ohio University 2007a, 2007b). Ohio University (2007c) subsequently banned peer-to-peer file sharing, disabling the Internet access of those who violated this new policy.

The Higher Education Opportunity Act of 2008 requires U. S. colleges and universities receiving Title IV federal funds to develop and implement "written plans to effectively combat the unauthorized distribution of copyrighted material by users of the institution's network without unduly interfering with the educational and research use of the network" (U. S. Department of Education 2010).

It should be noted that record sales declined in 2002 compared to the previous year, despite the shutdown of Napster. Informal interviews that the author conducted with undergraduates suggest that Napster's demise was at least partially responsible for this decline. These students frequently used Napster as a way to sample music; in many cases, they would buy it if they liked what they heard. Without access to Napster, they were unable to listen to recordings at their leisure before buying them, and were unwilling to pay for a CD before they knew if they liked any of its contents. This decline has continued since 2000 and according to the RIAA (2012a), the dollar value of music sales in the U.S. has dropped 53 percent since 1999 (Kennedy 2012).

Whether illegal downloading adversely affects sales of recorded music is not entirely clear. Oberholzer-Gee and Strumpf (2007) concluded that downloads had no significant effect on legal music sales. Liebowitz (2007) claimed that several errors in their methodology invalidated their conclusion. More recently, Oberholzer-Gee and Strumpf (2010) found that only 20% of the decline in record sales is due to illegal downloading. Several other studies sought to find what effect, if any, music piracy had on legitimate sales of recorded music. Rob and Waldfogel (2006) found that each album download by college students in 2003 reduced album purchases by 0.2. Blackburn (2005) found that music piracy has two competing effects on music sales: a direct substitution effect that impacts sales negatively and an effect that increases sales by making the artist's work better known. The first effect is more common with better known artists and the second with those less well-known. This effect was also noticed by Janis Ian, who wrote in *Performing*

Songwriter Magazine (2002) that "every time we make a few songs available on my website, sales of all the CDs go up. A lot."

Given the 53% decrease in music sales since 1999 and the estimated 30 billion songs illegally downloaded between 2004 and 2010 (RIAA 2012a), there is clearly a correlation between illegal downloading and the decline in music sales but this does not show a causal relationship. Two questions remain: do college students use illegal downloading as a method for sampling music before purchasing it and how many of these illegal downloads are directly responsible for sales of music that do not occur?

A composite profile of the typical music pirate can be created. D'Astous et al. (2005) found that younger people are more likely to engage in music piracy than older people. Green (2007) found that males are more likely to download music illegally than females and Information Systems majors were likely to do so than other majors. Gerlich et al. found no significant difference in views toward downloading between black and white students (2007) and found that the traditional college age population was most likely to be engaged in this behavior (2005).

What motivates computer users to engage in file sharing? Informal conversations that the author has had with undergraduates provides some insights: College students cannot afford to buy all the music that they want, they tend to view the artists as wealthy enough that they won't miss the royalties that are not being paid to them. And college students do not see copyright infringement as an ethical violation nor do they consider it likely that there will be consequences for these actions. The literature tends to support these impressions; Chiang and Assante found that 83% of the students surveyed considered cost as a major factor (2007). But this was not the only reason that students downloaded: 53% were motivated by the convenience and 65% said that downloading provided them access to a song that was not available for sale. Income also played a role in their willingness to pay for music. Additionally they discovered that female students were more responsive to risk factors and were more willing to pay for music (Chiang and Assante 2008).

Chiang and Assante (2002) list three factors that make college students more likely than the general population to commit software piracy: they are more likely to need ready access to the

software in which they are interested, they do not have as much disposable income and they possess the necessary skills to access the desired software and to copy it once it is located. Many of these characteristics also make college students more likely to be aware of the sites on the Internet from which pirated recordings are available for download and they also have the necessary computer skills to use the software that converts audio CDs to MP3 format and, if they choose to do so, to copy them on CDs in either MP3 format, which can store 10 albums on a single CD, or regular audio CD format.

Digital piracy on campus provides a major challenge to universities which must deal with the consequences of piracy and to IT professionals who must train IT professionals who are not just technically competent but who are also prepared to respect the profession's code of conduct. Additionally, peer-to-peer file sharing can lead to the accidental sharing of data stored on an individual user's computer, causing a potential information security breach.

The author surveyed undergraduates in two colleges during the 2000-2001 academic year regarding their attitudes on software and music piracy as well as a range of other ethical issues arising from the use of computers; much of this was a recreation of an earlier study by Cohen and Cornwell (1989) that found that most students believed that it was acceptable conduct to copy commercial software. The result of the author's 2000-2001 survey was consistent with Cohen and Cornwell's result. It appears that the factors that changed in the years between the Cohen and Cornwell survey in 1989 and the author's 2000-2001 survey (i.e., the rise of the Internet, a greater degree of computer literacy, etc.) did not significantly affect student attitudes. The author's 2000-2001 survey introduced two additional questions regarding music piracy and found that over 80% of the respondents saw nothing wrong with downloading music, and that the permission of the recording artists was almost completely irrelevant.

Since the completion of the 2000-2001 survey, there have been three additional surveys: one in 2005 that examined the computer usage and attitudes toward music piracy of college freshmen and how it had changed since 2001. While 74% of students replied that they used their computers to illegally download music,

38% said that they used their computers to buy music. A majority of respondents confirmed that they copied or downloaded music instead of buying it, that they bought music that they had copied and that they copied music to see if they liked it enough to buy it. This suggested that at least some of the students surveyed had used illegal downloads as a way to sample music for potential purchases (Siegfried and Ashley 2006).

Two additional surveys were administered, both to freshmen in English composition classes during the Spring 2006 and Spring 2011 semesters. These later surveys used a different questionnaire than in the earlier surveys and while there were a few questions on general computer use, most of the questions focused on issues of music piracy.

2. METHODOLOGY

The questionnaire was first administered to five sections of the University's required composition class "Art and Craft of Writing" during the Spring 2006 semester. The sections were chosen at random, and the student enrollment in these sections comprised 19% of the freshman class. The response rate was 75% of the enrollment in those sections that were surveyed and represented 14% of the freshman class as a whole. The questionnaires were numbered after collection to ensure auditability of the data while guaranteeing the privacy of the respondents. The answers were tabulated in a Microsoft Excel spreadsheet using a 1 to indicate "True" and a 0 to indicate "False." Questions left unanswered were left blank. A total of 110 questionnaires were used in the survey.

The questionnaire was also administered during the spring semester of 2011 to determine if a freshman class six years later would respond differently. Nine sections, chosen at random, were surveyed, comprising 19% of the freshman class. 213 completed questionnaires were collected. The response rate was 86% of the enrollment in those sections that were surveyed and represented 17% of the freshman class as a whole. The questionnaires were numbered and the data were tabulated in the same manner as the Spring 2006 data.

3. RESULTS

Several questions appeared on each of the surveys; e.g., students in each survey were asked about their experience with computers.

The data is presented in Table 1. While most students in the 2000-2001 study were familiar with computer use, both of the later surveys revealed that almost all of the respondents made heavier use of computers than their counterparts in the earliest study. In the 2006 survey, only six percent claimed to have limited experience with computers, and no respondents claimed a lack of prior experience; in the 2011 survey, only 2% claimed limited experience of any type. This differs from the 2000-2001 study where 21% claimed limited experience and 2% said that they had no prior experience. While almost half the respondents in the 2000-2001 and 2006 studies used computers on their jobs, there is drop from 44% in 2006 to 32% in the current survey; this may be due to the weaker economy in 2011 compared to 2006. Almost all used them for their schoolwork; the percentage using them for recreation grew from 79% to 94% before decreasing to the most recent 81%.

Table 2. Use Of Computers To Acquire Music

I use my computer:	2006	2011
to play music CDs	84%	65%
to play music MP3 files	82%	92%
to download music files that I did not buy	74%	73%
to buy music	38%	54%

In the 2000-2001 study, the main focus had been on student attitudes toward the copying of commercial software; as a result, there were only two questions regarding the downloading of music. 82% of respondents thought that it was acceptable to download music, and 84% thought that was acceptable to do so with the artist's permission; on average, only 2% believed that the artist's permission was a significant factor in that decision. In the 2006 and 2011 studies, students were asked whether they used their computers to play music, to download music without purchasing it and to buy music. As noted in Table 2, most students play music on their computers, either recorded on audio CDs or in MP3 format, although there is a clear shift away from CDs toward music in the MP3 format. And while there is no perceptible change in their use of illegal downloads, there is an increase in the number of students buying music online. However, in both surveys, most respondents downloaded music that they did not buy.

Digital music players have around for well over a decade, but it wasn't until the iPod came out that they became almost ubiquitous among college students. While 57% of the respondents in 2006 said that they had an iPod, 90% of the 2011 respondents acknowledged having one. The 17% said that they have another type of MP3 player shows that some of the respondents have both; a careful examination of the raw data confirms this.

Table 3 shows the perceptions that students have toward music piracy. They believe that most people will download or copy it rather than buy it; virtually everyone believes that students, in particular, will download instead of buying. Yet about half believe that most people will buy at least some of the music that they have downloaded and more than third believe that most students will do this as well. It is interesting to note that there has been no significant change in these student perceptions over the past five years. Nearly all the student respondents believe that most people and/or students copy or illegally download music. Perhaps the students' perception of "everyone's doing it" may have evolved, at least in part, from the fact that so many respondents have copied or downloaded bootleg copies of their own (Table 4). Yet it is particularly interesting that about half the respondents have bought music that they had previously downloaded and approximately half have copied or downloaded music to help decide if they were going to buy it. One should also note that all three trends have increased over the past six years.

Table 3. Student Perceptions On Music Piracy

	2006	2011
I think that most people copy or download recorded music instead of buying it	92%	90%
I think that most students copy or download recorded music instead of buying it	98%	98%
I think that most people will buy some of the recorded music that they copy or download	50%	57%
I think that most students will buy some of the recorded music that they copy or download	38%	37%

Table 4. Student Attitudes With Regard To Downloading Music

	2006	2011
I have copied and/or downloaded recorded music instead of buying it.	73%	93%
I have bought recorded music that I had copied and/or downloaded.	46%	60%
I have copied and/or downloaded music to see if I like it enough to buy it.	51%	57%

Table 5 shows the response to questions about the propriety and legality of copying recorded music under various circumstances. Most of these behaviors are unambiguously violations of copyright laws, although there is no clear answer in regard to personal copying (copying recordings that an individual owns into another format for personal use); although RIAA v Diamond Multimedia (2003) tested the Home Audio Recording Act, there was no decisive decision by the courts. Most of the respondents felt that all these behaviors were acceptable, with at least 80% answering in the affirmative in the 2011 survey, which is a small increase from five years earlier.

Lastly, students were asked a price at which they would buy either a song or an album instead of downloading it. Over 70% would buy a song for \$0.50 or an album for \$5.00 instead of downloading it.

4. DISCUSSION

The data points to a few clear results: the respondents download music without paying for it and believe that most people do so, too; that they would not buy all of the music that they downloaded if they could not download it; and most of the respondents would buy it if it were available for a low enough price.

Prior to the 2000-2001 study of student attitudes on software piracy and related issues, conversations with freshmen led the author to believe them when they claimed that they did not know that copying copyrighted software and other copyrighted works was wrong. Freshmen in recent years make no such claim, nor would it be credible even if they did. The news has carried numerous stories over the past several

years of college students, grandmothers and single mothers being sued for copyright infringement and music piracy. These news reports have made it very difficult for anyone who reads a newspaper, watches television or listens to the radio to be truly unaware that recorded music is intellectual property that cannot be copied without the permission of the copyright holder.

That does not mean that students know exactly what protection copyrights bestow on the holder. Conversations with students have led the author to believe that many college freshmen think that the fair use exception covers all non-commercial use, i.e., if they are not selling the copies, then they are not violating the copyright. They are disabused of this notion before the end of their first year of college. The author has used Brad Templeton's "10 Big Myths About Copyright Explained" (<http://www.templetons.com/brad/copymyths.html>) in class and there have always been a few students in the past who are completely surprised to find out that they cannot use copyrighted materials in the way that they did. But these blissfully ignorant students are far fewer than they used to be. In the author's experience, undergraduates usually know that file sharing and other copyright violations are illegal and even actionable, but in most instances, they simply do not care. They consider themselves to be "small fish in a large pond" and believe that the chances of their getting caught committing music piracy are too small to worry about.

What can be done to make students more aware that of the ethics of computer usage? Cohen and Cornwell spoke about integrating ethics into the computer science curriculum and not simply teaching it as a separate (1989). They found evidence that suggests it improves students' attitudes toward most ethical issues in computing. But this lesson must start with a good example: college faculty sometimes forget that we have a greater influence on our students than we may realize. And they need to be reminded that peer-to-peer file sharing can leave them vulnerable to breaches of piracy and malware.

Although the entertainment industry may seem to believe that legislation will solve much of their problems for them, it is difficult to say whether that will actually be the case. Music piracy existed before the Internet and even before the invention of the compact disc, with individuals

taping music directly from the radio. If the Internet were to become a hostile environment for music and video piracy, it could continue with people selling bootleg discs on street corners, an occurrence that was common before the Internet became popular. While the recording industry finds itself in an existential crisis because of music piracy, there is good news: there is still demand for legal copies of recorded music. Apple's iTunes Store sold 16 billion legal downloads of music since opening in 2003 and Apple has sold 300 million iPods (Melanson 2011). Apple has been the largest retailer of recorded music, with Amazon and WalMart tied in second place (NPD Group 2010). It is not an accident that all three retailers are known for the low prices that they charge for recorded music.

But this does not mean that the recording industry can continue with the business model upon which it has relied for so many years. There is clear evidence that while consumers are more than willing to pay for content, it has to be at a price that is commensurate with its perceived value. If the price exceeds its perceived value, they will go elsewhere, whether it's to the library, to borrow it from friend, or to look online for a bootleg copy. This has been especially true for album sales. Charles M. Blow (2009) pointed out that while single song purchases are quite common online, this is not the case for albums; the public does not perceive most albums as being worth the higher price that is charged, when there may be only one or two song in which the purchaser is interested.

Mark Schultz makes the case that there are ways in which music fans can be persuaded to respect copyrights and he describes the model presented by the so-called "jam bands", bands such as the Grateful Dead, who have frequently invited their fans to record their concerts (2006). Many of these jam bands have been financially successful, sacrificing the ability to sell some of their recorded music for the opportunity to pursue other streams of revenue, such as concert ticket sales and other licensed merchandise. This allows them to create a sense of community and their fans generally respect their wishes when they do not want particular tracks shared because of plan to sell an album. Violators of such requests face ostracism by their fellow fans and this social pressure is more effective at stopping the

unwanted distribution of content than the legal actions of the RIAA.

Robert L. Frost wrote about the need to restructure the music industry; eliminating the middleman would allow the artist to prosper from his or her labors and still provide the product to the public at a reasonable price (2007). The comedian Louis C. K. employed this business model recently, selling a download of one of his comedy shows directly to the public for \$5 (Carr 2011). As of 18 December 2011, he had grossed \$875,000 and a profit of over \$600,000. The very fact that his show was so inexpensive that it did not pay to steal it.

Perhaps there is a lesson in that for the recording industry to learn.

5. ACKNOWLEDGEMENTS

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APPENDIX

Table 1. Computer Experience and Usage of Respondents

My experience with computers includes:	2000-2001	2006	2011
daily use over more than a year	78%	91%	94%
limited exposure, but more than a year	17%	3%	2%
extensive exposure, but less than a year	1%	2%	0%
only passing experiences	3%	1%	0%
no prior experience	2%	0%	0%

Table 5. Student Attitudes About The Propriety Of Music Piracy

I think it is okay:	2006	2011
for people such as myself to download music	72%	80%
for people such as myself to download music if the recording artist says it's OK	66%	87%
for people such as myself to download music to see if they want to buy it	72%	78%
for people such as myself to create MP3 files (or to "rip") from tracks on CDs that I own	69%	81%
for people such as myself to "rip" tracks on CDs that I borrow from a friend	70%	81%
for people such as myself to make copies of CDs (or to "burn" CDs) from MP3 tracks that I have borrowed	72%	83%
for people such as myself to make copies of CDs (or to "burn" CDs) from MP3 tracks that I have bought.	76%	86%
for people such as myself to make copies of CDs that I have borrowed.	72%	80%
for people such as myself to make copies of CDs that I have bought.	74%	84%