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Give Me MP3 or Give Me Death

The music industry is frightened, so much so that it has been suing music "pirates" for theft. Some of the hundreds of people who have been sued are as young as 13 and others as old as 70. The Recording Industry Association of America (RIAA) also has sent subpoenas to Internet service providers (ISPs) asking for the names of their most flagrant **file-sharing** customers, under the assumption that Internet users who download big files are doing something illegal.

Before we look at the details of the current legal and economic battles over music transferred over the Internet via file sharing, it is worth looking at how we got to the point that 13-year-old Internet users are receiving subpoenas. Back in 1987, the Moving Picture Experts Group set a standard file format for the storage of audio recordings in a digital format. They called it MPEG-3, abbreviated as "MP3." Digital MP3 files are created through a process called "ripping." Ripping software allows a computer owner to copy an audio compact disc (CD) directly onto the computer's hard drive by compressing the audio information on the CD into the MP3 format. The MP3's compressed format allows for rapid transmission of digital audio files from one computer to another by e-mail or by using **file transfer protocol (FTP)** software.

Not surprisingly, as the ripping of existing prerecorded audio CDs became more and more popular (and less and less expensive as both computers and Internet access became cheaper), the volume of *blank*, recordable CDs sold in North America skyrocketed, as revealed in the middle column of Table 15–1. Note also

TABLE 15–1 As Sales of Prerecorded CDs Fall, Sales of Blank CDs Increase

Year	*Volume of Blank, Recordable CDs Sold in North America in Millions*	*Volume of Prerecorded CDs Made in North America in Millions*
1999	490	1800
2000	720	1720
2001	1540	1611
2002	2010	1600
2003	2030	1540

that, as the sales of blank CDs increased, the sales of prerecorded audio CDs fell—a point to which we shall return.

As just about everybody knows today, the ability to compress music (and now video) files, send them through the Internet, and then decompress them has led to a boom in the exchange of MP3 files. Most systems for exchanging MP3 files, particularly those that are illegal, involve **peer-to-peer (P2P) networking.**

Not that many years ago, most college students had heard of Napster's Web site (at http://www.napster.com), which used a file-sharing system invented by a New Jersey teenager named Shawn Fanning. Although the software he developed was complex, the concept was simple. No large servers or mainframe computers were involved. Rather, individuals who had downloaded the Napster program (over 40 million, according to Napster before it was effectively shut down due to legal actions) could share files, particularly music files, with anybody else who had downloaded the program. Those who shared their existing files of music with others had to, of course, leave their computers on. The reason this process is called peer-to-peer file sharing is that all of the participants are peers: individuals using personal PCs to share with one another on an equal basis.

The problem with this arrangement—at least as far as the record companies were concerned—was that all but one of the peers got the music without paying for it. Finally, the record companies had "had enough." They got together and filed suit against Napster, alleging **copyright infringement,** because the company

had allegedly aided consumers in sharing files with one another. The federal court issued a **preliminary injunction,** which eventually became permanent. Napster soon went out of business as a free peer-to-peer system and reinvented itself as a for-fee music download system, similar to iTunes from Apple, Jukebox from Dell, and other competing for-fee music download systems.

To understand fully the issues involved in peer-to-peer networking, illegal music pirating, and the like, you have to have some notion of what we call **intellectual property,** or IP, as the lawyers call it. IP consists of the products that result from intellectual creative processes. Although intellectual property is an abstract term for an abstract concept, it is nonetheless wholly familiar to just about everyone. Trademarks, copyrights, and patents are all forms of intellectual property. The book you are reading is copyrighted. The personal computer you use is trademarked. The software you use, the movies you see, and the music you listen to are all forms of intellectual property. In each case you cannot legally use the property without the permission of the property's owner—just as you cannot legally use an automobile without the permission of the car's owner.

Intellectual property has taken on increasing significance not only in the United States, but globally as well. Today the value of the world's intellectual property exceeds the value of physical property such as machines and houses. For U.S. companies, ownership rights in intellectual property are often more important to their prosperity than their **tangible assets.**

For all types of investment, the higher the expected rate of return, the more investment there will be. Record companies are no different than other businesses in this respect. A record label has to invest in its recording artists, particularly if it wants to popularize a new group. This investment consists of recording time, publicity, and the like. There is also the cost of producing CDs and distributing them to the various retail outlets. Consider two scenarios. The first one is the way things "used to be in the good old times," before peer-to-peer networking. When a record label signed a new artist, say Sheryl Crow, it was generally secure in its belief that it alone could distribute her songs. Hence, it gradually increased its investment as her records started to sell more and more. The second scenario applies more recently, in the presence

of file sharing. When a new group is signed, say OutKast, the record company faces the prospect that as soon as one CD is sold, thousands of unauthorized copies will appear, courtesy of numerous Web sites that offer free file-sharing software. Indeed, the available "illegal" peer-to-peer networking systems are many, including KaZaA, Scour, and WinMX. Clearly, in the second scenario, the *potential* total revenues and hence profits from the sales of OutKast CDs are much lower than they were for Sheryl Crow, who became popular before peer-to-peer networking was even understood by most music fans.

We know that music piracy is currently rampant. Boston-based Forrester Research Group has estimated that in one recent year, about 25 million music pirates did not buy almost 50 million CDs, costing the record industry anywhere from $800 million to a billion dollars in lost sales. Recording companies' sales and thus their profits have dropped dramatically. So, as a well-informed economist, you might predict the obvious here—a lower rate of return to investing in new music groups will lead to less investment in new music.

Some people argue that copyrights, trademarks, and the like each create a **monopoly** for their owners, because the owners are the only ones who can sell the resulting goods. Technically, this is true, but so too is the fact that *you* have a monopoly on the labor you sell: no one else but you can sell your services. You, like record companies and book publishers, face lots of competition, which limits your ability to price what you and they sell above marginal cost. Clearly, the amount of competition varies from case to case, but the presence of that competition is inescapable. If you are prevented from capturing, say, the return on your investment in education (including what you spent on this book!), you are less likely to make that investment. The same is true for record companies when it comes to music.

The moral of this story is not merely that illegal downloading of copyrighted music (and movies) is in fact a crime, but that it also will have *long-run* consequences for those who like to listen to music. Those consequences will, at a minimum, be less investment in new artists by the music industry. In other words, as with all economic situations involving scarcity, "there is no free lunch." Those who proclaim that the downloading of pirated MP3 files should be legally unrestricted are ignoring the long-run costs to society and to music lovers in general.

The same analysis can be applied to other economic areas in which intellectual property rights are at stake. Consider the pharmaceutical industry. Just as the music industry invests in new talent, the pharmaceutical industry invests in new drugs. A typical new drug costs roughly $800 million in investment to bring it to market. When foreign countries pass laws restricting the prices that pharmaceutical companies can charge for those drugs abroad, those countries are, in effect, usurping part of the expected rate of return on those hundreds of millions of dollars of investment in the new drugs.

In some cases, such laws are passed in impoverished developing countries, who argue that without the laws their citizens could not afford the medicine. But many of these laws—which result in artificially lower prices—have been passed in rich countries in Europe, such as France and Germany, as well as in Japan and Canada. In essence, these countries are engaged in a type of piracy, not dissimilar to the illegal downloading of music files. As the head of the Food and Drug Administration, Mark McClellan, pointed out, "The economic consequences of overly strict price controls on drugs are no different than violating the patent directly. . . ."

The most extreme case of this transfer of wealth from the shareholders of U.S. pharmaceuticals to foreigners occurs when (as a result of political pressure) drugs are given away free of charge. For example, some U.S. pharmaceutical companies have been providing "free" AIDS drugs to victims in Africa, apparently fearing that if they do not do so they will ultimately face laws requiring such actions. In the short run, low-income people get drugs they otherwise might not be able to afford. This is the good news. But the bad news is that the long-run consequences are *fewer* drugs for them and everyone else, because reduced revenue from drug sales means less incentive to invest in research and development of more and better drugs to cure that terrible disease in the future.

Let's return to the original subject of this chapter, music piracy. In addition to suing alleged pirates, the music industry has undertaken two additional measures to fight back. One involves testing the **price elasticity of demand.** In 2003, Universal Music Group cut the suggested retail price of nearly all of its CDs to $12.95, which represented about a 30 percent drop. In practice,

many of its CDs have sold since then for $9.99. In effect, this amounted to cutting the **constant-dollar price** of CDs back to the level it had been in 1997. Whether the price elasticity of demand is great enough in the long run to increase revenues (and perhaps, profits) for Universal remains to be seen.

The second way in which record companies are combating music piracy is by offering easy-to-use legal for-fee music file download systems. The first to get the ball rolling was Steve Jobs' Apple Computer Company. Apple created the iPod, which has now sold over a million units since it came out a few years ago. The iPod coupled with its iTunes system has been wildly successful. Although the "library" of music is only five or six hundred thousand songs strong right now, it is destined to grow. The typical price of a song is 99¢. The user can download a song to three different computers and one iPod. Other companies that have followed suit include Real, Dell, iRiver, Rio, Creative Nomad, and Gateway. Legal downloading of MP3 music files is definitely a growing business. Currently, no one company is making any true profits on the process, but that situation may change in the future. Apple, the leader in the field, says it makes virtually nothing on the downloading of music files, but it is making a handsome profit on the sale of its music player, the iPod.

Technology creates numerous new business opportunities. Technology also creates problems for existing businesses. A combination of the Internet, cheaper communication, high-speed broadband access proliferation, MP3 compression and decompression software, and peer-to-peer networking has clearly created a host of potential profits for business and also many problems. As with all other innovations in our past, some company will figure out the correct formula for making solid long-run profits, and other companies will emulate it.

DISCUSSION QUESTIONS

1. If you were the economist for Universal Music Group, how would you have presented the argument in favor of the firm's decision to lower prices by 30 percent in 2003?

2. Why do you think that prosecuting individual copyright violators—music pirates—might turn out to be a futile effort by the record industry? Or, alternatively, is it possible that such prosecution could work in the long run and, if so, under what circumstances?

3. How might the proliferation of music file sharing on the Internet be responsible for the trend toward fewer and fewer major live-music concerts in large venues, such as football stadiums? (You should be aware that in the 1960s, 1970s, and 1980s, numerous music groups toured the United States and, indeed, the world frequently and sold out football stadiums and other venues that held tens of thousands of screaming fans.)