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FILE SHARING: CREATIVE DESTRUCTION OR JUST PLAIN DESTRUCTION?*

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ABSTRACT

The sharing of sound recordings over the Internet is the newest controversy in a long-running battle between copyright owners and copying technologies. In order to provide some context, perspective, and background, this paper examines the short history of file sharing, the longer history of record sales, various explanations for the change in record sales, and some analysis of the economics of copying. Although file sharing has been imperfectly and inconsistently measured, it nevertheless appears to reveal a fairly close linkage between changes in file sharing and changes in record sales. Explanations, other than file sharing, for the recent decline in record sales seem to have little or no support. Because economic theories of the impacts of copying hold out little hope for a benign impact of file sharing, these results should not be surprising. These findings reinforce the econometric results from most of an expanding literature.

I. INTRODUCTION

TEN years ago the term “file sharing” was unknown. Then Napster arrived, and both file sharing and Napster quickly became etched into the public’s consciousness. Although Napster was effectively shut down as an unauthorized file-sharing service within 2 years of its birth, its progeny live on, as do new habits of music listeners. These dramatic changes have given us the now familiar additions to the lexicon such as “ripping” files from CDs, listening to MP3s on iPods, and, of course, downloading files online using programs such as Kazaa or Grokster.

Yet the file-sharing saga and the controversy surrounding it might appear a mere replaying of a narrative we have encountered several times before. The photocopier, introduced by Xerox in 1959, allowed individuals to cheaply and conveniently copy printed pages. Audiotaping, which became popular in the 1970s, made it easy and inexpensive for individuals to copy sound

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recordings, with dual cassette decks intended for high-speed copying becoming commonplace. Videotaping, which became popular in the 1980s, allowed individuals to copy broadcasts and prerecorded movies.

The copyright industries reacted negatively when each of these copying technologies appeared. The publishing industry complained about photocopying, although an analysis by Liebowitz (1985) concluded that photocopying was beneficial to the industry. The movie and television industries brought suit to stop the video recorder, but after the Supreme Court's ruling (*Sony Corp. of America v. Universal City Studios*, 464 U.S. 417 [1984]) went against these industries, a new market emerged—prerecorded video—which, although largely unanticipated, now provides the movie industry with revenues far in excess of box office revenues.¹

The sound-recording industry had an equally negative response to copying technology. No less a luminary than Alan Greenspan, prior to his becoming chairman of the Federal Reserve Bank, stated, "At present . . . severe economic damage [is being done] to the property rights of owners of copyrights in sound recordings and musical compositions. . . . [U]nder present and emerging conditions, the industry simply has no out. . . . Unless something meaningful is done to respond to the . . . problem, the industry itself is at risk" (U.S. Senate 1983). Sales of sound recordings began a decade-long expansion not long after this testimony (ending a 4-year decline), once again making the claims of concern by the copyright industry appear unwarranted.

Nevertheless, as explained in Section IV, the role of these older copying technologies as economic precedents is limited both because there are important differences between file sharing and these prior copying technologies and because the impacts of these technologies were not so clear-cut.

Each of the previous copying technologies brought forth some work by economists on the economics of copying, although the focus was more on theory than empirics (for surveys, see Varian 2005; Watt 2004). Among the problems with conducting empirical analyses of these older technologies was the difficulty in measuring the extent of unauthorized copying. One of the incidental benefits of the new digital copying technology should be to provide better data, although a great deal of imprecision remains.

This current copying technology of file sharing was personified by Shawn Fanning, who created Napster with the purpose of allowing music files to be shared among strangers. Napster began operations in mid-1999 and quickly rose to international prominence. The sound-recording industry experienced a dramatic swoon in sales beginning the next year, continuing unabated (with one informative exception) through 2005. The industry has blamed this sales decline on the rapid growth of file sharing and, in an attempt to stem the decline, has sued thousands of individuals heavily engaged in file sharing

¹ See Liebowitz (2004a), where prerecorded video revenues were estimated to be twice as high as revenues from theatrical showings.

(as well as suing the file-sharing services).² These lawsuits have led to a heated debate, often uninformed by facts. We are fortunate to have in this issue a detailed study by Bhattacharjee and colleagues (2006) that examines the impacts of those lawsuits on the amount of file sharing.

File sharing has generated far more attention than earlier copying technologies.³ It is easy to dismiss the intense media coverage, as evidenced by *Time* magazine's putting Fanning on its cover (October 2, 2000), as just another case of romanticizing the impact of a new technology. Yet Napster truly began a revolution in music listening with a still uncertain impact on the entire economic model that has been used by the sound-recording industry for much of the last century. Copyright industries also tend to attract more attention than might appear warranted by their share of gross domestic product (GDP) alone.⁴ This is most likely due to the fact that consuming these products occupies a majority of the time that individuals spend on leisure activities, with the average American watching 4.5 hours of television and listening to more than 3 hours of music each day (U.S. Census Bureau 2003). Thus the impact of these industries on the collective consciousness is very large.

Naturally, the current concern over the impacts of file sharing brought forth among economists a renewed interest in the economic consequences of copying. Recent econometric studies include, but are not limited to, the two very fine empirical examinations found in this issue—one by Rafael Rob and Joel Waldfogel (2006) and the other by Alejandro Zentner (2006; see also Blackburn 2004; Hong 2004; Michel 2005; Oberholzer-Gee and Strumpf 2005; Peitz and Waelbroeck 2004; Zentner 2005). Although neither of these two papers attempts to measure the impact of file sharing on the full U.S. sound-recording market, which is my focus in this paper, a recent econometric study (Liebowitz 2006) examines that specific question. All of the papers of which I am aware, except one, find that file sharing brings about some degree of harm to copyright owners.⁵

² According to the Recording Industry Association of America (RIAA) Web site, the recording industry announced plans to bring lawsuits against file sharers on June 25, 2003 (RIAA 2003c). On September 8, 2003, the RIAA brought what they referred to as the "first wave" of lawsuits against 261 individuals (RIAA 2003b).

³ Besides the economic studies discussed in this paper, there are papers of a more philosophical legal bent, particularly from some very vocal critics who have voiced their unhappiness with copyright law and the entertainment industry. These copyright critics, sometimes associated with the concept of the "creative commons" and the Electronic Frontier Foundation, argue that copyright laws are being used by the sound recording, movie, and software industries to thwart innovative forces that would otherwise open up the market to new competition. See, for example, Lessig (2004).

⁴ It is estimated to be between 5 and 7 percent of the gross domestic product (GDP), according to a report produced for a copyright trade association (Siwek 2002).

⁵ The one paper that does not find file sharing to harm record sales is Oberholzer-Gee and Strumpf (2005). Of the other papers, which cover different countries, different time periods, and different approaches, some find results that could be classified as consistent with the

Econometric studies are usually self-contained, but they do not, or should not, occur in a vacuum. In order to make an informed judgment about the impact of file sharing it is useful to understand the industry background. This should include examining the nature and size of file sharing as best we know it and investigating the history of the sound-recording market to gain some perspective on the current decline. It is also useful to examine the economic theories of copying that have been suggested. Finally, no judgment would be complete without examining the range of possible sources of evidence, particularly sources that might not be amenable to inclusion in econometric studies. This paper attempts to perform some of these tasks.

II. THE BRIEF HISTORY OF FILE SHARING AND ITS MEASUREMENT

File sharing, simply put, allows one computer on the Internet to search for and access files on the hard drives of other computers that are connected to the Internet. Any individual on a file-sharing network can make available any file on his or her hard drive to all other members of the file-sharing network.

The term “file sharing” is actually something of a misnomer, however. Individuals do not “share” the files that move back and forth on the Internet. They do not experience these files together nor are they likely to ever meet or even know one another. Nor do they lend or trade the files among one another, since the files are not borrowed or given back. A more appropriate term might be “anonymous file copying,” since that reflects what actually occurs. The end result of file sharing is that individuals who do not own and have not purchased a particular song or movie can nevertheless obtain that song or movie from unknown third parties.

Currently, file sharing encompasses sound recordings, films and television programs, computer software, various forms of pornography, and other products that can be digitized. Because music files are easily compressed, relatively small, very popular, and the primary type of file downloaded, they appear to be the best candidate for assessing the impact of file sharing itself.⁶ As Internet transmission speeds increase, file sharing is likely to focus more

possibility that the entire decline might be due to file sharing (Blackburn 2004; Liebowitz 2006; Zentner 2005), while others (Hong 2004) apportion only a part of the decline to file sharing, and yet others are difficult to classify in this manner. A detailed discussion of this literature can be found in Liebowitz (2005).

⁶ IDATE (2003) claimed that the ratio of audio files to video files was 100:1 in an October 28 report. Note, however, that the IDATE report seems of somewhat questionable value, as discussed below. Lyman and Varian (2003) report in their table 8.9 that although shared video files took up twice as much hard drive space as shared audio files, audio files were nevertheless 10 times as common as video files in 2003. An Organisation for Economic Co-operation and Development (2004, figure 5) report using data from BigChampagne claimed that the number of audio files transferred was only twice the number of video files in 2003. This claim seems somewhat implausible (unless most of these are short clips of pornography), given the enormous size of movie files.

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