



# Piracy:

## Twelve Year-Olds, Grandmothers, And Other Good Targets For The Recording Industry's File Sharing Litigation

By Matthew Sag\*

### INTRODUCTION

¶1 Since September 8, 2003, the recording industry has been pursuing a controversial strategy of suing end users for copyright violations in relation to their use of peer-to-peer computer networks. By the time this article goes to print, the number of individual law suits filed will surpass 20,000.<sup>1</sup>

¶2 The recording industry has been lambasted for both the conception and the execution of its end user litigation strategy with commentators warning that such “strong-arm tactics” will ultimately alienate the industry’s customers and political allies.<sup>2</sup> Numerous commentators have warned the recording industry that suing its own customers is not a winning business strategy, and that it is risking both a normative and technological backlash.<sup>3</sup> In addition to general qualms about suing individual consumers, many have derided the recording industry’s choice of litigation targets, noting that suing twelve year-old girls will do nothing to win over the hearts and minds of the public.<sup>4</sup> Yet, in spite of widespread condemnation, the recording industry is sticking to its guns and

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<sup>1</sup> On current trends, the recording industry will initiate its 20,000<sup>th</sup> individual lawsuit some time in June 2006. It will reach 47,800 individual lawsuits by the end of the decade. A database of Recording Industry Association of America (RIAA) litigation announcements is available from the author upon request.

<sup>2</sup> Peter K. Yu, *P2P and the Future of Private Copying*, 76 U. COLO. L. REV. 653, 655 (2005) [hereinafter Yu, *P2P*]; see also Peter K. Yu, *The Copyright Divide*, 25 CARDOZO L. REV. 331, 442-43 (2003) [hereinafter Yu, *Copyright Divide*].

<sup>3</sup> G. Richard Shell, *Suing Your Customers: A Winning Business Strategy?*, KNOWLEDGE@WHARTON, Oct. 22, 2003, available at [http://www.eff.org/share/?f=suing\\_customers.html](http://www.eff.org/share/?f=suing_customers.html); see also Fred von Lohmann, *Is Suing Your Customers a Good Idea?*, LAW.COM, Sept. 29, 2004, <http://www.law.com/jsp/article.jsp?id=1095434496352>.

<sup>4</sup> The recording industry has been extensively ridiculed for its lawsuit against twelve year-old Brianna LaHara. See, e.g., Ashley Vance, *The RIAA Sees the Face of Evil, and It's a 12-Year-Old Girl*, THE REGISTER, Sept. 9, 2003, [http://www.theregister.co.uk/2003/09/09/the\\_riaa\\_sees\\_the\\_face/](http://www.theregister.co.uk/2003/09/09/the_riaa_sees_the_face/); see also Racquel C. Callender, *Harmonizing Interests on the Internet: Online Users and the Music Industry*, 48 HOW. L.J. 787, 812 (2005) (“The music industry’s first settlement was with a twelve-year-old online user, and they settled for \$ 2,000. It is perplexing why the record industry would risk this kind of negative backlash from their fans.”).

filing an average of 590 law suits targeted at end-users every month since September 2003.<sup>5</sup>

This article focuses on the narrow issue of the rationality of end user litigation for the recording industry, not the broader question of the social utility of this practice. There is, of course, a vital link between these two issues. If suing its own (potential) customers is not in the recording industry's best interests then it is clear that it is not in society's interest either. On the other hand, if end user litigation does make sense from the standpoint of the industry, then there is a serious public policy debate to be had with respect to its social desirability. The illogic of the recording industry's present strategy has been argued by a number of commentators who also believe the practice to be undesirable from a broader social perspective.<sup>6</sup> The purpose of this article is to disentangle these conflicting perspectives and to answer the simple question: does end user litigation make sense for the recording industry?

The rational choice model of consumer file sharing developed in this article indicates that, rather than being "commercial suicide,"<sup>7</sup> end user litigation actually makes perfect sense for the recording industry. Furthermore, far from treading lightly and targeting only high-volume up-loaders, the recording industry should deliberately target sympathetic defendants along with a broad spectrum of file sharers.

### I. DOES SUING YOUR OWN CUSTOMERS MAKE SENSE?

Just like a good rock concert, the recording industry's end user litigation tour began with a warm-up. In April 2003, the recording industry filed lawsuits against four college students who were accused of running file-sharing networks from their college dormitories.<sup>8</sup> In each case, the recording industry asked the court for a permanent injunction to shut down the networks and also sought the maximum statutory damages for willful copyright infringement under the Copyright Act – \$150,000 for each illegal download.<sup>9</sup> These suits were quickly settled, and, in less than a month, each of the students had agreed to pay damages ranging from \$12,000 to \$17,500.<sup>10</sup> These first suits constituted a significant milestone for the recording industry because they emphasized the accountability of individual file sharers.

The "main event" of the recording industry's end user litigation strategy was launched with considerable fanfare on September 8, 2003, when the industry filed subpoenas under § 512(h) of the Digital Millennium Copyright Act (DMCA) in relation to 261 alleged file sharers.<sup>11</sup> While the industry initially began its litigation campaign by filing subpoenas under the DMCA, it was forced to switch to court supervised discovery

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<sup>5</sup> A database of Recording Industry Association of America litigation announcements is available from the author upon request.

<sup>6</sup> See *infra* notes 26–31 and accompanying text.

<sup>7</sup> John Tehranian, *All Rights Reserved? Reassessing Copyright And Patent Enforcement In The Digital Age*, 72 U. CIN. L. REV. 45, 58-59 (2003); see also *infra* notes 26–31 and accompanying text.

<sup>8</sup> Yu, *P2P*, *supra* note 2, at 559-660.

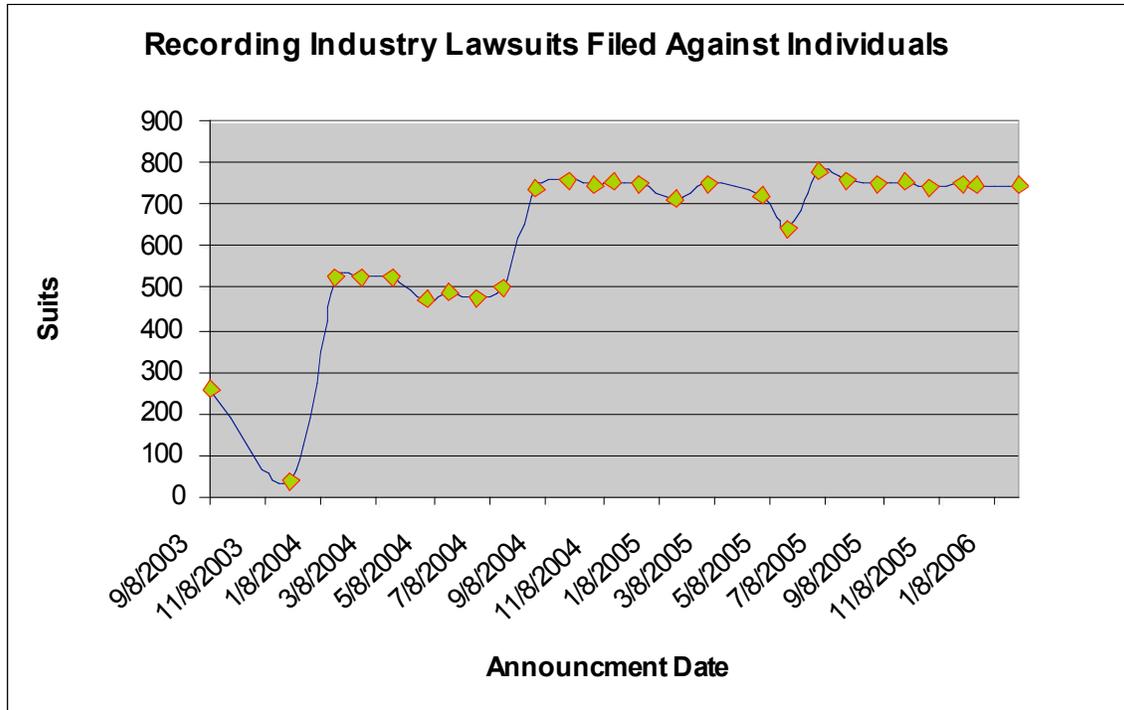
<sup>9</sup> *Id.* at 660.

<sup>10</sup> *Id.*

<sup>11</sup> See RIAA Press Room, *Recording Industry Begins Suing P2P File Sharers Who Illegally Offer Copyrighted Music Online*, Sept. 8, 2003, <http://www.riaa.com/news/newsletter/090803.asp> (last visited Feb. 23, 2006).

after the D.C. Circuit held that § 512(h) did not authorize the issuance of subpoenas to internet service providers acting solely as a conduit for file trading.<sup>12</sup> The *Verizon* decision was a moral victory for opponents of the recording industry's litigation strategy, but, as illustrated in Figure 1 below, it did little to slow the industry down. Since its initial blitz, the recording industry has sued 16,531 individuals in total, an average of 130 lawsuits a week. Figure 1 illustrates the volume and frequency of the recording industry's waves of litigation from 2003 to the present.<sup>13</sup>

Figure 1



#### A. Sympathy for the Devil?

The economic impact of illegal peer-to-peer file sharing is hotly disputed.<sup>14</sup> The recording industry routinely points to the emergence of peer-to-peer file sharing as the explanation for the massive contraction of the music market from 1999 to the present day. According to the Recording Industry Association of America (RIAA), the retail value of shipments of recorded music in the U.S. dropped from about \$13.5 billion in 1999 to \$11.5 billion in 2005.<sup>15</sup> 2005 saw a further 7% fall in sales of music albums in the United States, although the decline improves to 4% once legally downloaded singles

<sup>12</sup> *Recording Indus. Ass'n of Am., Inc. v. Verizon Internet Servs.*, 351 F.3d 1229, 1236 (D.C. Cir. 2003).

<sup>13</sup> The data represented in this figure was compiled from RIAA press releases dating from September 8, 2003 to January 31, 2006. These press releases are available from the RIAA Press Room, <http://www.riaa.com/news/default.asp> (last visited Feb. 23, 2006).

<sup>14</sup> See Matthew J. Sag, *The Search for Rationality in File Sharing Litigation* (working paper, on file with author).

<sup>15</sup> RIAA, *YEAREND STATISTICS (2005)*, available at <http://www.riaa.com/news/newsletter/pdf/2005yearEndStats.pdf>.

are taken into account.<sup>16</sup> Worldwide, the industry estimates that it loses about \$4.2 billion to piracy every year, but admittedly that figure includes more traditional forms of copyright infringement such as CD counterfeiting.<sup>17</sup>

¶18 A \$2 billion drop in U.S. revenue is clearly significant, but many question whether all or any of that decline can really be attributed to unauthorized file sharing.<sup>18</sup> Skeptics point to a number of external factors to explain the precipitous decline in music sales since 1999. These factors include: the downturn in the global economy, changing tastes in key music buying demographics, competition from new media including the internet, DVDs and video games, as well as a general decline in the quality, variety, and value for money of recorded music.<sup>19</sup>

¶19 Recording industry critics and peer-to-peer enthusiasts also argue that file sharing can, in fact, boost the sales of recorded music by allowing consumers to ‘try before they buy’ and encouraging them to explore a wider range of music.<sup>20</sup> Both anecdotal and empirical evidence suggest that the benefits of sampling partially off-set the substitution of legally acquired recorded music by illegal downloads, but the available evidence indicates that the substitution effect still dominates. For example, Rafael Rob and Joel Waldfogel’s study of purchasing habits of University of Pennsylvania undergraduate students indicates that downloading reduced per capita expenditure by about 20%.<sup>21</sup> Similarly, a survey of French graduate students conducted in 2004 reveals that the net effect of file sharing is a decrease in consumption of CD’s.<sup>22</sup> The French study also indicates that there is a significant sub-population (about 18%) for whom the sampling effect dominates the substitution effect.<sup>23</sup>

¶10 Resolving the theoretical and empirical disputes about the impact of file sharing is beyond the scope of this paper. It is sufficient to note that: (i) the recording industry

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<sup>16</sup> See Jeff Leeds, *In a Reversal, Album Sales Fall Again*, N.Y. TIMES, Jan. 5, 2006, at B1 (calculation based on the assumption that 10 singles equate to one album).

<sup>17</sup> See RECORD INDUSTRY ASSOCIATION OF AMERICA, ANTI-PIRACY, <http://www.riaa.com/issues/piracy/default.asp> (last visited Feb. 23, 2006).

<sup>18</sup> See, e.g., Electronic Frontier Foundation, *RIAA v. the People: Two Years Later 7* (2005), available at [http://www.eff.org/IP/P2P/RIAAatTWO\\_FINAL.pdf](http://www.eff.org/IP/P2P/RIAAatTWO_FINAL.pdf).

<sup>19</sup> See DIGITAL CONNECTIONS COUNCIL OF THE COMMITTEE FOR ECONOMIC DEVELOPMENT, PROMOTING INNOVATION AND ECONOMIC GROWTH: THE SPECIAL PROBLEM OF DIGITAL INTELLECTUAL PROPERTY 20-21 (2004), available at [http://www.ced.org/docs/report/report\\_dcc.pdf](http://www.ced.org/docs/report/report_dcc.pdf).

<sup>20</sup> See, e.g., Martin Peitz & Patrick Waelbroeck, *File-Sharing, Sampling, and Music Distribution 2* (Int’l U. in Germany, Working Paper No. 26, 2004), available at <http://ssrn.com/abstract=652743> (arguing that the use of file-sharing technologies may improve the matching between products and buyers, and that this matching effect may dominate the substitution effect). *But cf.* A&M Records, Inc. v. Napster, Inc., 239 F.3d 1004, 1018-1019 (9th Cir. 2001) (holding that sampling does not constitute a fair use of copyrighted sound recording).

<sup>21</sup> The authors show that downloading reduced student per capita expenditures on hit albums released 1999-2003 from \$126 to \$100. However, this \$26 per capita loss to the recording industry was more than offset by the \$70 average increase in the per capita consumer welfare from downloading. Rafael Rob & Joel Waldfogel, *Piracy on the High C’s: Music Downloading, Sales Displacement, and Social Welfare in a Sample of College Students 5* (Nat’l Bureau of Econ. Research, Working Paper No. W10874, 2004), available at <http://papers.nber.org/papers/w10874>.

<sup>22</sup> David Bounie, Marc Bourreau & Patrick Waelbroeck, *Pirates or Explorers? Analysis of Music Consumption in French Graduate Schools 23* (Telecom Paris Econ., Working Paper No. EC-05-01), available at <http://ssrn.com/abstract=739284> (finding based on self reported data that file sharing decreased the consumption of CDs for 136 respondents, made no change for 238 but was associated with an increase in CD purchases for 82 respondents).

<sup>23</sup> *Id.*

seems to truly believe that unauthorized file sharing is responsible for declining sales; and (ii) this view is supported by significant (but not conclusive) evidence.<sup>24</sup> Even assuming that file sharing is harming the recording industry, a number of critics argue that suing individual file sharers is not in the recording industry's own best interests.<sup>25</sup> Various commentators have warned the recording industry against suing its own customers<sup>26</sup> and that it is risking either "commercial suicide,"<sup>27</sup> "a huge backlash from the millions of MP3 file sharers,"<sup>28</sup> or "an inevitable backlash."<sup>29</sup> Some go so far as to proclaim that the industry's end user law suits have already "ignited a significant public opinion backlash"<sup>30</sup> and that there have been "mass protests against [the recording industry's] heavy-handed tactics."<sup>31</sup>

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<sup>24</sup> Rob, *supra* note 21; Bounie, *supra* note 22; Stan J. Liebowitz, *Testing File-Sharing's Impact by Examining Record Sales in Cities* (U. of Texas, Dallas - Dept. of Fin. & Managerial Econ., Working Paper, September 2005), available at <http://ssrn.com/abstract=829245>. But see Felix Oberholzer & Koleman Strumpf, *The Effect of File Sharing on Record Sales: An Empirical Analysis* (Working Paper, June 2005), available at [http://www.unc.edu/~cigar/papers/FileSharing\\_June2005\\_final.pdf](http://www.unc.edu/~cigar/papers/FileSharing_June2005_final.pdf).

<sup>25</sup> As distinct from the interests of the rest of society.

<sup>26</sup> Shell, *supra* note 3; see also von Lohmann, *supra* note 3; Tehranian, *supra* note 7, at 59-60.

<sup>27</sup> Tehranian, *supra* note 7, at 58-60 ("Suing one's own fans is rarely a good idea, and often constitutes commercial suicide."). See also Matthew Green, *Napster Opens Pandora's Box: Examining How File-Sharing Services Threaten the Enforcement of Copyright on the Internet*, 63 OHIO ST. L.J. 799, 823 (2002) (warning that "going after relatively innocent users has the potential threat of creating a tremendous backlash against the music industry, reinforcing the 'Robin Hood' mentality which has already been attached to the digital transfer of music."); Matthew Fagin, Frank Pasquale, & Kim Weatherall, *Beyond Napster: Using Antitrust Law to Advance and Enhance Online Music Distribution*, 8 B.U. J. SCI. & TECH. L. 451, 494 (2002) (warning that "any public policy that does not respect the culturally accepted sentiments of the majority of users is apt to create a backlash."). For more moderate predictions, see Peter K. Yu, *The Escalating Copyright Wars*, 32 HOFSTRA L. REV. 907, 943 (2004) (warning that "aggressive tactics" such as end user litigation may result in a public backlash.); Peter S. Menell, *Envisioning Copyright Law's Digital Future*, 46 N.Y.L. SCH. L. REV. 63, 159-161 (2003) (noting that content industries "have always felt some reluctance to pursue individual copyists and distributors out of practical concerns and potential backlash among their customers." Also warning that pursuing individual infringers "risks further alienating the industry's customers and fueling a legislative backlash.").

<sup>28</sup> Kristine J. Hoffman, *Fair Use or Fair Game? The Internet, Mp3 and Copyright Law*, 11 ALB. L.J. SCI. & TECH. 153, 177 (2000) (predicting that if the recording industry wins its lawsuit against Napster, it "will face a huge backlash from the millions of MP3 file sharers" and that "[r]egardless of the outcome, it is painfully obvious to the recording industry that it would be impossible to stop Internet users from sharing files between themselves.").

<sup>29</sup> David W. Opperbeck, *Peer-to-Peer Networks, Technological Evolution, and Intellectual Property Reverse Private Attorney General Litigation*, 20 BERKELEY TECH. L.J. 1685, 1738 (2005) (predicting dramatically that if the recording industry's end user litigation "becomes a more widespread enforcement mechanism. . . [t]he inevitable backlash against such tactics may result in a different kind of "digital divide": a divide between content distributors and content consumers, fueled by and fueling technological evolution, without an end in sight.").

<sup>30</sup> Neil Weinstock Netanel, *Impose a Noncommercial Use Levy to Allow Free Peer-to-Peer File Sharing*, 17 HARV. J.L. & TECH. 1, 8-9 (2003) (commenting that the "recording industry's initial foray, a much-ballyhooed bevy of lawsuits targeting file swappers in various locations throughout the United States, ignited a significant public opinion backlash (as well as some public expressions of contrition and support), capped by Senate hearings that scrutinized the industry crackdown and proposed legislation that would make it more difficult for the industry to bring such actions in the future."). See also, Ryan Bates, *Communication Breakdown: The Recording Industry's Pursuit of the Individual Music User, a Comparison of U.S. and E.U. Copyright Protections for Internet Music File Sharing*, 25 NW. J. INT'L L. & BUS. 229, 252 (2004) (commenting that "[a]ttacking individual users has already caused a backlash from the public's perception of the record industry").

<sup>31</sup> Tehranian, *supra* note 7, at 58-59 (arguing that industry lawsuits against individuals will be "tremendously costly and create lasting resentment among artists' most ardent fans, thereby undermining commercial demand for one's product even further than dilution from file sharing possibly could. Already,

¶11 With these dire warnings in mind, the sections that follow apply a rational choice model to the wide-spread phenomenon of unauthorized music file sharing to develop a better understanding of the recording industry's optimal strategy.

### B. The Cost Benefit Model

¶12 The standard economic analysis of crime predicts that individuals will break the law when the expected gain from doing so exceeds the expected penalty.<sup>32</sup> In other words, there is nothing special about legal and illegal activities; people will simply obey the law when the risks attached to unlawful behavior – a combination of the probability of detection and severity of punishment – outweigh its advantages.

¶13 One objection to this framework is that people want to obey the law. Even if this is true in relation to serious crimes such as murder, it is difficult to look at the prevalence of illegal file sharing and reach the same conclusion. Millions of Americans continue to use peer-to-peer file sharing networks to breach copyright, even now that the illegality of unauthorized file sharing is quite apparent.<sup>33</sup> Clearly, if obedience to the law has a value in its own right (as opposed to the utility of avoiding sanctions), then it is not a value that trumps all other considerations. This is not intended to dismiss the relevance of social norms in general or law-abidingness in particular, rather it suggests treating normative considerations and legality as product features on a par with price and functionality.

¶14 If the decisions people make about file sharing can be reduced to a cost benefit calculus, what does that equation look like? Applying a rationalist model, individuals will illegally file share when the expected gain from doing so exceeds the expected cost. In the case of file sharing it is important to keep in mind that as well as the option of simply not acquiring any music, consumers have many alternatives for legal acquisition, most obviously through legal download sites such as iTunes, or buying CDs in stores or through on-line retailers. Consequently, an individual consumer's decision as to how to acquire music will be based on a comparison of her net benefits from unauthorized downloading ( $B_U - C_U$ ) to the net benefits from legally acquiring music ( $B_L - C_L$ ),<sup>34</sup> assuming that the net benefit of at least one of these options is greater than zero.

¶15 Expressed symbolically, an individual will acquire music via unlawful means if:

$$(B_U - C_U) > (B_L - C_L), \text{ subject to the constraint that } (B_U - C_U) > 0.$$

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the backlash against the RIAA has begun with mass protests against its heavy-handed tactics.”)

<sup>32</sup> See generally Gary S. Becker, *Crime and Punishment: An Economic Approach*, 76 J. POL. ECON. 169 (1968).

<sup>33</sup> The Pew Internet Project's latest estimate of the prevalence of file sharing is that “about 36 million Americans—or 27% of internet users—say they download either music or video files.” Mary Madden and Lee Rainie, Pew Internet Project Data Memo, *Music And Video Downloading Moves Beyond P2P* (2005), <http://www.pewinternet.org/pdfs> (This result was based on a telephone survey with a sample of 2,201 adults, conducted January 13 to February 9, 2005.). Any question of the legality of file sharing was dispelled by the Ninth Circuit's decision in *Napster* in 2001. *A&M Records, Inc. v. Napster, Inc.*, 239 F.3d 1004, 1018-1019 (9th Cir. 2001) (“sampling” does not constitute a fair use of copyrighted sound recording). See also, *BMG Music v. Gonzalez*, 430 F.3d 888, 891 (7th Cir. 2005); Matthew Sag, *God in the Machine: A New Structural Analysis of Copyright's Fair Use Doctrine*, 11 MICH. TELECOMM. & TECH. L. REV. 381, 431 (2005) (explaining that although fair use enables consumer autonomy, that autonomy is limited to consumers acting as consumers, as opposed to consumers acting as potential rivals of the copyright owner).

<sup>34</sup> The notation: B = benefit, C = cost, subscript U = unlawful, subscript L = legal.

¶16 The challenge for the recording industry is to increase the number of consumers for whom the right side of this inequality dominates. In other words, the recording industry's optimal strategy is determined in part by the number of consumers for whom:

$$(B_L - C_L) - (B_U - C_U) > 0, \text{ subject to the constraint that } (B_L - C_L) > 0.$$

¶17 Hypothetically, the recording industry might do this by reducing the price of music to zero. Although this would make lawfully acquired music much more attractive than the alternatives, the industry's options will continue to be constrained by its desire to maximize profits.

¶18 To understand the recording industry's optimal strategy, we need to take a closer look at the constituent elements: the costs and benefits of legal and illegal acquisition of music.

### 1. Benefits

¶19 Both legal and illegal music acquisition result in three types of benefits to individuals: (i) the *functional value* of individual music files (F), (ii) the *normative value* of the method of acquisition (N), and (iii) the *law-abidingness value* of the method of acquisition (L).

¶20 The functional value of any individual music file (F) depends on the number of other files a user has. All other things being equal, a user with 10,000 music files is likely to value one additional file much less than a user with only 100 music files.<sup>35</sup> The functional value of an individual music file will also depend significantly on file attributes such as permissions, encoding quality, and the inclusion of extra features such as video, cover art, and lyrics. Finally, the functional value of individual music files will depend on how well the file matches an individual's music preferences, which is largely a function of the range of music available.

¶21 Comparing the functional value of music delivered over peer-to-peer networks with that of legal downloads or traditional CDs requires balancing a number of competing factors. First, the functional value of music available from the authorized music services is reduced by the Digital Rights Management (DRM) restrictions those services attach. Although the nature of these restrictions varies, files are often restricted as to the number of copies allowed and/or which music playing devices they are compatible with.<sup>36</sup> Second, authorized download sites have been criticized for limited inventories "which omit both popular performers like the Beatles, as well as obscure (and non-obscure) independent artists and rarities such as live concert recordings."<sup>37</sup> The limited range of

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<sup>35</sup> Anyone who has taken a long car trip with only 6 discs in the CD changer understands how scarcity effects the valuation of additional units. It is also appropriate to assume a decreasing marginal value for music files because listening time and storage space are scarce.

<sup>36</sup> For example, Apple employs DRM to ensure that (i) songs purchased on the iTunes Music Store can only be played on 5 authorized computers at a time; (ii) songs purchased on the iTunes Music Store cannot be played on any portable digital music player other than the Apple iPod; (iii) songs purchased on online music stores other than the iTunes Music Store cannot be played on the Apple iPod; and (iv) any particular playlist within iTunes containing a protected track can be copied to a CD only up to seven times (originally ten times) before the playlist must be changed. See iTunes Music Store Terms of Service, <http://www.apple.com/support/itunes/legal/terms.html> (last updated Oct. 7, 2005).

<sup>37</sup> According to the Electronic Frontier Foundation (EFF), "[f]or many popular hip-hop albums, only

early internet music services meant that it was not always possible to find exactly what you were looking for, but it is unclear whether that is still a significant problem for the majority of consumers.<sup>38</sup> All of the albums selected by Amazon's editors under the "top 10 albums for 2005" and "top 10 hip-hop albums for 2005" categories were available for download on iTunes as of February 2006. However, only 39 out of the 55 Grammy Award winning albums for 2006 were available for download on the iTunes service as of the same date. The Grammy winners that were not available on iTunes tended to be from non-mainstream sub-genres such as Latin Jazz and Gospel music. Authorized download sites appear to remain at a disadvantage in terms of the range of music they offer, but this factor is less significant with respect to mainstream music.

¶22 In contrast to the potential functional limitations discussed above, music files obtained through authorized retailers may have superior functionality due to more reliable quality control, and the inclusion of extra features such as video, cover art, and lyrics. Also note that if the functional value of music available for legal downloads is too severely restricted by DRM or the limited range of titles available, consumers always have the option of buying music on CDs and converting it to a DRM-less format such as MP3. Admittedly, the search costs of this approach are higher, but as long as this option exists, it suggests that the functional value of unauthorized music cannot be significantly greater than the legal alternatives.

¶23 The normative value of individual music files captures the extent to which users feel good or bad about how the files were acquired. One of the supposed advantages of acquiring music legally is that it simply feels good to contribute towards musicians and that paying for music is in some ways a token of respect.<sup>39</sup> Acquiring music through authorized channels may have greater normative appeal for many consumers, assuming that they see a connection between paying for music and artist remuneration.<sup>40</sup>

¶24 The significance of the normative value that consumers attach to different methods of acquiring music is difficult to quantify. Nonetheless, it seems likely that the recording industry must adapt its strategy to take the normative value of music into account. If there is a normative backlash to the recording industry's waves of individual lawsuits, then the normative value of legal music acquisition ( $N_L$ ) will decrease and the normative value of unauthorized music acquisition ( $N_U$ ) will increase. In addition to public sentiment regarding the recording industry's litigation strategy in general, the normative values associated with music acquisition are also likely to be influenced by other

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some tracks are available, with the remainder caught up in Byzantine music industry fights over licensing [and yet all] of these are made available by music fans on the peer-to-peer networks." EFF, *RIAA v. the People: Two Years Later* 11 (2005), [http://www.eff.org/IP/P2P/RIAAatTWO\\_FINAL.pdf](http://www.eff.org/IP/P2P/RIAAatTWO_FINAL.pdf).

<sup>38</sup> iTunes now offers more than 2 million songs, 25,000 podcasts and more than 16,000 audiobooks. This is still considerably less than is available on peer-to-peer networks, but the chances that the average consumer can't find what she is looking for on a legal download site have greatly diminished. See Apple iTunes Overview, <http://www.apple.com/itunes/overview/> (last visited Feb. 26, 2006).

<sup>39</sup> The RIAA website quotes the producer/artist Missy Elliott as follows: "We do our best to bring you the latest, hottest beats, and we appreciate it when our fans show their love and respect by going in that record store and buying the finished product." RIAA Press Release, *Recording Industry To Begin Collecting Evidence And Preparing Lawsuits Against File "Sharers" Who Illegally Offer Music Online*, June 25, 2003, <http://www.riaa.com/news/newsletter/062503.asp>.

<sup>40</sup> See Steve Albini, *The Problem With Music*, <http://www.negativland.com/albini.html> (pointing to the disparity between record label revenues and returns to individual artists).

recording industry policies relating to the cost of authorized music and the restrictions record labels impose on authorized music.

¶25 The law-abidingness value of music represents the utility that individuals derive from their own personal knowledge that they have obeyed the law in acquiring their music. It does not capture their individual utility of escaping either legal or community based sanctions. In the context of file sharing at least, it appears that the value of obedience to the law will be conditional on the perceived justification of the law in question. One would expect that the L-value of obtaining music legally would exceed the L-value of unauthorized downloads, but it is possible that if the recording industry becomes sufficiently unpopular consumers may take a perverse pleasure in defying laws they perceive to be unjust. This may have been a factor in the initial rise of Napster.

¶26 In sum, the functional benefits of music are likely to be roughly the same regardless of whether it was obtained lawfully or unlawfully. In contrast, the normative value and the law-abidingness value associated with music should be positive for lawfully acquired music and negative for music obtained through unauthorized file sharing. But, if the recording industry's tactics generate a substantial normative backlash, then the comparative advantage of acquiring music legally might be reduced, nullified, or even reversed.

## 2. Costs

¶27 The main difference between CDs, legal downloads, and music obtained from peer-to-peer networks lies in the varying costs associated with these different methods of acquisition. These costs can be broken down into four sub-categories: (i) the monetary cost of obtaining music (M), (ii) the time and effort or search costs involved in acquisition (T), (iii) the expected cost associated with computer viruses (V), and (iv) the expected cost of sanctions (S).

¶28 The music products offered by the recording industry are at a considerable disadvantage with respect to price because peer-to-peer networks offer essentially the same products at no monetary cost. The search costs for unauthorized music and authorized music are difficult to compare, but probably now favor the recording industry for the reasons discussed below. In contrast, the record label's products are much better value for those consumers who are more concerned by the potential for viruses or legal sanctions.

¶29 The first significant cost of music acquisition is naturally its monetary cost. The monetary cost of unauthorized file sharing is typically zero because peer-to-peer software is usually free. File sharing may have a monetary cost for consumers who spend more on internet access or computer hardware as a result, but assuming consumers already have computers and internet access for other reasons, the marginal monetary cost of file sharing is either zero or very close to it. In contrast, the monetary cost of legal downloads and CDs remains quite high:<sup>41</sup> a single song costs 99 cents on iTunes and the average cost of a CD is about \$13.00.<sup>42</sup>

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<sup>41</sup> See EFF, *supra* note 37. But see RIAA, *Cost of a CD*, <http://www.riaa.com/news/marketingdata/cost.asp>.

<sup>42</sup> The NPD Group, Inc., *CD Price Declines are Accelerating, Says The NPD Group* (June 23, 2004), [http://www.npd.com/dynamic/releases/press\\_040603.htm](http://www.npd.com/dynamic/releases/press_040603.htm) (reporting that the average price of CDs in the

¶30 If the upfront monetary cost of music was the only relevant cost, the recording industry would be dead in the water. Fortunately for the recording industry, unauthorized downloads also come with other significant costs which make the legal alternatives far more attractive for many.

¶31 The second significant cost of music acquisition is the time and effort it takes to find music that aligns to your preferences: i.e. the search costs. The difference in search costs between legal and illegal music has changed dramatically since the demise of Napster and advent of iTunes and other legal download sites. Before iTunes there was no legal source for compressed music files that did not involve access to a CD. Thus the efficiency of internet distribution gave peer-to-peer sites a clear search cost advantage over the legal alternatives.

¶32 In the post-iTunes world, it is questionable whether unauthorized downloads retain any search cost advantage, at least for consumers with music tastes in the mainstream. Anecdotal evidence suggests that using iTunes and comparable services is now faster and easier than most peer-to-peer networks.<sup>43</sup> One reason for this is that the average time it takes to locate and download a song on peer-to-peer networks has increased significantly because of the increasing volume of deliberately mislabeled or spoof files on those networks.<sup>44</sup> Many of these spoof files are distributed by members of the recording industry to discourage downloading.

¶33 The average time it takes to locate and download a song on peer-to-peer networks has also increased due to the increasing number of consumers who free ride off the network by refusing to share their own material.<sup>45</sup> Individual consumers have an incentive to free ride for a number of reasons: first, allowing others to upload may consume valuable bandwidth; second, uploading appears to carry a much greater risk of detection and enforcement than downloading; and third, allowing others to upload may render users more vulnerable to viruses and/or invasions of their privacy. Anecdotal reports suggest that free riding has diminished the attractiveness of peer-to-peer distribution, but exactly how much remains unclear.<sup>46</sup>

¶34 The third significant cost of music acquisition is the potential exposure to computer viruses. Users of peer-to-peer networks run the same risks of malicious code as regular internet users,<sup>47</sup> but their degree of exposure can be much higher. A 2004 study reported in *InformationWeek*, concludes that 45% of the files found by popular keyword searches on peer-to-peer networks were infected with viruses.<sup>48</sup> Arguably, this overstates the risk

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U.S. has reached a low of \$13.29, versus \$13.79 in 2003).

<sup>43</sup> See Press Release, The NPD Group, iTunes More Popular Than Most Peer-to-Peer File Sharing Services (June 7, 2005), available at [http://www.npd.com/dynamic/releases/press\\_050607.html](http://www.npd.com/dynamic/releases/press_050607.html); Ed Oswald, *Study: iTunes More Popular than P2P*, BETANEWS, June 7, 2005, [http://www.betanews.com/article/Study\\_iTunes\\_More\\_Popular\\_than\\_P2P/1118158804](http://www.betanews.com/article/Study_iTunes_More_Popular_than_P2P/1118158804) (noting that users can find a song more quickly on iTunes than on peer-to-peer networks).

<sup>44</sup> See James Maguire, *Hitting P2P Users Where it Hurts*, WIRED NEWS, Jan. 13, 2003, <http://www.wired.com/news/digiwood/0,1412,57112,00.html> (noting that spoof files are an “effective tool for lessening P2P networks’ appeal” and that, as a result of spoof files, “it has become much more difficult to find the file you’re looking for the first time around.”).

<sup>45</sup> Free riding is discouraged on most P2P networks, with varying degrees of success. See *infra* note 74 and accompanying text.

<sup>46</sup> See *infra* note 74 and accompanying text.

<sup>47</sup> Risks include viruses, worms, Trojan horses, spyware, and unwanted adware.

<sup>48</sup> Parry Aftab, *The Privacy Lawyer: Peer-To-Peer Networks: The Other Risks*, INFORMATION WEEK, Nov. 22, 2004,

of contracting a harmful virus on a peer-to-peer network because although viruses do appear on the networks, they do not appear as audio files.<sup>49</sup> The real hazard associated with peer-to-peer applications is that many install spyware along with the actual peer-to-peer program itself.<sup>50</sup> In addition, consumers who do not properly deactivate or restrict the sharing function in peer-to-peer software run the risk of giving other people access to both their IP address and their entire system.<sup>51</sup>

¶35 The virus cost of peer-to-peer downloading should provide the recording industry with a clear advantage in the music it offers. Yet, recent attempts to lock down music distributed on CD with digital rights management software may have temporarily squandered that advantage. In 2005 SonyBMG distributed over 2 million CDs with an undisclosed rootkit that infected as many as 500,000 computer networks world wide.<sup>52</sup>

¶36 The DRM technology Sony used served a legitimate purpose, but the software was often installed without the user's consent,<sup>53</sup> left their computers vulnerable to hackers and resulted in significant damage if they attempted to remove it.<sup>54</sup> Although the rootkit fiasco may have temporarily diminished the virus cost advantage of legal music acquisition in the mind of the public,<sup>55</sup> as long as it is not repeated this factor should weigh significantly in favor of the recording industry and its products.

¶37 The final significant cost of music acquisition for users of peer-to-peer networks is their potential exposure to legal sanctions. The sanction cost of unauthorized downloading is determined by the risk of detection multiplied by the likely penalty – altering these two variables is the primary objective of the recording industry's much maligned end user litigation strategy. The effectiveness with which the recording industry can hope to manipulate consumer expectations of the expected value of legal

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<http://www.informationweek.com/security/showArticle.jhtml?articleID=53200209&pgno=1>. Some of the more popular P2P programs offer fee based premium services which give the user certain warranties in relation to malicious code.

<sup>49</sup> P2P users sophisticated enough to avoid downloading and executing files that end in non-audio extensions, e.g. “.exe,” can easily avoid most viruses. Also many applications automatically filter out non-audio files.

<sup>50</sup> See FEDERAL TRADE COMMISSION, FTC CONSUMER ALERT, P2P FILE-SHARING: EVALUATE THE RISKS (2005), <http://www.ftc.gov/bcp/online/pubs/alerts/sharealrt.htm>.

<sup>51</sup> *Id.*

<sup>52</sup> Quinn Norton, *Sony Numbers Add Up to Trouble*, WIRED NEWS, Nov. 16, 2005, <http://www.wired.com/news/privacy/0,1848,69573,00.html>. A rootkit is a set of software tools frequently used by a third party (usually an intruder) after gaining access to a computer system. These tools are intended to conceal running processes, files or system data, which helps an intruder maintain access to a system without the user's knowledge. See Wikipedia, Rootkit, <http://en.wikipedia.org/wiki/Rootkit> (last visited Feb. 26, 2006).

<sup>53</sup> The software installs even if the user declines Sony's End User License Agreement. See J. Alex Halderman, *MediaMax Permanently Installs and Runs Unwanted Software, Even if User Declines EULA*, FREEDOM TO TINKER, Nov. 28, 2005, <http://www.freedom-to-tinker.com/?p=936>.

<sup>54</sup> The rootkit fiasco has resulted in at least one class action lawsuit being filed against Sony BMG for alleged violations of the Computer Fraud and Abuse Act 18 U.S.C §1030 and various consumer protection laws. See Complaint, *Melcon v. Sony BMG Music Entm't*, No. 05-5081 (N.D. Cal. Dec. 8, 2005), available at [http://www.eff.org/IP/DRM/Sony-BMG/ND\\_cal\\_complaint.pdf](http://www.eff.org/IP/DRM/Sony-BMG/ND_cal_complaint.pdf).

<sup>55</sup> See Andrew Orlowski, *Sony Unsinged By Rootkit CD Fiasco*, THE REGISTER, Nov. 22, 2005, <http://www.theregister.co.uk/2005/11/22/analysis/> (“[T]he CD buying public doesn't seem to care. . . . Far from being a historic turning point in the public's perception of nefarious DRM tactics, that many hoped, it's proof that the CD buying public is impervious to technology warnings, or at least extremely slow to cotton on.”).

sanctions attached to unauthorized downloading is explored in the remainder of this article.

### C. *Altering the Cost-Benefit Analysis Through Litigation*

¶38 As discussed above, rational consumers will acquire music via unlawful means if their utility from file sharing is greater than their utility from acquiring music legally. In other words, consumers will continue to buy the industry's products if  $(B_L - C_L) > (B_U - C_U)$ , constrained by  $(B_L - C_L) > 0$ . Expanding this inequality to take into account the variables that comprise these costs and benefits results in:

$$(F_L + N_L + L_L) - (M_L + T_L + V_L + S_L) > (F_U + N_U + L_U) - (M_U + T_U + V_U + S_U)$$

¶39 This can be simplified if we assume that  $V_L$  (the expected cost of viruses),  $S_L$  (the expected cost of sanctions) and  $M_U$  (expected monetary cost) are each equal to zero for the reasons given above. This results in:

$$(F_L + N_L + L_L) - (M_L + T_L) > (F_U + N_U + L_U) - (T_U + V_U + S_U).$$

¶40 The recording industry's optimal strategy is not to make the left hand side of this equation dominate for every single potential music consumer. That is an unrealistic objective given the likely variation of individual valuations of functional attributes, money, time and effort, the risk of viruses and legal sanctions. Making the legal acquisition of music more attractive than the alternative of illegal file sharing for each and every consumer is also unrealistic because consumers have widely diverging attitudes toward the normative desirability of paying for music and obeying the law.

¶41 The recording industry's key objective is not to enforce compliance with the law for its own sake, but rather to maximize its own profit. The recording industry should only attempt to diminish the consumer appeal of unauthorized file sharing if doing so results in consumers buying more music through legitimate channels. The critical point to understand here is that some consumers will be more likely to switch to paying for music than others.

¶42 In light of this cost-benefit analysis, the recording industry has a number of non-exclusive options it can pursue to make its products more attractive than the illegal alternatives offered on peer-to-peer networks.<sup>56</sup> First, the recording industry could make its own product more attractive by reducing the price of music, easing DRM restrictions and/or improving the range of music available for legal downloading via the internet. All of these moves would make the recording industry's product more attractive than unauthorized downloading for at least some consumers. Exactly how many would depend on the extent of these changes and to the degree to which consumers are sensitive to

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<sup>56</sup> One possibility not addressed in this article is that the recording industry could attempt to engineer pro-copyright social norms by tapping into community based feelings of reciprocity and giving copyright and the record labels greater public legitimacy. See, e.g., Mark Schultz, *Fear and Norms and Rock & Roll: What Jambands can Teach us about Persuading People to Obey Copyright Law*, 21 BERKELEY TECH. L.J. (forthcoming Spring 2006) (arguing that the experience of the jamband community provides a model for the development of pro-copyright social norms that the recording industry could follow).

changes in these product attributes. Inevitably, some consumers will be more motivated by price reductions than reduced DRM restrictions and others will feel the opposite way. However, it may not be in the record labels' interests to take any of these steps because their current business models are still centered on physical distribution of CDs.

¶43 Second, the recording industry could pollute peer-to-peer networks with viruses and spoof files. If successful, this strategy would make the recording industry's products more attractive than the illegal alternative by raising the expected costs of unauthorized music file sharing. In 2002, California Democrat Howard Berman introduced a bill that would have given legal immunity to copyright owners who blocked, diverted, or otherwise impaired unauthorized distribution of their work on peer-to-peer networks.<sup>57</sup> The bill essentially proposed giving the recording industry a blank check for retributive hacking. Not to be outdone, Senator Orrin Hatch has implied that copyright owners might be allowed to destroy the personal computers of file sharers in order to "teach someone about copyright."<sup>58</sup> Extreme measures like these are unlikely to be approved because of the risks that electronic vigilantism poses to the national economy and national security. Spoofing, on the other hand, seems like fair game. Adding harmless decoy files to peer-to-peer networks does not damage anyone's computer; it simply wastes the time and energy of consumers trying to get copyrighted music without paying for it.<sup>59</sup>

¶44 Third, the recording industry can also attempt to make its products more attractive than the alternative by raising the expected legal sanctions associated with unauthorized music file sharing.<sup>60</sup> The industry's main tool in this regard has been its aggressive litigation campaign against the end users of peer-to-peer file sharing networks.

#### D. D. End User Litigation Makes Sense

¶45 The application of a cost benefit model of consumer behavior in relation to file sharing supports the rationality of the recording industry's end user litigation campaign. As discussed above, rational consumers will acquire music via unlawful means if:

$$(F_L + N_L + L_L) - (M_L + T_L) > (F_U + N_U + L_U) - (T_U + V_U + S_U)^{61}.$$

¶46 Raising the expected cost of legal sanctions that attach to unlawful file sharing ( $S_U$ ) makes sense from a rational choice perspective.

¶47 The only scenario under which manipulating the expected cost of legal sanctions can be categorically dismissed as irrational is if any attempt to do so triggers either a

<sup>57</sup> H.R. 5211, 107th Cong. (2002).

<sup>58</sup> See Declan McCullagh, *Senator OK with Zapping Pirates' PCs*, CNET NEWS, June 18, 2003, [http://news.com.com/2100-1028\\_3-1018845.html](http://news.com.com/2100-1028_3-1018845.html); Sonia K. Katyal, *The War on CD Piracy Is a War on Our Rights*, NEWSDAY, July 2, 2003, at A34.

<sup>59</sup> A recent Pew survey reports that 15% of former downloaders who said they quit did so because they were getting more viruses, pop-up ads or having other computer problems that they could attribute to their downloading activity. See MARY MADDEN AND LEE RAINIE, PEW INTERNET PROJECT DATA MEMO, MUSIC AND VIDEO DOWNLOADING MOVES BEYOND P2P (2005), available at [http://www.pewinternet.org/PPF/r/153/report\\_display.asp](http://www.pewinternet.org/PPF/r/153/report_display.asp).

<sup>60</sup> Note that the recording industry has also done this by lobbying government for tougher sanctions and enforcement in relation to criminal liability for breach of copyright.

<sup>61</sup> The variables in bold are discussed in the following paragraph.

normative or technological backlash against the recording industry.<sup>62</sup> A normative backlash would reduce the normative value of legal music acquisition, ( $N_L$ ) will decrease, and the normative value of unauthorized music acquisition ( $N_U$ ) will increase. A normative backlash might also feed back into the value consumers associate with complying with copyright law, in which case the law-abidingness value of legal music acquisition ( $L_L$ ) will decrease and the law-abidingness value of unauthorized music acquisition ( $L_U$ ) will increase. The notion of a technological backlash following the recording industry's waves of consumer litigation implies that the industry's attempts to increase the expected cost of legal sanctions in the short run will actually reduce the expected cost of legal sanctions in the long run by making infringing activity harder to detect.

¶48 Although the possibility of normative or technological backlash cannot be dismissed, it should not necessarily be assumed either.<sup>63</sup> In the final analysis, whether either a normative or technological backlash could actually be significant enough to negate the recording industry's gains from manipulating consumer expectations about legal sanctions depends on exactly how the industry goes about this task. Part II of this article reviews the recording industry's implementation of its end-user litigation strategy and suggests that both of these risks will be minimized if the recording industry targets the marginal file sharer as opposed to focusing on high volume up-loaders.

## II. TARGETING THE MARGINAL FILE SHARER

¶49 The recording industry's file sharing dragnet has led to civil suits against a number of strange fish: a 71 year-old man whose teenage grandchildren downloaded music via P2P networks;<sup>64</sup> a twelve year-old honors student living in public housing;<sup>65</sup> a deceased 83 year-old grandmother;<sup>66</sup> and a 41 year-old disabled single mother.<sup>67</sup> These are not the people you would choose to drag into court if you were trying to win the Nobel Peace Prize.

¶50 Conventional wisdom holds that, if the recording industry is going to sue anyone, it should focus on high volume up-loaders and avoid minors, the elderly, the poor and other sympathetic targets.<sup>68</sup> The intuition behind this view is that targeting those consumers who supply large volumes of music for others to download (the so-called "high-volume up-loaders") will be both more effective and less likely to provoke public outcry. From a public policy perspective, there may well be reasons to follow this course, but from the recording industry's point of view, exclusively targeting high volume up-loaders is

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<sup>62</sup> These arguments are discussed in more detail in another paper. See Sag, *supra* note 14.

<sup>63</sup> The argument that a normative or technological backlash is inevitable is addressed more completely in a separate paper. See *id.*

<sup>64</sup> See Yu, *P2P*, *supra* note 2, at 665; Chris Gaither, *Group Sues 261 Over Music-Sharing*, BOSTON GLOBE, Sept. 9, 2003, at A1.

<sup>65</sup> See Yu, *P2P*, *supra* note 2, at 665; Tim Arango et al., *Music-Thief Kid Sings Sorry Song*, N.Y. POST, Sept. 10, 2003, at 21.

<sup>66</sup> See Andrew Orlowski, *RIAA Sues the Dead: 83 Year Old Deceased Woman in Copyright Violation*, THE REGISTER, Feb. 5, 2005, [http://www.theregister.co.uk/2005/02/05/riaa\\_sues\\_the\\_dead/](http://www.theregister.co.uk/2005/02/05/riaa_sues_the_dead/).

<sup>67</sup> See, e.g., Yu, *P2P*, *supra* note 2, at 666-67; Lior Jacob Strahilevitz, *Charismatic Code, Social Norms, and the Emergence of Cooperation on the File-Swapping Networks*, 89 VA. L. REV. 505, 544-45 (2003); Vance, *supra* note 4.

<sup>68</sup> See, e.g., Yu, *P2P*, *supra* note 2, at 665-666.

entirely flawed. Targeting high volume up-loaders may (or may not) slow down some peer-to-peer sites, but it will not deliver the same revenue increases as more broadly based litigation campaign that focuses on convincing the marginal file sharer to switch to purchasing music.

¶51 Targeting high volume up-loaders might make sense if the recording industry was aiming to reduce or eliminate peer-to-peer file sharing for its own sake, but this is not the case. Reducing infringement is usually the goal of law enforcement, but that is because there is usually some correlation between infringement and social harm. File sharing does not fit this mold since the recording industry is not harmed by infringement, only by music sales that might have been. It is not in the recording industry's economic interest to shut down peer-to-peer file sharing at any cost, the industry should only be concerned with reducing file sharing to the extent that doing so will maximize the profits of the recording labels.

¶52 In spite of its vast resources, the recording industry and its member labels can not sue every end user who might be unlawfully using peer-to-peer networks to swap music. To maximize its return on litigation expenses, the recording industry needs to be selective about which file sharers it pursues. Furthermore, because the recording industry's aim is profit maximization, not infringement minimization, its optimal strategy is to persuade marginal file sharers to switch to buying music, not to persuade hard-core file sharers not to share. It might seem counter-intuitive, but the recording industry is actually better off suing every day people (including twelve year-olds and grandmothers) because they are most likely to be persuaded to switch to buying music.

#### A. *The Limits of Supply Reduction*

¶53 One interesting variation on the conventional "safe targeting" strategy is the administrative dispute resolution proceeding advocated by Mark Lemley and Anthony Reese.<sup>69</sup> As an alternative to expanding secondary liability for peer-to-peer service providers, the authors propose giving copyright owners a low cost administrative dispute resolution proceeding method of suing peer-to-peer file sharers.<sup>70</sup> Although this proposal is a step in the right direction, the authors stop short at the critical point in their insistence that this new procedure be reserved for high-volume up-loaders.<sup>71</sup> Lemley and Reese argue that their process should only be used against consumers who upload "at least one copy of at least 50 copyrighted works during any 30-day period."<sup>72</sup> The authors suggest reserving low cost enforcement to these cases to remove any doubts associated with the potential for justifiable instances of downloading, such as mistake or fair use.<sup>73</sup>

¶54 The primary argument for exclusively targeting high volume up-loaders is that this will reduce the supply of pirated music to peer-to-peer networks without causing a significant normative or technological backlash. In theory, addressing piracy on the

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<sup>69</sup> Mark A. Lemley & R. Anthony Reese, *Reducing Digital Copyright Infringement Without Restricting Innovation*, 56 STAN. L. REV. 1345 (2004).

<sup>70</sup> *Id.* at 1352-1353.

<sup>71</sup> *Id.* To be fair, Lemley and Reese make their proposal with the best interests of society, not the recording industry, in mind. Nonetheless, their broader claims about social welfare only stand up if the mechanism they propose is at least somewhat effective in meeting the recording industry's objectives.

<sup>72</sup> *Id.* at 1413.

<sup>73</sup> *Id.*

supply side may increase the cost of acquiring unauthorized music by slowing down peer-to-peer networks or reducing the variety of songs they have to offer. But the effectiveness of supply reduction alone is questionable because of the inherently sharable nature of the objects of regulation and the resilience of peer-to-peer networks to free-riding.

¶55 In spite of the individual incentive to free-ride, peer-to-peer file sharing networks are unlikely to succumb to a tragedy of the digital commons if the recording industry targets high volume up-loaders. First, peer-to-peer networks are programmed to create strong incentives to upload that may be greater than the disincentives offered by the recording industry's threats of litigation. The current generation of file sharing applications reinforce the norm of reciprocity through a system of carrots and sticks that encourage (and sometimes compel) users to share.<sup>74</sup> In part this is achieved by burying the pro-sharing default so that it takes some user sophistication to figure out how to turn it off. A more sophisticated approach is to allow users to refuse to share with anyone who does not themselves share a minimum number or ratio of files. BitTorrent actually works faster if more users are downloading; it also penalizes non-sharing clients by slowing down their download speeds.

¶56 Second, peer-to-peer networks are robust enough that they can survive with only a minority of highly motivated users supplying the majority. These highly motivated users may be off-shore, judgment proof or protected by layers of anonymity and encryption. Furthermore, although the idea of cutting off the supply of illegal content at its source is attractive, the average peer-to-peer user is not the original source of most infringing material. Ordinary file sharers do not rip the movies and music they buy and post them online; rather they share the material that is already available.<sup>75</sup> The typical file on a peer-to-peer network comes from inside the entertainment industry's own distribution chain, often appearing on the internet before the public ever has a chance to buy them.<sup>76</sup> Despite the communitarian rhetoric of peer-to-peer networks, the majority of source files are obtained and propagated by topsites, the upper echelons of the peer-to-peer pyramid that ordinary members of the public cannot reach.<sup>77</sup>

¶57 In sum, although the safe targeting strategy may have some effect on the prevalence of peer-to-peer file sharing, supply reduction alone is unlikely to be as effective as the mixed strategy discussed below.

### *B. Mixed Strategy and the Marginal File Sharer*

¶58 The safe strategy of only targeting high volume up-loaders is fundamentally mistaken because it focuses on infringement minimization, not revenue maximization. Instead of artificially restricting end user litigation to high volume up-loaders, the

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<sup>74</sup> See Strahilevitz, *supra* note 67; see also Wikipedia, Leech (computing), [http://en.wikipedia.org/wiki/Leech\\_%28computing%29](http://en.wikipedia.org/wiki/Leech_%28computing%29) (last visited Mar. 8, 2006).

<sup>75</sup> See Jeff Howe, *The Shadow Internet*, WIRED, Jan. 2005, <http://www.wired.com/wired/archive/13.01/topsite.html> (noting that "[i]n reality, the number of files on the Net ripped from store-bought CDs, DVDs, and videogames is statistically negligible. People don't share what they buy; they share what is already being shared - the countless descendants of a single 'Adam and Eve' file.").

<sup>76</sup> *Id.*

<sup>77</sup> *Id.*

recording industry should adopt a mixed strategy that includes targeting some of the most marginal file sharers, whether they happen to be frail and disadvantaged or rich and powerful. Targeting the marginal file sharer rather than the very worst infringers may seem counter-intuitive, but it is likely to be the recording industry's most effective strategy for at least four reasons.

¶59 First, targeting high volume up-loaders is a misallocation of resources because those consumers are less likely to change their behavior than consumers at the margin. Second, targeting high volume up-loaders is also a misallocation of resources because file sharing by marginal consumers is the primary cause of economic harm to the industry. Third, exclusively targeting high volume up-loaders creates something akin to a moral hazard, whereby consumers will change their behavior to avoid sanctions in ways that actually increase the economic harm to the recording industry. Fourth, exclusively targeting high volume up-loaders sends a weak and confused normative message about the acceptability and legality of file sharing.

#### 1. Finding the consumers that are most likely to switch

¶60 Rather than focusing on the infringing acts of high volume up-loaders, the recording industry's resources are better spent targeting the comparatively innocent file sharers because they are more likely to be deterred from file sharing and also more likely to switch to buying music.

¶61 Some have argued that focusing on high volume up-loaders will minimize the significance of any backlash, because these targets are not likely to be the recording industry's customers in the first place.<sup>78</sup> This makes no sense. The value the recording industry gets from suing users depends on the extent to which that litigation causes users to switch from file sharing music to paying for it. It is widely acknowledged that the "threat of a lawsuit will realistically do little to deter hard-core pirates."<sup>79</sup> If the industry only targets users who are unlikely to switch, it is missing the chance to send a message to those who might.

¶62 When a Senate leader is trying to rally votes for an important bill, she does not lobby her most ardent opponents; she focuses her energy on the senators who are most likely to be persuaded. The recording industry should follow a similar approach, investing its litigation resources into changing the behavior of consumers who are most likely to switch from file sharing to buying their music. Targeting high volume up-loaders does just the opposite; it targets the recording industry's most hostile audience. As a group, high volume up-loaders are less likely to be deterred from file sharing than low volume or occasional file sharers because of their obvious enthusiasm for the practice and because of their likely technological sophistication. Consequently, the recording industry will get more "bang" for its litigation "buck" if it targets the comparatively innocent.

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<sup>78</sup> Discussing recent litigation against high volume up-loaders, Peter Yu argues that "[g]iven the amount of music swapped and downloaded, these individuals were unlikely to become the industry's customers." Yu, *P2P*, *supra* note 2, at 666-67.

<sup>79</sup> Kristina Groennings, *An Analysis of the Recording Industry's Litigation Strategy Against Direct Infringers*, 7 VAND. J. ENT. L. & PRAC. 389, 390 (2005).

## 2. Follow the money

¶63 Another posited reason to target high volume up-loaders is that they are seen as more morally culpable than more marginal file sharers. It follows from this reasoning that if the recording industry targets more sympathetic defendants, it will be seen to be acting unfairly. Lior Strahilevitz notes that although “large-scale file-sharers might be prosecuted; it is widely believed that the public could not stomach widespread prosecutions of individual computer users who had illicitly downloaded copyrighted content.”<sup>80</sup> In a similar vein, Alfred Yen cautions that “the Internet makes infringement easy to commit and Internet users are not attractive targets for suit. Internet users may be difficult to identify or find, and their pocketbooks often are not deep enough to pay for monetary judgments.”<sup>81</sup> But this again misses the point. End user litigation is not about raising money, it is about raising the expected value of legal sanctions for the marginal file sharer. It is irrelevant whether defendants can pay court imposed fines or industry brokered settlements, all that matters for the recording industry is whether people like the defendants can pay for CDs. The recording industry’s end game is to increase sales, not to reduce infringement just for its own sake.

¶64 Although high volume file traders are responsible for more copyright infringement than other more occasional users; it does not necessarily follow that they are responsible for more lost sales than occasional down-loaders. If a college student spends \$ 30 of discretionary income on music and then downloads 1000 songs, the recording industry’s lost revenue is not \$ 1,300,<sup>82</sup> it may not be anything at all if that student would not have spent more than \$ 30 on music under any circumstances. In contrast the recording industry does lose money if a teenager who rarely downloads music satisfies her demand for the latest Madonna album by downloading when she would have otherwise gone to a CD store. Neither downloads nor uploads have economic consequence for the recording industry, only downloads that substitute for legitimate purchases are consequential.

## 3. Mixed strategies and moral hazards

¶65 In order to effectively increase the expected value of legal sanctions against file sharing, the recording industry must not only target the marginal file sharer, but also adopt a mixed strategy that makes their target selection less predictable. On this basis, it seems that lawsuits against twelve year olds and grandmothers are far from a public relations disaster – they are something of a “public relations coup.”<sup>83</sup>

¶66 One potential objection to the suggestion that the recording industry should target the marginal file sharer is that this category of consumer is harder to identify than high volume up-loaders. Even if this is true, this objection has little practical consequence because as well as targeting the marginal file sharer, the recording industry must also target file sharers with a broad range of characteristic. This mixed strategy is required

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<sup>80</sup> Strahilevitz, *supra* note 67, at 544-545.

<sup>81</sup> Alfred C. Yen, *A Preliminary Economic Analysis of Napster: Internet Technology, Copyright Liability, and The Possibility Of Coasean Bargaining*, 26 DAYTON L. REV. 247, 252 (2001).

<sup>82</sup> The average cost of a CD is \$13, assuming that there are 10 tracks on a CD yields a total cost of \$1,300.

<sup>83</sup> Justin Hughes, *On the Logic of Suing One’s Customers and the Dilemma of Infringement-Based Models*, 22 CARDOZO ARTS & ENT. L.J. 725, 731-736 (2005).

because otherwise the consumers will simply adapt to avoid meeting the industry's target specifications. The recording industry's stated preference to target high volume up-loaders invites file sharers to evade detection simply by uploading less than the target amount.<sup>84</sup> Limiting enforcement to high volume up-loaders lowers the expected sanction for moderate file sharing to zero. This is a particular weakness of the Lemley and Reese proposal.<sup>85</sup> If all file sharers need to do to stay off the recording industry's radar is share less than 50 files in a month, the average user will set their defaults to share 49 files.

¶167 As discussed in Part I, rational consumers will acquire music via unlawful means if:

$$(F_L + N_L + L_L) - (M_L + T_L) > (F_U + N_U + L_U) - (T_U + V_U + S_U)^{86}.$$

¶168 Exclusively targeting high volume up-loaders would create two separate groups, high volume up-loaders for whom the industry's threats of legal action have some value, and every one else, for whom the value of  $S_U$  is zero. This creates a very strong incentive for file sharers to trade at 49 songs a month, but gives them no incentive to stop trading beyond that.

¶169 This moral hazard is not just a theoretical possibility, it is already evident in the response of organizations such as the Electronic Frontier Foundation (EFF) which artfully instructs consumers "how not to get sued by the RIAA for file-sharing."<sup>87</sup> The EFF primarily advises consumers to purge potentially infringing files in their shared folders or to disable the "uploading" features on their peer-to-peer applications.<sup>88</sup> The EFF does not suggest to consumers that they hold back from unauthorized downloading, presumably because downloading *per se* is not likely to bring them to the attention of the recording industry.

¶170 The recording industry must adopt a mixed strategy in target selection, otherwise consumers will change their behavior just enough to avoid detection, but probably not enough to benefit the record labels' balance sheets. The moral hazard created by the safe target strategy is only likely to become more damaging as consumers become increasingly aware of the ease of evading rigid target profiles.

#### 4. Mixed messages

¶171 Exclusively targeting high volume up-loaders sends an odd message to consumers. It intimates that only a certain level of uploading is really normatively undesirable and that occasional downloading is inconsequential. Whereas, from the recording industry's point of view, downloads are consequential for the recording industry if they substitute for CDs that would have otherwise been bought.

¶172 The recording industry's litigation strategy is not simply about increasing the expected sanctions attached to unauthorized music file sharing. The campaign is

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<sup>84</sup> See also Groennings, *supra* note 79, at 395 (noting that the "RIAA's strategy would benefit from a less predictable approach").

<sup>85</sup> See Lemley, *supra* note 69. But see Hughes, *supra* note 83.

<sup>86</sup> The variable in bold is discussed in the following paragraph.

<sup>87</sup> Electronic Frontier Foundation, *How Not to Get Sued by the RIAA for File-Sharing*, <http://www.eff.org/IP/P2P/howto-notgetsued.php> (last visited Mar. 25, 2006).

<sup>88</sup> The same site also provides easy to follow links to show users how to do just that that. See *id.*

explicitly designed to change consumer perceptions as to the moral and legal acceptability of file sharing. But even in this respect, it makes even greater sense to target the most marginal file sharers because their N-values and L-values are likely to be most susceptible to manipulation. Mark Schultz suggests that the “most efficient and effective way to persuade people to comply with copyright law is to convince them that it is the right thing to do.”<sup>89</sup> That may be correct, but often the most efficient way to convince people what is right is to show them that breaking the law is not inconsequential.

¶73 In contrast, if the recording industry digs in for a pitched battle with dedicated and technologically sophisticated users of peer-to-peer networks, it will in all likelihood fail. The recording industry’s litigation strategy is likely to drive technically sophisticated users and dedicated file sharers to invest greater resources in avoiding detection. But this will only constitute a technological backlash if that escalation permeates into the mainstream.<sup>90</sup> The recording industry has a much better chance focusing on less committed file sharers and persuading (or coercing) them to switch to legal channels of distribution. The recording industry’s best chance for avoiding a technological backlash is to make unauthorized file sharing unappealing to the mass market and essentially give up on influencing more dedicated file sharers who have the technical skills to evade their current methods of detection.

¶74 For all of these reasons, far from apologizing for its high profile suits against sympathetic targets, the recording industry should continue to prosecute a random assortment of file sharers.

### C. *Success Is In the Eye of the Beholder*

¶75 The ultimate test of the recording industry’s end user litigation strategy will be its long run effect on the market place. Like all empirical questions related to file sharing, the effectiveness of end user litigation thus far is strongly contested.<sup>91</sup>

¶76 The recording industry’s initial foray into consumer litigation certainly appeared to have a significant effect. Traffic on popular networks such as Kazaa and Morpheus declined immediately upon the announcement of the first wave of suits.<sup>92</sup> Moreover, the Pew Internet and American Life Survey found that the percentage of the adult internet population engaged in music file sharing had dropped from 30% in June 2003 to only 14% in November 2003.<sup>93</sup>

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<sup>89</sup> Schultz, *supra* note 56.

<sup>90</sup> I address this possibility more fully in a separate paper. See Sag, *supra* note 14.

<sup>91</sup> David Opperbeck argues “total P2P network usage has increased significantly, and that the RIAA litigation has simply fueled a technological arms race which reflects the synergy between the P2P file sharing and application coding communities.” *Peer-to-Peer Networks, Technological Evolution, and Intellectual Property Reverse Private Attorney General Regulation*, 20 BERKELEY TECH. L.J. 1685, 1715-1716 (2005). Justin Hughes draws the opposite conclusion from the same underlying data. Hughes, *supra* note 83, at 731-736.

<sup>92</sup> See, Kristina Groennings, *Costs and Benefits of the Recording Industry’s Litigation Against Individuals*, 20 BERKELEY TECH. L.J. 571, 578 (2005) (citing Press Release, Netratings, Inc., *File-Sharing Application Usage Dips After Warning from the Recording Industry*, July 14, 2003, <http://www.Nielsen-netratings.com>).

<sup>93</sup> Rainie, *supra* note 59; see also MICHAEL GROSS, BUSINESS SOFTWARE ALLIANCE, HIGHER EDUCATION AND UNLICENSED SOFTWARE EXPERIENCE – PTUDENT AND ACADEMICS SURVEY 2, available at <http://www.definetheline.com/resources/BSA-Ipsos-EducationSurvey-June2005.pdf> (reporting, based on a

¶77 However, subsequent studies based on the number of connections to peer-to-peer networks may indicate a different trend. In 2004, researchers at the San Diego Supercomputer Center concluded that peer-to-peer traffic had simply migrated to other networks in response to recording industry litigation.<sup>94</sup> These researchers analyzed the routing information on packets of data passing through a particular point on the internet. Based on certain characteristics of the data packets, the researchers inferred which ones were likely to be peer-to-peer traffic and which were not. The advantage of this method is that it does not rely on individual self reporting of file sharing. The disadvantage is that even assuming that the researchers correctly identified the whether data was peer-to-peer or not, they have no way of determining the actual contents of those packets. Critically this means that there is no way to determine whether the traffic increases they observed were due to the increasing trade in large objects such as movie files, the spread of file sharing outside the U.S., or even the presence of millions of spoof files planted by the recording industry itself.<sup>95</sup>

¶78 Although the survey data collected by Pew has its own limitations, in some ways it is more reliable than connectivity studies. The accuracy of surveys can be undermined by all kinds of human frailty: surveys depend on their subjects' motivation, honesty, recollection, and comprehension. Given unauthorized music file sharing can be both a civil and a criminal offense; it is particularly relevant to note that survey responses may be misleading because respondents may be motivated to give answers that present themselves in a favorable light. Nonetheless, the studies undertaken by the Pew researchers since 2000 are extremely useful because they use a consistent methodology to track consumer trends over time. Figure 2, below, maps the survey responses to various Pew polls conducted from 2000 to 2005.<sup>96</sup>

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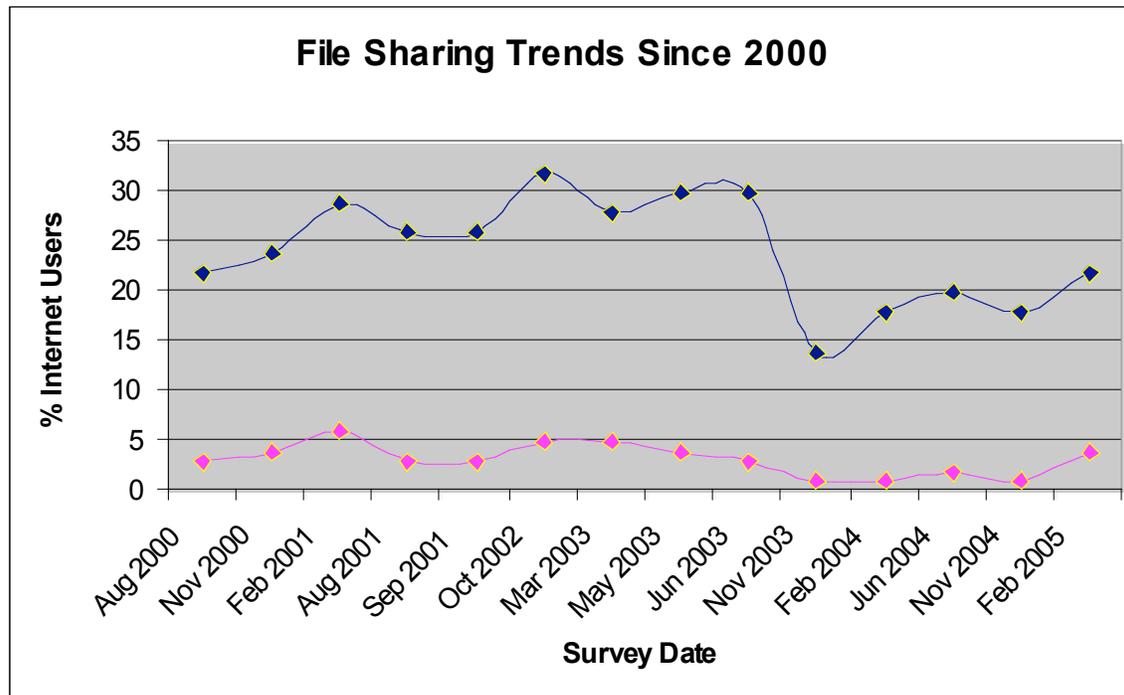
survey of college students, that P2P use has dropped 23% since 2003.).

<sup>94</sup> Thomas Karagiannis et al., *Is P2P Dying or Just Hiding?* (2004) (prepared for IEEE Globecom 2004 - Global Internet and Next Generation Networks), available at <http://www.caida.org/outreach/papers/2004/p2p-dying/p2p-dying.pdf> (“We find that, if measured accurately, P2P traffic has never declined; indeed we have never seen the proportion of p2p traffic decrease over time (any change is an increase) in any of our data sources.”).

<sup>95</sup> See Hughes, *supra* note 83. The other connectivity data referred to by Opderbeck appears to share the same problems. See Opderbeck, *supra* note 91, at 1715.

<sup>96</sup> Rainie, *supra* note 59.

Figure 2



¶79 From August 2000 to June 2003 the proportion of adult American internet users who claim to have engaged in file sharing grew fairly steadily from 22% to 30%.<sup>97</sup> This occurred during a period when internet use was growing rapidly, so the actual raw increase in file sharing was actually much more dramatic.<sup>98</sup> Since June 2003, the proportion of adult American internet users who claim to have engaged in file sharing has dropped significantly. The initial drop, measured in November 2003, was down to 14%. As illustrated in Figure 2, since then the proportion of respondents identifying as file sharers has increased back up to 22%.

¶80 These individual polls may not tell us what the actual incidence of file sharing is because of the possibility of response bias, but the changes between the polls are strongly indicative of at least one of two possibilities. Either less people are file sharing, or less people are willing to admit to file sharing – or, more likely, some combination of both. In other words, the Pew polls indicate that recording industry litigation against individual file sharers has either reduced downloading reduced people's willingness to admit to it. In either case this suggests that litigation has been effective.

¶81 The unprompted responses or survey participants who claimed to have stopped file sharing provides further evidence of the effectiveness of end user litigation. According to the most recent Pew survey, 15% of respondents said they had downloaded in the past but no longer did so. Of that 15%, one third cite the recording industry lawsuits as the main reason they stopped.<sup>99</sup> In addition, the Pew survey also indicates that there is a

<sup>97</sup> *Id.* at 9.

<sup>98</sup> *Id.*

<sup>99</sup> *Id.* at 8–9. Significantly this was in response to an open-ended question, the interviewers did not prompt the respondents by offering them a menu of reasons which included the recording industry lawsuits.

significant cross over between the file sharing population and users of online music services such as iTunes or BuyMusic.com.<sup>100</sup> The proportion of current music downloaders who say they have tried legal online music services grew from 24% in 2004 to 43% in 2005.<sup>101</sup> With Apple recently announcing its billionth music download,<sup>102</sup> this should be good news for the recording industry.

### III. CONCLUSION

¶82 There may well be social welfare or public policy considerations that cast the recording industry recent tactic of end user litigation in a negative light, but there is little doubt that this strategy is rational from the recording industry's perspective.

¶83 The rational choice model of file sharing developed in this article demonstrates that, for the recording industry, suing your (potential) customers makes a lot of sense. The advantage of applying a traditional cost benefit analysis of consumer file sharing is that allows us to contextualize the predictions of normative and technological backlash that seem so popular. While the theoretical possibility of either of these reactions remains, there is no current evidence to suggest that they will overwhelm the increased value of expected legal sanctions engineered by the recording industry's consumer litigation. The cost benefit model suggests that rational consumers should be just as sensitive to changes in the expected cost of legal sanctions as any other product feature associated with the music they acquire.

¶84 This article does not answer the broader question of whether the recording industry's lawsuits are in the best interests of society at large, but it resolves an important preliminary question. Resolving this preliminary question is an important step towards a more productive debate on the future of the recording industry and peer-to-peer technology. If the industry's end user litigation was irrational, then there is really no good case for allowing it to continue. On the other hand, once the rationality of the recording industry's tactics is acknowledged, the overall desirability of end user litigation becomes at least a debatable point.

¶85 Furthermore, rather than focusing their efforts on the very worst copyright offenders, the recording industry's optimal strategy in relation to end user litigation is to target the most sympathetic defendants along with a broad spectrum of file sharers. Targeting high volume up-loaders sounds like a safe course of action at first, but as this article explains, this is an illusory comfort. It makes much more sense for the recording industry to target more marginal file sharers because they are more likely to be persuaded to stop file trading and start buying music.

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<sup>100</sup> *Id.*

<sup>101</sup> *Id.*

<sup>102</sup> The billionth song, "Speed of Sound," was purchased as part of Coldplay's "X&Y" album by Alex Ostrovsky from West Bloomfield, Michigan. Apple.com/iTunes, *To Every iTunes Customer, Thanks a Billion*, <http://www.apple.com/itunes/1billion/> (last visited Mar. 25, 2006).