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Copyright and "New-Use" Technologies

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I. Trotter Hardy

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Today’s copyright concerns often center on the new digital technologies, especially the Internet and its friendly interface, the World Wide Web (“the Internet”). Even though the Internet is relatively new and poses new challenges for copyright law, “technology,” as such, and a constant change in technology are certainly not new. To the contrary, inventors, innovators, and entrepreneurs have been changing the landscape of American life ever since the country’s founding. Not surprisingly, copyright law—having existed for almost as long¹—has repeatedly had to accommodate new technologies over the two centuries of its existence.

Congress has repeatedly stated its intention to make the Copyright Act² flexible enough to adapt to new technologies over time without requiring repeated amendments. Much of the talk in hearings for the 1909 Copyright

1. The first Copyright Act was enacted in 1790. *See generally* Act of May 31, 1790, ch. 15, 1 Stat. 124.

2. Copyright Act of 1976, Pub. L. No. 94-553, 90 Stat. 2541 (codified as amended at 17 U.S.C. §§ 101–118 (1976)).

Act³ focused on this goal, and even more of the hearings for the 1976 Copyright Act⁴ focused on it as well. Yet, since its effective date of 1978, the most recent major copyright revision has been amended at least twenty-eight times,⁵ more than once every year on average, and as of this writing, has just undergone some very significant amendments relating to new technology.⁶

Something is out of kilter here. On the one hand, Congress has tried to make the Copyright Act flexible enough to survive technological change; on the other hand, every new technological change seems to lead to further amendments to the Copyright Act. Why is it so hard to make the Copyright Act flexible, particularly when Congress has declared that doing so is a signal value?

Two reasons account for the failure of Congress to craft an enduring Copyright Act, though only the second of these is addressed here. The first reason is essentially a matter of politics: a Copyright Act written to survive significant technological change would necessarily be very broadly and generally worded. But broad and general language neither clearly requires the imposition of liability nor clearly renders a potential defendant immune

3. Copyright Act of 1909, Pub. L. No. 60-349, 35 Stat. 1075 (codified as amended at 17 U.S.C. §§ 101-914 (1994)).

4. Copyright Act of 1976, Pub. L. No. 94-553, 90 Stat. 2541 (codified at 17 U.S.C. § 101 (1994)).

5. See *Preface to the Copyright Act* <<http://lcweb.loc.gov/copyright/title17/preface.html>> (the U.S. Copyright Office World Wide Web site). See also H.R. REP. NO. 104-554, at 6 (1996) (stating “[s]ince 1976, Congress regularly has had to address new issues, especially those raised by new technologies or new methods of exploitation. Each session of Congress has produced at least one major amendment to the Copyright Act”).

6. See *The Digital Millennium Copyright Act* [“DMCA”], H.R. 2281, 105th Cong. (1998), signed into law by President William Clinton in the fall of 1998 as Pub. L. No. 105-304, 112 Stat. 2860 (1998) (to be codified at 17 U.S.C. 101). The Copyright Office summarized the law as follows:

The DMCA is divided into five titles:

Title I . . . implements the WIPO treaties.

Title II . . . creates limitations on the liability of online service providers for copyright infringement when engaging in certain types of activities.

Title III . . . creates an exemption for making a copy of a computer program by activating a computer for purposes of maintenance or repair.

Title IV contains six **miscellaneous provisions**, relating to the functions of the Copyright Office, distance education, the exceptions in the Copyright Act for libraries and for making ephemeral recordings, “webcasting” of sound recordings on the Internet, and the applicability of collective bargaining agreement obligations in the case of transfers of rights in motion pictures.

Title V . . . creates a new form of protection for the design of vessel hulls.

U.S. Copyright Office, *The Digital Millennium Copyright Act of 1998: U.S. Copyright Office Summary* <<http://lcweb.loc.gov/copyright/legislation/dmca.pdf>> (emphasis in original).

from liability in a given context. Political interest groups therefore seek legislative provisions not only favorable to their interests, but provisions that clearly and unambiguously favor those interests. To accomplish the latter goal, those groups press Congress for narrow and specific statutory wording, wording that cannot be expected to survive much technological change. Conversely, the more general the language of an act—and hence the more likely that it is to survive a long while—the greater the incentive of interest groups to oppose it.⁷

The second reason for Congress's failure is a matter of policy, however, and is within the scope of this article: Congress has perceived and hence tried to solve only one-fourth of the problem of copyright and new technologies—the other three-fourths have never been adequately addressed, let alone solved. The one-fourth of the problem that has been reasonably well solved is the issue of copyright's subject matter. At times, new technologies create new media for recording the creative expression of authors, such as photography, motion pictures, laser-etched disks, and so on. This kind of technological evolution has often in the past given rise to the corresponding issue of whether those new media should be protected by copyright. By and large, the 1976 Copyright Act avoided the questions—and the need for repeated Copyright Act amendments—for future media by defining copyright's subject matter to be "works of authorship", something that is by definition an abstraction and independent of any particular medium of fixation. The three-fourths of the problem that has not been addressed makes up an enormous portion of the issues that surround new technology and copyright. Those issues, first proposed in a report written for the United States Copyright Office,⁸ include the following.

7. For more on the politics of copyright revision, see Professor Litman's excellent analysis in Jessica Litman, *Copyright Legislation and Technological Change*, 68 OR. L. REV. 275, 277 (1989), written 10 years ago and more timely than ever:

Throughout its history, copyright law has had difficulty accommodating technological change. Although the substance of copyright legislation in this century has evolved from meetings among industry representatives whose avowed purpose was to draft legislation that provided for the future, the resulting statutes have done so poorly. The language of copyright statutes has been phrased in fact-specific language that has grown obsolete Whatever copyright statute has been on the books has been routinely, and justifiably, criticized as outmoded. In this article, I suggest that the nature of the legislative process we have relied on for copyright revision is largely to blame for those laws' deficiencies.

Id. at 277 (citations omitted).

8. I. TROTTER HARDY, PROJECT LOOKING FORWARD: SKETCHING THE FUTURE OF COPYRIGHT IN A NETWORKED WORLD-FINAL REPORT 238 (1998) [hereinafter HARDY I] (source on file with author).

New subject matter. First, new technologies sometimes allow new forms of creative expression that are independent of any particular medium.⁹ These new forms of expression raise questions of copyright's subject matter that are not solved by the current Copyright Act's separation of copyrightable "works" from particular media because the issue has nothing to do with the particular medium of fixation.¹⁰ For example, the hierarchy of menu commands that is part of many computer programs is a form of expression that can be fixed in a variety of media.¹¹ Yet, in early 1996 the Supreme Court split four-to-four on the question of the copyrightability of menu command hierarchies.¹²

Decentralized infringement. Second, technologies like photocopying and computers sometimes allow widespread noncommercial uses of copyrighted works in ways that would clearly be infringing if done on a large scale for commercial purposes.¹³ When they are done on a small scale, typically for noncommercial purposes, the issue arises whether these "decentralized infringements" should be legitimized as a fair use, considered to be infringements even if they are largely undetectable by copyright owners, declared to be non-infringing by Congress, or dealt with in some other way.¹⁴

New uses. Finally, new technologies often create new ways of using existing copyrighted works.¹⁵ Radio in the early 1920s raised the issue whether music broadcasts infringed composers' performance rights, for example.¹⁶ Cable television in the 1960s similarly raised the issue whether retransmitting copyrighted television programs or movies infringed the copyright owner's performance rights.¹⁷

This article will summarize these three issues of copyright and new technologies, and then concentrate on the last, the "new-use" issue from the perspective of copyright as an incentive to creative efforts. The article will demonstrate that much of the affected parties' and Congress's understanding of the new-use issue is faulty because it is heavily biased toward the then present state of the technology in issue. A proper analysis of the issue requires thinking ahead. Some new-use technologies will eventually grow to supplant "old use" technologies and should therefore be required to pay

9. *Id.* at 238.

10. *Id.*

11. *See Lotus Dev. Corp. v. Borland Int'l, Inc.*, 49 F.3d 807 (1st Cir. 1995), *aff'd by an equally divided court* 516 U.S. 233 (1996).

12. *Id.* *See also infra* text accompanying notes 31-34.

13. HARDY I, *supra* note 8, at 240.

14. *Id.* at 241.

15. *Id.* at 240.

16. *Id.*

17. *Id.*

royalties to preserve authors' incentives at their previous level. Other new-use technologies may not grow to any particular importance, and consequently need not be required to pay royalties to preserve authors' incentives. Unfortunately, neither courts nor Congress can predict the future growth of a new technology in order to make this determination. The issue is then how to make a determination about a new-use technology's royalty obligation that depends on foretelling the future when the future cannot be foretold.

This article proposes one answer to this apparently intractable problem by analyzing the issue in terms of the statistician's "Type I" and "Type II" errors. Essentially, this approach asks: "How bad could it be" if the copyright decision-maker (court or Congress) guesses wrongly about a new technology's future? If one type of wrong guess is likely to be less harmful than other types, than absent information to the contrary, that is the guess about the future that the decision-maker ought to make. Finally, this same analysis implies that in the absence of other information to the contrary, when courts or Congress face the issue of whether a copyright royalty obligation applies to a new-use technology, they should find that it does apply.

I. NEW MEDIA AS SUBJECT MATTER

The way we view copyright's "subject matter" has evolved over the two centuries of copyright law's existence. In 1790, the first copyright statute included "maps, charts, and books" within its protection.¹⁸ Although not expressly confined to tangible media—a court could always interpret "map" or "chart" or "book" in a broad and nonliteral way were the occasion to do so arise¹⁹—this statute nonetheless seemed to focus on tangible media as the object of copyright's protection.

Over the succeeding two hundred years, the focus of copyright's subject became more varied, including some subject matters defined or phrased as tangible objects, and others suggesting more abstract types of works. In an 1853 case, for example, the Supreme Court said clearly that copyright was an abstract right, thoroughly separate from any tangible embodiment:

But from the consideration we have given to the case, we are satisfied that the property acquired by the sale in the engraved plate, and the copy-right of the map secured to the author under the

18. Act of May 31, 1790, ch. 15, 1 Stat. 124.

19. *See* *Holmes v. Hurst*, 174 U.S. 82, 89 (1899) (stating "the word 'book' as used in the statute is not to be understood in its technical sense of a bound volume, but any species of publication which the author selects to embody his literary product").

act of Congress, are altogether different and independent of each other, and have no necessary connection. The copy-right is an exclusive right to the multiplication of the copies, for the benefit of the author or his assigns, disconnected from the plate, or any other physical existence. It is an incorporeal right to print and publish the map, or, as said by Lord Mansfield in *Millar v. Taylor* (4 Burr. 2396) "a property in notion, and has no corporeal tangible substance."²⁰

Yet when Congress added photography to copyright's subject matter in 1865, it used words that focused on the medium itself: protection applied to "photographic prints."²¹ On the other hand, musical compositions were for years registered by the Copyright Office in the category of "books,"²² a practice that implied a recognition of "music" as a more abstract entity, capable of being fixed in a variety of forms. Congress only expressly added "musical compositions" to copyright's subject matter in 1831.²³ "Dramatic works" were added to the statute as a category in 1856,²⁴ another phrase suggesting a focus on the abstract work regardless of its medium of fixation. Yet, this abstract sounding focus was not so broad that it was thought expressly to include "operatic compositions," a subject matter only added to the statute in 1894.²⁵ Moreover, in 1908 the Supreme Court declared without reservation that copyright's subject matter consisted only of tangible media:

20. *Stephens v. Cady*, 55 U.S. 528, 530 (1852).

21. Act of March 3, 1865, ch. 126, 13 Stat. 540. Interestingly, the issue of photography as a new type of copyrightable subject matter was litigated a year *later*, in 1866, on facts that had arisen before passage of the 1865 Act. See *Wood v. Abbott*, 30 F. Cas. 424, 425 (S.D.N.Y. 1866) (No. 17,938). The court concluded that photographs did not fit within any of the existing categories of protectible subject matter and hence were not copyrightable. *Id.*

22. See *Revision of Copyright Laws: Hearings Before the Joint Comm. on Patents*, 60th Cong. (1908) (statement of Albert H. Walker), reprinted in E. FULTON BRYLAWSKI & ABE GOLDMAN, LEGISLATIVE HISTORY OF THE 1909 COPYRIGHT ACT (1976) [hereinafter BRYLAWSKI] Part K at 46 (noting that English courts had protected sheet music as "books" since 1777, and that American courts had always followed that precedent).

23. Act of Feb. 3, 1831, ch. 16, 4 Stat. 436.

24. See Act of Aug. 18, 1956, ch. 169, 11 Stat. 138 (1856).

25. See H.R. 6835, 53d Cong. § 4966 (1894). Apparently Congress omitted "operatic compositions" from the category of "dramatic works" from simple oversight. See JAMES W. COVERT, AMENDING THE COPYRIGHT LAW, H.R. REP. NO. 1191, at 1 (stating "the omission to include protective provisions for operatic compositions in the law sought to be amended [in 1856] was, doubtless, the result of oversight").

The statute has not provided for the protection of the intellectual conception apart from the thing produced, however meritorious such conception may be, but has provided for the making and filing of a tangible thing, against the publication and duplication of which it is the purpose of the statute to protect²⁶

Finally, in the 1976 Copyright Act, Congress formally adopted the “meritorious conception” that was rejected sixty-eight years earlier by the Supreme Court, namely that copyright’s subject matter is abstract “works of authorship” regardless of the medium of a work’s fixation.²⁷ By “generalizing” copyright’s subject matter that way, Congress hoped to permit copyright law more gracefully to accommodate technological change—to apply to new media of fixation, whether “now known or later developed.”²⁸ Relative to other issues of copyright and new technology, Congress has succeeded reasonably well in that endeavor.²⁹ To the author’s knowledge, no issues of copyright subject matter have arisen over “video

26. *White-Smith Music Publ’g Co. v. Apollo Co.*, 209 U.S. 1, 17 (1908). Apparently *contra* is the ten-years’ earlier opinion in *Holmes v. Hurst*, 174 U.S. 82, 89 (1899) (stating: “It is the intellectual production of the author which the copyright protects and not the particular form which such production ultimately takes” though the Court may have intended “form” to refer to some form of paper publication).

27. 17 U.S.C. § 102(a) (1994).

28. *Id.*

29. *But see* HARDY I, *supra* note 8, at 246 stating:

Even under the 1976 Act, subject matter issues that spring from new media of fixation have not always been resolved as cleanly and simply as the statutory language suggests. Notably in the 1980’s, it took a major, highly contested case, *Apple Computer v. Franklin Computer Corporation*, [714 F.2d 1240 (3rd Cir. 1983)], to determine that although computer programs written on paper or on a disk were the subject matter of copyright, so were computer programs fixed in read-only memory. One would have thought that the “medium-neutral” design of the 1976 Act would have made this an easy answer to reach.

Id. See also *Matthew Bender & Co., v. West Pub. Co.*, 158 F.3d 693 (2d Cir. 1998), where despite its claims to the contrary, the Second Circuit returned to putting copyright’s subject matter focus on the particular medium of fixation instead of the abstract work that results from “selection and arrangement.” *Id.* at 703.

But the relevant statutory wording refers to material objects in which “a work” readable by technology “is fixed,” not to another work or works that can be created, unbidden, by using technology to alter the fixed embedding of the work, by rearrangement or otherwise. The natural reading of the statute is that the arrangement of the work is the one that can be perceived by a machine without an uninvited manipulation of the data.

Id.

cassettes," "audio CDs," "CD-ROMs," "laser disks," "DVD disks," "DIVX videos," three-dimensional photographs in holograms, or over any other modern developments in media technology. That such disputes have not arisen is a tribute to Congress's wisdom in abstracting copyright's subject matter away from the medium of fixation.

II. NEW WORKS AS SUBJECT MATTER

Tributes pretty much have to stop with Congress's handling of the medium-of-fixation issue, alas. Less successfully treated in the Copyright Act is the issue of whether new types of *works* should be treated as copyrightable subject matter.³⁰ The First Circuit's decision in *Lotus Development Corp. v. Borland International, Inc.*,³¹ a case involving the question of extending protection to the menu command structure of a computer program, illustrates the problem.³²

Lotus had developed the widely used computer spreadsheet program known as "Lotus 1-2-3."

Lotus 1-2-3 is a spreadsheet program that enables users to perform accounting functions electronically on a computer. Users manipulate and control the program via a series of menu commands, such as "Copy," "Print," and "Quit." Users choose commands either by highlighting them on the screen or by typing their first letter. In all, Lotus 1-2-3 has 469 commands arranged into more than 50 menus and submenus.³³

Competing software company Borland developed its own spreadsheet program, "Quattro," which could make use of the same menu commands—indeed, Quattro had implemented "a *virtually identical* copy of the entire 1-2-3 menu tree" though with a different on-screen appearance.³⁴ Lotus sued Borland, arguing that Borland had infringed Lotus's copyright in hierarchy

30. 17 U.S.C. § 103 (1994).

31. 49 F.3d 807 (1st Cir. 1995), *affirmed by an equally divided Court*, 516 U.S. 233 (1996).

32. *Id.* at 810.

33. *Id.* at 809.

34. *Id.* at 810 (quoting *Lotus Dev. Corp. v. Borland Int'l, Inc.*, 831 F. Supp. 202, 212 (D. Mass. 1993) (emphasis in original)).

of menu commands. The First Circuit concluded that the menu hierarchy was a “method of operation”—something not copyrightable by definition.³⁵

A more useful way of looking at the case, though, is to see it as an issue of new subject matter. Personal computers and the software sold for them constituted a new technology that led to a new type of authorial effort, the creation of a computer program’s “menu hierarchy.” The fundamental issue in the case was whether copyright law should recognize that type of authorship as an appropriate type of subject matter for protection.³⁶

The issue arises because of ambiguity in the statutory language. Section 102 defines two things: things that copyright protects as subject matter, *and* things that copyright does not protect as subject matter.³⁷ These twin provisions, intended no doubt to serve as an abundance of caution in ensuring that the Copyright Act withholds copyright protection from ideas, facts, and the like, actually open up a middle ground of uncertainty. If there were but a single definition of what is copyright’s subject matter, courts would focus on new types of works with but a single question: Does this type of work fall within that definition of subject matter? With two definitions, one inclusive and one exclusive, the *Lotus* court understandably felt obliged to ask three questions: Does the new type of work fall within the definition of copyrightable subject matter? Does the work also fall within the definition of non-copyrightable subject matter? And finally, what is the effect of a work’s falling within *both* categories of expressly protected and expressly unprotected subject matter? *Lotus* apparently concluded that a computer program’s menu hierarchy did in fact fall within both categories:

[W]hile original expression is necessary for copyright protection [that is, falls within copyright’s *included* subject matter], we do not think that it is alone sufficient. Courts must still inquire whether original expression falls within one of the categories foreclosed from copyright protection by [section] 102(b) [that is, falls within copyright’s *excluded* subject matter], such as being a “method of operation.”³⁸

35. *Id.* at 815. The Copyright Act, section 102(b), notes: “In no case does copyright protection for an original work of authorship extend to any . . . method of operation.” *Lotus*, 49 F.3d at 815 (quoting 17 U.S.C. § 102(b) (1994)).

36. *Id.* at 813.

37. 17 U.S.C. § 102(a), (b) (1994).

38. *Lotus*, 49 F.3d at 818.

The court implicitly found that falling within both categories meant that the new type of work, menu command hierarchies, was not eligible for copyright's protection.³⁹

III. THE "DECENTRALIZED INFRINGEMENT" ISSUE

One major problem in copyright enforcement today is the fact that many modern communications technologies exhibit very low reproduction costs. Low costs mean that small firms, or even individuals, can make low volume copies without coming to the attention of copyright holders. When copying costs are high, infringement tends to be "centralized" because economies of scale dictate that a business enterprise—a store, a copy center—provide the copying equipment. Business enterprises are few enough in number, and visible enough through advertising, that copyright holders can locate and bargain with them.

Before the invention of mimeography and xerography, for example, the copying of books or other printed matter would have to be undertaken by hand, a severe practical limit, or by a printer. Printing required typesetting, an expensive and time-consuming process. Because of the high initial overhead of printing, copying would not be worth undertaking unless a fairly large run of books was envisioned. A large run of books by a commercial printer would constitute a "centralized" infringement and would be relatively visible to a copyright holder:

The unauthorized publication of a copyrighted book may ordinarily be adequately punished through civil proceedings and under the provisions of existing law. The offender in such case is ordinarily a person of fixed habitat, and has a press and the implements of his business. The ordinary processes of the courts may readily be served upon him, and he may be compelled to respond in damages for his wrongdoing.⁴⁰

When technology reduces the costs of copying, the phenomenon of "decentralized infringement" results: individuals can duplicate copyrighted works in a way that is not easily detected by the copyright holder. Today, high quality copies can be made in low volume by ubiquitous photocopy machines. Such copying takes no overhead, little time, and even the machinery is priced low enough for home use, where the copying is essentially invisible to a copyright holder.

39. *Id.* at 819.

40. *See* COVERT, *supra* note 25, at 2.

The photocopier and the video recorder are obvious examples of dramatically lowered costs over printing presses and television studios for the making of copies of paper documents and television programs. Similarly, the falling cost of home audio taping equipment in the form of tape cassettes during the 1960s and 1970s allowed individuals to make high quality copies of sound recordings that previously could only be made with expensive reel-to-reel tape machines in professional sound studios. Making such copies was lawful under federal law until 1972.⁴¹

Decentralized infringement is not confined to physical reproduction of copyrighted materials. The distribution right⁴² can also be affected by technology. Today's computer networks and electronic mail provide an easy way to distribute information to literally millions of Internet users. In spite of recent amendments to the Copyright Act⁴³ to deal with digitized music, new developments in digital audio and the Internet raise the familiar issue of decentralized infringement once again.

Music has been available in a digital format in the form of audio "compact disks" or "CDs" for many years.⁴⁴ For some years, it was far from easy for home users to make a copy of the digital audio data resident on a CD. CD players and computers with CD-ROM drives converted the digital format to analog immediately upon use. Consequently, home audio taping equipment that was used to copy a CD produced an analog tape recording, one that would decline in quality with multiple generations of subsequent copies. Both home audio equipment and computer CD-ROM drives today, however, are commonly able to copy the digital format directly, without conversion to analog form. Readily available software can read the digital files from a CD and copy them onto a personal computer's hard disk.⁴⁵

41. See Pub. L. No. 92-140, 85 Stat. 391 (1971) (codified as amended at 17 U.S.C. § 1(f)); see also *Goldstein v. California*, 412 U. S. 546 (1973) (discussing California's state-law approach to the problem).

42. The Copyright Act confers several defined rights on copyright owners: reproduction, distribution, public performance, public display, and the preparation of derivative works. See 17 U.S.C. § 106 (1994).

43. See 17 U.S.C. §§ 1001-1010 (1994) (codifying the Audio Home Recording Act of 1992, Pub. L. No. 102-563, 106 Stat. 4327 (1992)).

44. The Philips Corporation introduced the first CD system in 1979. Sony followed with improvements to the Philips design in 1983. RUSSELL SANJEK & DAVID SANJEK, *AMERICAN POPULAR MUSIC BUSINESS IN THE 20TH CENTURY* 241 (1991).

45. See, e.g., *Audiograbber* <<http://www.audiograbber.com-us.net>> (stating: Audiograbber is a beautiful piece of software that grabs digital audio from cd's. It copies the audio digitally - not through the soundcard - which enables you to make perfect copies of the originals. It can even perform a test to see that the copies really are perfect. Audiograbber can also automatically normalize the music, delete silence from the start and/or end of tracks . . .).

However, the resulting computer files are quite large.⁴⁶ For most home users, wide-spread distribution of such files electronically over the Internet would be impracticably time consuming.⁴⁷ However, a compression technology called "MP3" has arisen that reduces the sizes of such files by a factor of ten, with little or no noticeable loss in music quality.⁴⁸ This combination of copying and compression technologies has resulted in the rapid spread of nonprofessional Internet sites that feature digitized music for downloading, typically copied from CDs.⁴⁹ This development now threatens to decentralize the formerly highly centralized system for the distribution of recorded music.⁵⁰

46. CD music occupies roughly 10 million bytes of computer storage per minute of playing time. A three minute song, for example, copied to one's computer hard disk would take up roughly 30 megabytes of disk storage.

47. A typical home-to-Internet connection today operates at 28.8 kilobits per second. At that speed, downloading or uploading a three-minute song, about 30 million bytes (which at eight bits per byte equals 240 million bits), would take roughly 140 minutes or over two hours (that is 240 million bits divided by 28,800 bits per second which equals 8333 seconds). Obviously, anything that speeded up such downloading—other things being equal—would increase the amount of such downloading. Faster modems or other access technologies would do it; smaller file sizes would also do it. It happens that the latter came first.

48. See Jason Chervokas, *Music Industry Fears Digital Music Pirates* <<http://search.nytimes.com/books/search/bin/fastweb?getdoc+cyber-lib+cyberlib+20671+3+wAAA+mp3>> (source on file with author). See also David Thom, *MPEG Audio FAQ Version 9* <<http://www.tnt.uni-hannover.de/project/mpeg/audio/faq/>> (source on file with author).

49. The Recording Industry Association of America ("RIAA") refers to these non-professional sites as "Music Archive Sites," defining them as sites that host an inventory of full-length sound recordings for Internet users to download and play and in some cases upload as well. Music Archive Sites may contain hundreds of full-length sound recordings that, for the most part, are of near CD quality. The sites often actively encourage -- sometimes require -- users to upload additional full-length sound recordings to the site in exchange for being able to download.

RIAA, *Record Industry Protects Copyrighted Sound Recordings On the Internet: Enforcement Campaign Expands, Music Archive Sites Targeted* <<http://www.riaa.com/antipir/releases/maslit.htm>>.

50. See, e.g., Jon Pareles, *With A Click, A New Era of Music Dawns*, N.Y. TIMES, Nov. 15, 1998, at AR-1 (stating: "Digital distribution is likely to revolutionize the economics of the music business. Some advantages of large recording companies, like their *centralized manufacturing and distribution* and their domination of retail display space, vanish if the Internet becomes the main outlet for music") (emphasis added). These new music distribution technologies have strong analogies to jukeboxes, radio, retail CD stores, and so on, suggesting that courts will find that distributing music in this particular form will be infringing. Yet, on October 26, 1998, federal district court Judge Audrey B. Collins denied the recording industry's motion for a preliminary injunction against the sale of a device for storing music in

These previous illustrations feature changing costs making certain uses of works so cheap that they are no longer centralized and hence no longer “visible” or readily controllable by copyright owners. This phenomenon can arise even without sophisticated technology. Early in the twentieth century, witnesses in copyright hearings testified about the difficulty of finding and suing professional play pirates, who operated in this fashion:

An expert stenographer secretes himself somewhere in the theater and he takes down word for word everything that is spoken in the play After he has gotten all that, he takes down the makeup of the actor, everything he wears, the arrangement of the face, the beard or wig if he wears one, the costume. Then he comes down to the scenery; the properties that are used. All of the play is stolen in that way.

. . . .

How does he get that stolen manuscript on the market? He does not put out a sign “Play broker,” “Play agent,” as a reputable vendor of manuscripts would do. But he has in front a beer saloon. You enter ostensibly to get a glass of beer. What you go for is to get the play. By knocking on a door or by some other means you obtain access to the manuscript room, and you get a copy for \$5.⁵¹

Another witness similarly complained about the difficulty of enforcing play copyrights when unauthorized “performances are usually given at points remote from the location or headquarters of the dramatic author or producer, and by irresponsible persons, who jump their companies nightly from town to town.”⁵² Obviously, modern digital technology had nothing to do with these nineteenth to early twentieth century play performances. Rather, the

its MP3 format. *See* Recording Indus. Ass’n of Am., Inc. v. Diamond Multimedia Sys., 29 F. Supp. 2d 624 (C.D. Cal. 1998). Actions against private individuals for “decentralized infringement” in the form of copying MP3 files may be foreclosed by the digital audio amendments to the Copyright Act made in 1992. *See* 17 U.S.C. § 1008 (1994).

51. *Revision of Copyright Laws: Hearings Before the Joint Comm. on Patents*, 60th Cong. (1908), reprinted in BRYLAWSKI, *supra* note 22, Part K at 22 (statement of Harry P. Mawson, representing the American Dramatists’ Club).

52. *Id.* at 24 (statement of Ligon Johnson, representing the National Association of Theatrical Managers). Similarly, the 19th century saw the wide-spread unauthorized reproduction and distribution of sheet music. Canadian music publishers maintained secret publishing houses in the United States. They sent thousands of salesmen out with trunks of sheet music, keeping only a few sheets at recognized warehouses so that they could not be caught with much on hand. *See* H.R. REP. NO. 1289-55.

problem grew from the fact that the performances, at least when done with limited props and scenery, had only small economies of scale and could therefore be produced with a small number of people and equipment and hence in a decentralized fashion.

Courts and Congress have responded to the decentralized infringement issue in a variety of ways. At times, stiff penalties have been imposed on the conduct;⁵³ at times, Congress has adopted a compulsory license with prescribed payments;⁵⁴ at times, private parties have worked out their own arrangements in the form of "guidelines;"⁵⁵ at times, Congress has rendered the activities immune, perhaps in exchange for a tax/royalty on some related activity;⁵⁶ at times, one who facilitates decentralized infringement has been found liable for contributory infringement;⁵⁷ at times, a court has declared the activity to be a fair use.⁵⁸ And doubtless, at times, the activity in question continues, undetected, without litigation, and hence without any definitive resolution of the infringement question.

IV. THE NEW-USE ISSUE

All three problems so far discussed—new media of fixation, new types of works, and decentralized infringement—raise challenges for copyright law and merit thoughtful analysis. But the fourth problem is perhaps the most vexing of all: new technologies that create a new way of using existing copyrighted works. In short, these technologies raise the new-use question: Does the new-use of an existing copyrighted work infringe the author's rights? An abundance of illustrations has emerged from copyright cases over the last century or so.

For example, musical compositions as such were copyrightable after 1831, well before the advent of radio in the 1920s. When radio stations began playing musical compositions "on the air," however, litigation soon arose over whether such a playing constituted a "performance for profit" of

53. See Act of January 6, 1897, ch. 4, 29 Stat. 482 (amending 60 R.S. ch. 3) (imposing prison sentences for unauthorized play performances).

54. See 17 U.S.C. § 115(c) (compulsory license for the making of "cover records").

55. See Ad Hoc Committee on Copyright Law Revision, Authors League of America, and Association of American Publishers, Inc., Agreement on Guidelines for Classroom Copying in Not-For-Profit Educational Institutions with Respect to Books and Periodicals, reprinted in HOUSE REPORT ON COPYRIGHT ACT OF 1976, H.R. REP. NO. 94-1476, at 159-60, reprinted in 1976 U.S.C.C.A.N. at 5775-76 [hereinafter House Report].

56. See 17 U.S.C. §§ 1003, 1004 (1994) (tax on digital recording devices and media).

57. See, e.g., Princeton Univ. Press v. Michigan Document Servs., Inc., 855 F. Supp. 905 (E.D. Mich. 1994), rev'd, 74 F.3d 1512 (6th Cir. 1996), reh'g en banc and opinion vacated, 74 F.3d 1528 (6th Cir. 1996), aff'd 99 F.3d 1381 (6th Cir. 1996).

58. See, e.g., Sony Corp. v. Universal City Studios, Inc., 464 U.S. 417 (1984).

the composition—and hence a copyright infringement under the 1909 Copyright Act.

The same question arose after the arrival of cable television in the 1960s. Cable television began as a means of strengthening the signal of distant broadcast stations, especially in the valleys of mountainous areas. These cable stations picked up broadcast signals from the airwaves and passed them along to cable subscribers without seeking permission from the broadcast stations or paying royalties. Again, litigation arose over whether such retransmission by cable constituted a “public performance for profit” within the scope of the copyright owner’s rights.

A. *Phonograph Recording*

Composers of the 1900s era wanted to be able to collect royalties from phonograph and piano roll companies that hired orchestras to record their compositions. Most copyright scholars know that the Supreme Court rejected that desire in 1908, when the Court decided the *White-Smith Music Publishing Co. v. Apollo Co.*⁵⁹ case. *White-Smith* held that the use of copyrighted music on piano rolls, a popular technology of the day,⁶⁰ did not infringe the composer’s copyright rights.⁶¹ Less well-known, perhaps, is that the Supreme Court rested its decision partly on that fact that a number of earlier lower court cases had declined to offer copyright protection to recorded sound; Congress, with presumed awareness of those decisions, had not acted to change that result.⁶²

59. 209 U.S. 1 (1908).

60. *Id.* at 9.

The record discloses that in the year 1902 from seventy to seventy-five thousand of such instruments were in use in the United States, and that from one million to one million and a half of such perforated musical rolls . . . were made in this country in that year.

It is evident that the question involved in the use of such rolls is one of very considerable importance, involving large property interests, and closely touching the rights of composers and music publishers.

Id.

61. *Id.* at 18.

62. *Id.* at 12–14.

[I]t must be admitted that the decisions, so far as brought to our attention in the full discussion had at the bar and upon the briefs, have been uniformly to the effect that these perforated rolls operated in connection with mechanical devices for the production of music are not within the copyright act.

White-Smith, 209 U.S. at 12.

Since these cases were decided Congress has repeatedly had occasion to amend the copyright law. The English cases, the decision of the District

The real story was a bit more circular. True, the early cases of recorded music found no infringement. In 1888, a Massachusetts case, *Kennedy v. McTammany*,⁶³ found that the reproduction of music in the form of perforated paper rolls for “organette” hand organs⁶⁴ did not infringe composers’ copyrights because it was not a “copy” of the composition for copyright purposes.⁶⁵ A similar case in 1901, *Stern v. Rosey*,⁶⁶ relied on *Kennedy* to conclude that a phonograph record was similarly not a copy of the musical composition it recorded.⁶⁷ Within just a few years of that decision, Congress began considering a major revision of the Copyright Act. By the time the first Congressional hearings began in June, 1906,⁶⁸ a bill had already been introduced that provided music composers the right to control the reproduction of their works in the form of recorded sounds:

[T]he copyright secured by this Act shall include the sole and exclusive right . . .

(g) To make, sell, distribute, or let for hire any device, contrivance, or appliance especially adapted in any manner whatsoever to reproduce to the ear the whole or any material part of any work published and copyrighted after this Act shall have gone into effect, or by means of any such device or appliance

Court of Appeals, and Judge Colt’s decision must have been well known to the members of Congress . . . the omission of Congress to specifically legislate concerning them might well be taken to be an acquiescence in the judicial construction given to the copyright laws.

Id. at 14.

63. 33 F. 584 (C.C.D. Mass. 1888).

64. For a brief history of organettes, see Peter Schmidt, *History of Organettes* <<http://www.actionwebcreations.com/smr/history.htm>>, where one learns that John McTammany—presumably the defendant in the case cited—was the inventor of the devices.

Id. Schmidt himself is evidently a collector of antique organettes. *Id.*

65. *Kennedy*, 33 F. at 584.

66. 17 App. D.C. 562 (1901).

67. *Id.* at 565.

68. Three hearings took place: in June of 1906; again in December of that year; and finally, in March of 1908. See *Revision of Copyright Laws: Hearings Before the Joint Comm. on Patents*, 59th Cong. (1906), reprinted in BRYLAWSKI, *supra* note 22, Part H at 102; *Revision of Copyright Laws: Hearings Before the Joint Comm. on Patents*, 59th Cong. (1906), reprinted in BRYLAWSKI, *supra* note 22, Part J at 276; *Revision of Copyright Laws: Hearings Before the Joint Comm. on Patents*, 60th Cong. (1908), reprinted in BRYLAWSKI, *supra* note 22, Part K at 46.

publicly to reproduce to the ear the whole or any material part of such work⁶⁹

The bill proved controversial, with the “authors” (composers and publishers) favoring it, and “users” (piano roll and phonograph manufacturers) opposing it. In classic fashion, though, both sides to the debate focused on the effect of the new technology on the market for the old technology, without so much as a nod to the possibility that the new technology might itself become a major market one day. In the case of recorded sound, the old market was for the sale of sheet music to individuals and to orchestras and bands for live performances.⁷⁰ Accordingly, much testimony centered on sheet music sales: Whether a composer’s right to control the making of recordings would help or hurt the composer’s income from the sale of sheet music.⁷¹ As it turned out, in a very few years several phonograph recording companies would earn phenomenal amounts of money

69. *Revision of Copyright Laws: Hearings Before the Joint Comm. on Patents*, 59th Cong. (1906), reprinted in BRYLAWSKI, *supra* note 22, Part H at v (1976).

70. KERRY SEGRAVE, *PAYOLA IN THE MUSIC INDUSTRY: A HISTORY, 1880–1991* 3 (1994). “In those days [the late 19th century], of course, it was the sale of sheet music that was the sole source of income for the [music publishing] companies Records would not become a major factor for several more decades.” *Id.*

71. *See, e.g.*, BRYLAWSKI, *supra* note 22, Part H at 325 (statement of Paul H. Cromelin, representing the Columbia Phonograph Company). Mr. Cromelin stated that the operators of a penny arcade that featured coin operated player pianos:

are being paid by certain music publishers for displaying ads of certain compositions over the automatic piano or piano player which is used to attract the public.

It seems to us that this would amply demonstrate the fact that publishers and composers consider the piano player an advantageous medium to increase the sale of their compositions.

Id. at 325 (statement of Paul H. Cromelin, representing the Columbia Phonograph Company)

Why does [one of several well known music publishers], who claim that we are stealing the product of the composers’ brains, use . . . us and paying [sic] for 250 to 300 records of every song as soon as they publish it? For the purpose of selling the records? No—absolutely not—but to give them away to the owners of penny arcades in consideration of their putting them on their automatic graphophones, so that the public will become acquainted with the tune and buy the sheet music.

Id. at 326. “We claim, gentlemen, that there has been no more potent influence than the talking machine and the piano player and these various mechanical devices in bringing about an increase in sheet music sales of 163 percent in six years.” *Id.* at 333.

from record sales;⁷² however, this possibility was remote from the discussions.

In any event, Congress and various industry representatives continued to thrash the music issue throughout the hearings, initially without sign of any resolution. By the last round of hearings, in March of 1908, the Supreme Court had just a month earlier issued its decision in the *White-Smith* case.⁷³ As already noted, the Court—relying heavily on the fact that Congress itself had not amended the statute—concluded that under the statute as it then stood, composers had no right to control recordings of their works.⁷⁴

The Court had deferred to Congress—which then deferred back to the Court.⁷⁵ Representative Currier observed that composer Victor Herbert, whose views doubtless represented a great many other composers, was “asking us to create for him an absolutely new property right, *which the Supreme Court says has absolutely no existence.*”⁷⁶ Representative Barchfeld added that “[y]ou are coming to Congress and asking for additional legislation to give you a right which the law does not now give you. *The Supreme Court has declared that you have no standing in court.*”⁷⁷

The issue had become a mutual finger-pointing exercise, with the Supreme Court unwilling to create or recognize rights that Congress had not chosen to create or recognize, and the Congress apparently unwilling to create or recognize rights that the Supreme Court had not chosen to create or recognize. Whereas at an earlier point, a bill to grant rights to composers might have seemed unremarkable, after the Supreme Court’s decision, such a bill seemed to fly in the face of established authority. With this posture, the hearings took on the quality of a stalemate.

72. Between 1902 and 1917, assets of the Victor Talking Machine Company, predecessor to the RCA Victor company, went from \$2.7 million to \$33.2 million, a twelve-fold increase. The company’s founder, Eldridge Johnson, “had become a tycoon; and several of the men whose careers dated back to the founding of the company were millionaires, or well on their way.” ROLAND GELLATT, *THE FABULOUS PHONOGRAPH: FROM EDISON TO STEREO* 151 (1965). And this was at a time, 1910, when *one* dollar “would buy a seven-course dinner at a first-class restaurant.” *Id.* at 149. The British recording company, Gramophone, saw its *net* profits rise from £79,348 in 1901 to £137,268 in 1902 and to £252,285 (over \$1 million) in 1903. *Id.* at 122.

73. See *White-Smith Music Publ’g Co. v. Apollo Co.*, 209 U.S. 1 (1908).

74. *Id.* at 14.

75. *Id.*

76. *Revision of Copyright Laws: Hearings Before the Joint Comm. on Patents*, 60th Cong. (1908), reprinted in BRYLAWSKI, *supra* note 22, Part K at 193 (comment of Representative Currier) (emphasis added).

77. *Id.* (comments of Representative Barchfeld) (emphasis added).

A stalemate leads Congress to compromise. In the final round of hearings, members and witnesses seized on the proposal to establish a “compulsory license” as a compromise between full copyright rights and none.⁷⁸ A compulsory license meant that composers would receive a non-negotiated, statutorily prescribed royalty when their compositions were recorded more than once.⁷⁹ Hearings participants finally struck an agreement on a compulsory license some time after the hearings closed. In short order, it became law.⁸⁰

History now shows us that notwithstanding the vigorous discussion at the hearings about how recorded music would boost the sale of sheet music, the sheet music market soon withered under the dual onslaught of the phonograph and later the radio.⁸¹ Today, music in the home almost

78. In addition to the Supreme Court’s ruling in the *White-Smith* case, the compulsory license provision in the 1909 Copyright Act was also inspired by fears of a recording industry monopoly. A leading piano roll company of the day, the *Æolian* Company, had signed contracts with many music publishers that would have granted *Æolian* exclusive rights to the music for which copyright was held by the publishers. These contracts were conditioned upon either the Supreme Court or Congress declaring that recording music without permission was an infringement of the composers’ rights. By the end of 1906, about 500 publishers had signed such contracts. A number of music publishers, in other words, had signed contracts that would be ineffective if copyright were found not to apply to sound recordings, but would automatically transfer copyright permissions to *Æolian* if copyright were found to apply. See *Revision of Copyright Laws: Hearings Before the Joint Comm. on Patents*, 59th Cong. (1906), reprinted in BRYLAWSKI, *supra* note 22, Part J at 277–80 (statement of Albert H. Walker).

79. Composers were not obliged to permit any recording of their compositions. However, having once voluntarily negotiated with a recording company to permit recording, composers were then subject to the compulsory license provision: other recording companies could record the same composition on payment of the statutorily prescribed fee whether the composer liked it or not.

80. Representative Currier introduced a bill that included the compulsory license provision on March 2, 1909. See H.R. 28192 § 1(e), included in H.R. REP. NO. 2222, 60th Cong. (1909), reprinted in BRYLAWSKI, *supra* note 22, Part S at 22–24 (1976). The bill specified a compulsory royalty of two cents per record for anyone to record compositions that had already been licensed by the composer for recording. The next day it passed in both the House and the Senate. See 43 CONG REC. 3768-69 (1909) (House version); 43 CONG REC. 3744 (1909) (Senate version). President Roosevelt signed it the following day, March 4. See 43 CONG REC. 3831-32 (1909).

81. A turning point of sorts was around 1921, when music publishing companies first began releasing compositions to phonograph recording companies before exhausting sheet music sales. See SANJEK & SANJEK *supra* note 44, at 20. By 1924, roughly seven to eight million phonographs were in use, compared with about five million pianos and less than a million player pianos. *Copyrights: Hearings on H.R. 6250 and H.R. 9137 Before the House Comm. on Patents*, 68th Cong. (1924) (statement of E.C. Mills). As one commentator noted about the wildly popular “Victrola” phonograph machine introduced in 1906, “[o]nce, a piano

invariably means radio or recorded music, the income from which easily dwarfs that of sheet music sales.⁸² Congress, in short, was terribly wrong in its assessment of the role that recorded music would come to play in American life—and accordingly in its assessment of the relative significance of recorded music and sheet music for copyright law.

B. *Motion Pictures*

Invented toward the end of the 19th century,⁸³ motion pictures were confirmed as copyrightable subject matter by an appellate court in 1903.⁸⁴

had graced the parlor of the middle-class home and gave it an air of refinement and culture. Now a fine Victrola and a collection of the exclusive Victor Red Seal records made the same statement.” ANDRE MILLARD, *AMERICA ON RECORD: A HISTORY OF RECORDED SOUND* 131 (1995). Later, it was radio that nearly drove the phonograph recording business out of business. Sharply improved sound quality boosted sales of radio receivers in the “radio Christmas” season of 1924; in that same year, sales of phonograph record players from the Victor company dropped 60% , and those of Edison’s company dropped more than 50%. *Id.* at 138. *See also* GELATT, *supra* note 72, at 265 (stating “by January 1933, the record business in America was practically extinct”). Jukeboxes were largely responsible for rescuing the recorded music industry: in 1936, over half of all records were produced for the jukebox market. MILLARD, *supra* at 169. In the ironic flip-flops that have characterized the commercialization of sound technology, radio broadcasting went into decline when television began to usurp the market for live musical and variety performances in the late 1940s and early 1950s. Phonograph records in part accounted for radio’s reemergence as an important medium for music. MICHAEL FINK, *INSIDE THE MUSIC BUSINESS* 14 (1989) (stating “[r]adio, which in the early 1920s had nearly destroyed the record business, now owed its own recovery to its new role as something of a promotional tool for the recording industry”); SEGRAVE, *supra* note 70, at 50.

82. *See* LEONARD FEIST, *AN INTRODUCTION TO POPULAR MUSIC PUBLISHING IN AMERICA* 47 (1980).

While the American population had swelled [since the 1920s] and its musical skills and awareness had grown, sheet music has never regained an economic significance in direct ratio to these changes. Where once a single popular song frequently sold over one million printed copies, purchase of half that number in a country with a trebled population was regarded as a phenomenon in the 1970s.

Id. Interestingly, even the medium of sheet music is adaptable to the digital age. As of this writing (Fall 1998), one company, called “Sunhawk,” which came to the attention of this writer by accident, has developed a sort of “interactive sheet music” in digital format that can be bought over the Internet. *See Solero and Sunhawk Technology* <<http://www.sunhawk.com/hawk/techfct.html>>.

83. In 1872, zoologist Eadweard Muybridge designed what he called a “zoopraxiscope,” a rotating disk with still images on it. Viewers would look through a small hole at the rotating disk and see a form of animation. Muybridge designed the device to

The new-use issue—whether motion pictures made use of and hence infringed some preexisting copyrighted work—appears not to have arisen in the early days of the industry. Most likely, the absence of major new-use infringement questions can be attributed to the fact that movies, at first, did not record or make use of some already copyrightable works in the way that the phonograph made use of already copyrightable music. In addition, not until the mid-1920s was sound added to motion pictures; necessarily, the use of music or other sounds on films as a possible new-use copyright infringement would not arise before that time.⁸⁵

Indeed, for the first ten or so years of development, most motion pictures were recordings of live events and scenes,⁸⁶ which are not copyrightable. The early years of motion picture performance in one American city, Rochester, New York, for example, featured films of wrestling matches, dancing performances, horse racing, railroad trains entering a station, “a tub race, the coronation of the present czar, a watermelon match, a Parisian street scene, march of the French school children,” and other “views”: travel scenes from Moscow, Budapest, Venice, Dresden, and the United States.⁸⁷ Much of the appeal of movies was that they brought distant and exotic scenes to one’s hometown.⁸⁸ Not until

resolve a major controversy of his day: whether all four feet of a horse are ever off the ground at the same time when the horse is galloping. M. JACKSON-WRIGLEY & ERIC LEYLAND, *THE CINEMA* 7–8 (1939). By 1885, William Friese-Greene had demonstrated a motion picture projected onto a screen. *Id.* at 6. Thomas Edison’s assistant, William Dickson, was pioneering many of the advances later credited to Edison himself in the late 1880s. JOHN FELL, *A HISTORY OF FILMS* 10–11 (1979) (source on file with author).

84. *Edison v. Lubin*, 122 F. 240 (3d Cir. 1903).

85. See MILLARD, *supra* note 81, at 152–55.

86. For that matter, many early phonograph recordings were of nonmusical events, such as lectures, comedy monologues, religious evangelism, and the like. See GELATT, *supra* note 72, at 88–89; MILLARD, *supra* note 81, at 81. In part, turn of the century recording was driven by the fact that some sounds reproduced much better than others: banjo sounds, for example, were much easier to reproduce than violin sounds, and male voices could more easily be reproduced than female voices. MILLARD, *supra* note 81, at 81. Unlike motion picture technology, however, sound recordings required considerable equipment and typically were done in a recording studio.

87. GEORGE C. PRATT, “No Magic, No Mystery, No Sleight of Hand”: *The First Ten Years of Motion Pictures in Rochester*, in “IMAGE” ON THE ART AND EVOLUTION OF THE FILM: PHOTOGRAPHS AND ARTICLES FROM THE MAGAZINE OF THE INTERNATIONAL MUSEUM OF PHOTOGRAPHY 39, 39–42 (Marshall Deutelbaum, ed., 1979) (quoting a contemporaneous newspaper account).

88. See KRISTIN THOMPSON & DAVID BORDWELL, *FILM HISTORY: AN INTRODUCTION* 12 (1994) (stating “most [film] subjects were nonfiction, or ‘actualities.’ These might be ‘scenics,’ or short travelogues, offering views of distant lands”) (source on file with author). Films like this were only a minute or two long. Films were widely offered for rental

some years' worth of these vignettes had passed and the public's attention had begun to wane did motion pictures as a vehicle for dramatic storytelling come to the fore. After years of frequent showings of the travel oriented "views," for example, the city of Rochester went nearly two years, between 1901 and 1903, with no motion picture showings at all.⁸⁹ At that point, films "were still in danger of permanent extinction Their rescue came single handedly from the introduction and advance of the 'story' film . . . comprising a series of scenes related to a central character or group of characters."⁹⁰

The first "stories" told were, perhaps not surprisingly, adaptations of stage dramas. Two notable films of this period are often cited as turning points in motion pictures' history, Edison Films' *The Great Train Robbery* in 1903, and D.W. Griffith's *The Birth of a Nation* in 1915. The former film was based on a road show drama of the same name,⁹¹ while Griffith's was based on a 1905 play, *The Clansman*.⁹²

When motion pictures became a vehicle for the adaptation of stage plays, the first new-use issue involving motion pictures arose. Toward the end of the century, publisher Harper & Brothers had bought the copyright to a recent popular novel by General Lew Wallace, *Ben Hur*, for the purpose of "dramatizing" the novel as that term was then used: making a stage play. Around the same time the Kalem Company decided to make a motion picture of the Wallace novel, hiring a writer to develop what today we would call a screenplay. It then made the film from the screenplay and licensed theaters to show it. Harper & Brothers brought suit.⁹³

At that time, dramatic works themselves had been explicit copyrightable subject matter for about thirty-five years—since 1856—long before motion pictures had been invented.⁹⁴ When the right to "dramatize"

in film catalogs, such as those of the American Mutoscope and Biograph company in 1902, which classified its films as "'Comedy, Vaudeville, Trick, Sports and Pastimes, Notable Personages, Railroads, Scenic, Fire and Police, Military, Parades, Marine, Children, Educational, Expositions, Machinery, Miscellaneous.'" DAVID ROBINSON, FROM PEEP SHOW TO PALACE: THE BIRTH OF AMERICAN FILM 71 (1996) (quoting the American Mutoscope and Biograph catalogue), a litany strongly suggestive of nonfiction content. Exceptions were notable: Parisian Georges Méliès "transformed the cinema into a narrative medium . . . creating [around 1900] his own fantasy universe *at a time when most filmmakers were still content simply to photograph the world as it appeared before them.*" *Id.* at 74-75 (emphasis added).

89. PRATT, *supra* note 87, at 52.

90. *Id.* at 52.

91. ROBINSON, *supra* note 88, at 81.

92. PRATT, *supra* note 87, at 46.

93. *Kalem Co. v. Harper Bros.*, 222 U.S. 55, 60 (1911) [hereinafter *Kalem II*].

94. *Daly v. Palmer*, 6 F. Cas. 1132, 1133 (C.C.S.D.N.Y. 1868) (No. 3552).

an existing nondramatic work was added in 1891,⁹⁵ it encompassed only stage plays: although motion picture research was well underway by 1891, the first public showing of a motion picture was not until 1895.⁹⁶

The district court found for the plaintiff, Harper & Brothers.⁹⁷ The Second Circuit heard the first appeal and concluded that Kalem had indeed infringed Harper's right to dramatize the novel.⁹⁸ The court determined that showing a film was the same as putting on a play.⁹⁹ Kalem apparently argued that a play contained spoken dialog and that its movie was, like other movies of the day, a silent film.¹⁰⁰ This sort of factual distinction seems wholly irrelevant today, and struck the court as not much more even then: live dramatic productions include pantomime, noted the court, so that the absence of sound in a movie simply made the movie like a pantomime.¹⁰¹

Kalem also argued that it could not be an infringer because it had taken only the novel's ideas, not its "writing."¹⁰² Today we might look on this as

The act of August 18, 1856 (11 Stat. 138), provides, that any copyright thereafter granted under the laws of the United States, "to the author or proprietor of any dramatic composition, designed or suited for public representation, shall be deemed and taken to confer upon the said author or proprietor, his heirs and assigns, along with the sole right to print and publish the said composition, the sole right also to act, perform, or represent the same, or cause it to be acted, performed, or represented, on any stage or public place, during the whole period for which the copyright is obtained."

Id.

95. Today we know the right at issue as the broader one of either controlling the making of "derivative works" or the making of a "public performance" of the work under section 106 of the United States Code.

96. ALBERT R. FULTON, *MOTION PICTURES: THE DEVELOPMENT OF AN ART FROM SILENT FILMS TO THE AGE OF TELEVISION* (Norman ed., 1960).

97. *Harper & Bros v. Kalem Co.*, 169 F. 61, 62 (2d Cir. 1909) [hereinafter *Kalem I*]. "A final decree granting a perpetual injunction was entered in the court below, from which this appeal is taken." *Id.*

98. *Id.* at 63. "When the film is put on an exhibiting machine, which reproduces the action of the actors and animals, we think it does become a dramatization, and infringes the exclusive right of the owner of the copyrighted book to dramatize it . . ." *Id.*

99. *Id.*

100. *See Kalem I*, 169 F. at 64.

101. *Id.*

102. *Id.* In the Supreme Court, Kalem also argued that motion pictures are just part of a machine and hence could not infringe copyrights. *Kalem II*, 222 U.S. at 58. "The exhibition of the pictures, arranged upon a film which is, during all the time of its use, a part of a machine, is not an infringement of the book copyright." *Id.* The "just-part-of-a-machine" argument followed arguments made earlier that piano rolls did not infringe copyright. *See Kennedy v. McTammany*, 33 F. 584, 584 (C.C.D. Mass. 1888) (stating "I cannot convince myself that these perforated strips of paper are copies of sheet music, within the meaning of

the familiar argument that copyright protects only “expressions” of ideas, not the actual ideas themselves. But the court viewed the argument more as going to a combination of subject matter and infringement: can a movie made from a novel itself be a “writing” and hence infringe the rights in the novel?¹⁰³ The court misunderstood the nature of infringement, which does not depend on the infringing work being itself copyrightable,¹⁰⁴ but no matter: the court concluded that the Constitutional term “writing” had over the years been broadly applied to paintings, statutes, etc., and so was not offended by being extended to cover “film dramatizations.”¹⁰⁵

The Supreme Court agreed with the Second Circuit in an opinion by Justice Holmes issued in 1911.¹⁰⁶ Unlike the Second Circuit, the Supreme Court understood that the issue was not the copyrightability of the film. More precisely, where the appeals court had seemed to think that infringement by the film depended on the film itself sustaining a copyright (being considered a “writing”), the Supreme Court noted that the film’s own copyrightability had nothing to do with escaping the charge of infringement.¹⁰⁷ But like the Second Circuit, even the Supreme Court focused on the matter of the movie’s silence as being the touchstone of the question whether it could be a dramatization.¹⁰⁸ Again, the familiar analogy of pantomime carried the day, with the Supreme Court finding only a slight and legally insignificant difference between a “live” pantomime and a filmed one:

We are of opinion that Ben Hur was dramatized by what was done Action can tell a story, display all the most vivid relations between men, and depict every kind of human emotion, without the aid of a word. It would be impossible to deny the title of drama to pantomime as played by masters of the art. *Daly v.*

the copyright law. They are not made to be addressed to the eye as sheet music, but they form part of a machine”); see also *White-Smith Music Publ’g Co. v. Apollo Co.*, 209 U.S. 1, 7 (1908) (stating “[t]hings intended for mechanical function—for use in themselves—will not infringe copyright . . .”) (argument of Charles S. Burton and John J. O’Connell, counsel for defendant player-piano manufacturer Apollo Company). It also foreshadowed similar arguments raised nearly a hundred years later over computer programs in read-only memory, in *Williams Electronics, Inc. v. Artic Int’l, Inc.*, 685 F.2d 870, 874 (3d Cir. 1982) (stating “[d]efendant argues that there can be no copyright protection for the ROMs because they are utilitarian objects or machine parts”). However, these arguments had little effect in *Kalem II*.

103. See *Kalem I*, 169 F. at 65.

104. *Id.* at 63.

105. *Id.* at 64–65.

106. *Kalem II*, 222 U.S. at 63.

107. *Id.* at 62.

108. *Id.*

Palmer, 6 Blatchf. 256, 264. But if a pantomime of Ben Hur would be a dramatizing of Ben Hur, it would be none the less so that it was exhibited to the audience by reflection from a glass and not by direct vision of the figures—as sometimes has been done in order to produce ghostly or inexplicable effects. The essence of the matter in the case last supposed is not the mechanism employed but that we see the event or story lived.¹⁰⁹

The Court reached past superficial arguments to see “the essence of the matter” without being distracted by a focus on the “mechanism employed.”¹¹⁰ Perhaps this was a mild retreat from the *White-Smith* case’s insistence only three years earlier that copyright applied only to the mechanism, and *not* to the essence of the matter.¹¹¹ In any event, the motion picture industry fell under the obligation to pay royalties for stories used and nevertheless rapidly grew to become the major economic force it is today.

C. *Cable Television*¹¹²

Rural homes in the 1950s, especially those in valleys or on the far side of mountains, were often unable to receive television signals clearly. With hindsight, it seems a logical improvement for someone to erect a large receiving antenna on the top of a mountain and “pipe” the received signal along a wire cable to those rural homes. The first term coined for what we call “cable television” today was “CATV,” which stood for “Community

109. *Id.* at 61. The actual basis of the motion picture studio’s liability for “dramatization” of the novel in theaters—under the control of independent contractors—was the doctrine of contributory infringement.

The defendant not only expected but invoked by advertisement the use of its films for dramatic reproduction of the story. That was the most conspicuous purpose for which they could be used, and the one for which especially they were made. If the defendant did not *contribute to the infringement* it is impossible to do so except by taking part in the final act. It is liable on principles recognized in every part of the law.

Id. at 62–63 (emphasis added) (citations omitted).

110. *Kalem II*, 222 U.S. at 61.

111. *See supra* text accompanying note 26.

112. Much of the discussion of cable television is drawn from HARDY I, *supra* note 8, at 252–56 and from I. Trotter Hardy, *Computer RAM “Copies”: Hit or Myth? Historical Perspectives on Caching as a Microcosm of Current Copyright Concerns*, 22 U. DAYTON L. REV. 423, 442–46 (1997) [hereinafter Hardy II].

Antenna Television.”¹¹³ Quite simple in concept, the idea of bringing television signals over a wire instead of through the air was novel. But it was successful, and the cable industry began to grow.

Not surprisingly, the copyright owners of the television programs being picked up by cable receiving antennas and transmitted to additional homes began to demand royalty payments from the cable companies. These demands were refused; lawsuits for copyright infringement followed shortly thereafter. Two similar cases involving these facts reached the United States Supreme Court a few years apart, *Fortnightly Corp. v. United Artists Television, Inc.*¹¹⁴ and *Teleprompter Corp. v. Columbia Broadcasting System, Inc.*¹¹⁵

The issue in both cases was whether a cable station that, without authorization, received and further transmitted a copyrighted program should be held to be a copyright infringer.¹¹⁶ Plaintiff's theory was that such a transmission constituted a “performance” of the copyrighted works.¹¹⁷ As the performances were to the public and for profit (cable companies were not, to put it in Justice Holmes's famous words, “eleemosynary” institutions)¹¹⁸ and were accomplished without permission or royalties, plaintiffs argued that the cable stations infringed their copyright rights.¹¹⁹

The defendant cable companies argued, quite straightforwardly, that merely by picking up a signal and passing it on, they did not “perform” anything.¹²⁰ The Supreme Court found for the defendant cable companies, determining that cable systems did not “perform” the shows they transmitted.¹²¹ This conclusion was

113. See *Fortnightly Corp. v. United Artists Television, Inc.*, 392 U.S. 390, 391 (1968). See also MARY ALICE MAYER PHILLIPS, *CATV: A HISTORY OF COMMUNITY ANTENNA TELEVISION 4* (1972).

114. 392 U.S. 390 (1968).

115. 415 U.S. 394 (1974).

116. *Fortnightly* dealt with broadcast signals picked up from the local area and transmitted over cable. *Fortnightly Corp. v. United Artists Television, Inc.*, 392 U.S. 390 (1968). *Teleprompter* dealt with broadcast signals picked up from distant markets. *Teleprompter Corp. v. Columbia Broad. Sys., Inc.*, 415 U.S. 394 (1974). For purposes of the discussion in this article, both raise the same issues.

117. *Fortnightly*, 392 U.S. at 395; *Teleprompter*, 415 U.S. at 402.

118. *Herbert v. Shanley Co.*, 242 U.S. 591, 594 (1917). One early cable system was created by John Walson, part owner of an appliance store, in 1948 to boost sales of television sets in the local, rural area. PHILLIPS, *supra* note 113, at 8–9. Initially given away, this cable service proved so popular that the very next year, 1949, Walson began charging a \$100 installation fee and two dollars per month. *Id.*

119. *Fortnightly*, 392 U.S. at 390; *Teleprompter*, 415 U.S. at 404.

120. “The petitioner maintains that its CATV systems did not ‘perform’ the copyrighted works at all.” *Fortnightly*, 392 U.S. at 395.

121. *Id.* at 402.

founded largely on the reasoning that cable companies were merely passive carriers¹²² that did not rise to the level of “performing” in the ordinary sense of that term—or as the Court put it, “Broadcasters perform. Viewers do not perform.”¹²³ The Court viewed cable as merely an extension of broadcast television, of little economic or other significance in itself.¹²⁴ “Essentially, a CATV system no more than enhances the viewer’s capacity to receive the broadcaster’s signals”¹²⁵ Cable systems

“have nothing to do with sponsors, program content or arrangement. They sell community antenna service to a segment of the public for which [broadcasters’] programs were intended but which is not able, because of location or topographical condition, to receive them without rebroadcast or other relay service by community antennae”¹²⁶

In other words, the Court saw cable television functioning mainly to promote some other already paid for medium—in this case, broadcast television—in much the same way that phonograph recordings were first seen as merely promoting sheet music.¹²⁷

122. Note that the cable companies were not “passive carriers” as that term is often used in connection with telephone companies or Internet Service Providers. In the latter cases, the carrier is in a contractual relation with the sender of the information in question. With the cable companies, there was no contractual relation with the sender—the broadcasting companies—at all. In addition, cable companies have the ability to choose what signals to receive and retransmit, and to what audiences they will perform the retransmission.

123. *Fortnightly*, 392 U.S. at 398 (citation omitted). The Court announced that it would not simply look to the ordinary meaning of the word “perform,” noting instead that

[a]t the outset it is clear that the petitioner’s systems did not “perform” the respondent’s copyrighted works in any conventional sense of that term, or in any manner envisaged by the Congress that enacted the law in 1909. But our inquiry cannot be limited to ordinary meaning and legislative history

Id. at 395 (citations omitted). But in fact, the majority opinion largely *did* limit itself to ordinary meaning, especially in concluding that: “Broadcasters perform. Viewers do not perform. Thus, while both broadcaster and viewer play crucial roles in the total television process, a line is drawn between them. One is treated as active performer; the other, as passive beneficiary.” *Id.* at 398–99 (citations omitted).

124. *Id.* at 399.

125. *Id.* See also *id.* at 400 (where the court stated “[b]roadcasters procure programs and propagate them to the public; CATV systems receive programs that have been released to the public and carry them by private channels to additional viewers”).

126. *Fortnightly*, 392 U.S. at 400 n.28 (quoting *Intermountain Broad. & Television Corp. v. Idaho Microwave, Inc.*, 196 F. Supp 315, 325 (D. Idaho 1961)).

127. See *supra* text accompanying notes 70–72.

Just as Congress was shortsighted in its assessment of recorded music a generation earlier, so the Supreme Court was dramatically shortsighted in its assessment of the significance of cable television. Far from remaining merely an adjunct to broadcast television, by the time Congress was revising the Copyright Act in the mid-1970s, the cable industry was a major economic force: nearly 3500 cable operators served 7700 communities, reaching 10.8 million homes and earning revenues of \$770 million.¹²⁸ Cable was well beyond the point of simply extending existing broadcast signals to a wider and rural audience. It had become an alternative network, competing with broadcast networks¹²⁹—and for that matter, growing much more rapidly in urban, affluent areas than among the rural poor.¹³⁰

In a replay of what had happened with recorded sound a generation earlier when Congress debated the protection of musical compositions against the backdrop of a negative Supreme Court ruling, near endless Congressional debates¹³¹ over cable television's copyright obligations arose against the backdrop of a negative Supreme Court ruling. In the end, as with the phonograph, a compromise was reached: Cable companies would pay a royalty, but the royalty would be fixed by Congress, and copyright owners would have no choice but to accept that royalty.¹³²

D. *Current New-Use Issues*

The Internet has begun a new round of new-use issues. One such issue is whether audio and video sent over the Internet infringe any copyright rights. Digitizing audio or video signals—whether live or recorded—is quite simple with today's computers. Once digitized and resident on a computer's hard disk, these digital files can be set up to be played on demand. A number of new uses have appeared that depend on this digitizing capability. One innovative company developed a technique to play digitized music files over a telephone line as a customized aural greeting, in the process fulfilling one of Alexander Graham Bell's predictions about the

128. H.R. Rep. No. 94-1476 at 88 (1976).

129. PAUL GOLDSTEIN, *COPYRIGHT PRINCIPLES, LAW AND PRACTICE*, § 5.8.2 at p. 642 (1996).

130. See Phillips, *supra* note 113, at 171-72 (stating: "Industry leaders have recently expressed concern for a *neglected* sector of the American public—the rural dweller") (emphasis added; statement published in 1972).

131. See Litman, *supra* note 7, at 332 (stating "[i]t took eleven years and the combined efforts of the Copyright Office, the bar associations, the House and Senate Subcommittees, the FCC, and the White House Office of Telecommunications Policy to force interested parties to reach an agreement on the revision bill's treatment of cable television").

132. See Jessica D. Litman, *Copyright, Compromise, and Legislative History*, 72 *CORNELL L. REV.* 857 (1987). See also 17 U.S.C. § 111 (1994).

telephone's use for music some hundred years after he first made it.¹³³ A trade association representing music recording companies, the Recording Industry Association of America ("RIAA"), filed suit against this telephone music provider in early 1996 and soon thereafter a settlement was reached in which the defendant company agreed to stop making this use of copyrighted music.¹³⁴ As a settlement, of course, this proceeding did not establish that the new-use in question was infringing, though that seems likely to have been the outcome had the matter continued to trial.

Many Internet sites make recorded music available on demand over the Internet. Apparently these sites, at least initially, did not obtain licenses for their distributions. The RIAA sent a cease-and-desist letter to one such site, then called *AudioNet.com*, in early 1996 for exactly that activity.¹³⁵ The site—since renamed *broadcast.com*—has apparently removed the allegedly infringing materials and claims to have licensed the materials it continues to provide.¹³⁶ This same site provides links to live radio and television broadcasts, as well as various concerts and other audio and video events. This author is not aware of any conclusive legal determination that

133. See LEWIS COE, *THE TELEPHONE AND ITS SEVERAL INVENTORS: A HISTORY* 78 (1995).

134. See *Recording Industry Association of America, Nine Record Companies Reach Settlement In Infringement Action* <<http://www.riaa.com/antipir/releases/nine.htm>> (stating Send-A-Song operates a commercial service for customers to order particular recordings to be played over the telephone, accompanied by a personal message, in the form of an "aural greeting card." Prior to the settlement, Send-A-Song made copies of the plaintiffs' sound recordings without the plaintiffs' consent, stored them in Send-A-Song's computers, and then transmitted these copies over the telephone to the recipients of Send-A-Song's services).

135. See *Recording Industry Association of America, RIAA Demands Internet Service Stop Violating Record Companies' Rights* <<http://www.riaa.com/antipir/releases/rights.htm>>.

136. See *broadcast.com, Terms and Conditions* <<http://www.broadcast.com/about/terms.html>> (stating "[a]ll material on this site, including but not limited to images, illustrations, audio clips, and video clips, is protected by copyrights which are owned and controlled by broadcast.com or by other parties that have licensed their material to broadcast.com") (emphasis added); *Recording Industry Association of America, RIAA Releases Midyear Anti-Piracy Stats: CD Seizures, Dominated by Bootlegs, Increase Astronomically and Overtake Cassette Seizures* <<http://www.riaa.com/antipir/releases/midstats.htm>> (stating:

the RIAA demanded an Internet service stop violating record companies' rights when it sent a cease and desist letter to AudioNet. The company was providing an interactive service that offered 400 digital performances of full-length albums from a variety of musical genres, without the authority of many of the various sound recording copyright owners. AudioNet dropped all the infringing works within days).

such Internet live "broadcasts" infringe copyrights, so technically this new-use issue remains an open question. Nonetheless, the brief dispute with the RIAA and even the name change to *broadcast.com* certainly suggest that the site regards itself as a kind of broadcasting station, presumably subject to the same copyright rules as other more traditional broadcasters like radio and television.

V. NEW USES: ANALYSIS

When new technologies raise the new-use issue, the debate unfolds in a surprisingly predictable way. Whatever the forum, whether in congressional hearings or in court, representatives of authors and composers and those who, like publishers and distributors, are allied with those interests appear on one side. These parties tend to stress that copyright has long accommodated new technologies, that Congress intended to protect works of authorship in general, and that authors make little enough money as it is such that they need all the incentives that a new technology can give them; and consequently, that Congress ought to ensure that the new technology falls under a full regime of copyright liability applicable to existing technologies.

Oposing these arguments will be representatives of user groups: the owners of the new technology like radio that enables the new-use of others' copyrighted works, along with perhaps libraries, schools, research organizations, or the like. These parties concentrate their arguments either on a narrow reading of the statute as not applicable to the technology, or on the broader and more appealing argument that the new technology deserves a chance to grow without the encumbrance of exposure to copyright liability, or that the new-use of copyrighted works merely advertises the old use and as an affirmative benefit to copyright owners should not be held to infringe the existing works.

The arguments on both sides encompass two important policy considerations: the benefits of giving new technologies "room to grow" by not encumbering them with full copyright liability; and the benefits of ensuring that as a technology grows to become economically significant, those who create works of authorship for it will have an adequate incentive to continue their creative efforts. Sometimes the "no encumbrance" side of this argument has won out, as happened in the Supreme Court's decisions that cable television did not have to pay royalties to the creators of broadcast television programs.¹³⁷ At other times the reverse has been true, as happened

137. See *Fortnightly Corp. v. United Artists Television, Inc.*, 392 U.S. 390 (1968); *Teleprompter Corp. v. Columbia Broad. Sys., Inc.*, 415 U.S. 394 (1974).

when courts decided that radio broadcasters did have to pay royalties for the copyrighted material they broadcast.¹³⁸

The argument that a new-use merely “advertises” an old use and hence should not be held to infringe is a particularly familiar one and leads naturally into the heart of this article’s analysis of the new-use issue. Representatives of the phonograph recording industries in the 1900s strongly argued to Congress that records merely served as advertising for the sheet music market;¹³⁹ the producers of the motion picture *Ben Hur* argued before the Supreme Court that their movie would benefit sales of the book;¹⁴⁰ radio station owners in the 1920s argued to Congress that radio served mainly to advertise the sales of sheet music;¹⁴¹ library photocopying of journal articles in the 1950s and 1960s was described by some as primarily a beneficial advertisement for the journals;¹⁴² the Supreme Court found that cable television in the late 1960s merely promoted broadcast television;¹⁴³ representatives of an Internet news site argued that “framing” others’ web sites benefited the sites framed;¹⁴⁴ the owner of an Internet site celebrating widely available digitized music over the Internet argued that the availability of such music benefited the bands whose music was thus made available.¹⁴⁵

138. See e.g., *M. Witmark & Sons v. L. Bamberger & Co.*, 291 F. 776, 780 (D.N.J. 1923).

139. See *supra* text accompanying note 71.

140. *Kalem II*, 222 U.S. at 57 (1911). “Not only is there no evidence here that the copyright proprietors were injured even in the slightest degree; but, on the contrary, the defendant asserted by letter that its films would benefit the complainants, and this they did not deny, but stood upon their naked assertion of legal right.” *Id.*

141. See *To Amend the Copyright Act: Hearings on S. 2600 Before the Subcomm. of the Comm. on Patents*, 68th Cong. 31–32 (1924) (statement of Charles H. Tuttle of the National Association of Broadcasters).

142. John C. Koepke, *Assessment of Documentation Practices in Reprography*, IN REPROGRAPHY AND COPYRIGHT LAW 50, 53 (Lowell H. Hattery & George P. Bush eds., 1964) (stating:

The small journal will tell you that photoduplication actually increases its circulation rather than decreases it We have talked to many librarians who have told us that, after seven or eight requests for an article that may have appeared in a rather obscure journal, they have found it desirable to begin to subscribe to the journal)

143. See *supra* text accompanying notes 123–127.

144. David S. Hilzenrath, *Online Publishers Wage a Battle Over Frame and Fortune*, THE WASH. POST, Feb. 11, 1997, at D4. “A lot of news organizations are very pleased by what [TotalNews is] doing,’ because TotalNews generates more visitors to their sites, said Lisa Farringer, a Washington attorney representing TotalNews.” *Id.* (emphasis omitted).

145. See Michael Robertson, *Artists Use MP3 To Reach More Fans, Sell More CDs* <<http://www.mp3.com/news/088.html>> (stating:

On their face, these advertising arguments make no sense. Even when the arguments are true—and it has often been true that a new-use of copyrighted works does promote the sales of an existing format¹⁴⁶—nothing in copyright policy supports the *obliging* of authors to advertise their creativity, and certainly not obliging them to advertise on terms and in places that they may not desire.¹⁴⁷ If authors have a right to object to others' advertising their works, in circumstances where withholding their objections would benefit them, then the authors will simply withhold their objections in order to gain the benefits of the advertising.¹⁴⁸ After all, novelists have the

One strategy for artists to consider is to seed the Internet with one or more songs. This enables music listeners to get a taste of an artist's style or a sample from a CD. If they like what they hear they will spread the music and a percentage will buy the CD).

The term "MP3" refers to a type of data compression technology that is especially suited to compressing digital music files.

146. The music business has been particularly attuned to the desirability of advertising music through new uses, from vaudeville and phonograph records, which initially advertised sheet music sales, to radio, which advertised first sheet music sales then phonograph record sales and now CDs. *See generally* SEGRAVE, *supra* note 70; *see also id.* at 13, 37, 51 (vaudeville advertising sheet music, radio advertising sheet music, and radio advertising records). The number of new bands that voluntarily permit their music to be digitized and available on the World Wide Web today suggests that these bands find the new-use of Internet broadcasting to be valuable advertising. One popular music download site, <<http://www.mp3.com>>, claimed that "MP3.com is the #1 music download site on the Internet, with 3,000,000 visitors per month. In the past year, MP3.com has facilitated more than 5,000,000 legal, original song downloads—approximately 75,000 songs daily." Michael Robertson, *Platinum Entertainment Offers Free MP3 Downloads Via MP3.Com* <<http://www.mp3.com/news/123.html>>.

147. *Accord* M. Witmark & Sons v. L. Bamberger & Co., 291 F. 776, 779–80 (D.N.J. 1923).

There is another point which, although striking us as immaterial, deserves some comment. The defendant argues that the plaintiff should not complain of the broadcasting of its song because of the great advertising service thereby accorded the copyrighted number. Our own opinion of the possibilities of advertising by radio leads us to the belief that the broadcasting of a newly copyrighted musical composition would greatly enhance the sales of the printed sheet. But the copyright owners and the music publishers themselves are perhaps the best judges of the method of popularizing musical selections. There may be various methods of bringing them to the attention of music lovers. It may be that one type of song is treated differently than a song of another type. But, be that as it may, the method, we think, is the privilege of the owner. He has the exclusive right to publish and vend, as well as to perform.

Id.

right to object to someone else's publishing their novels, yet most novelists are all too eager to waive that right in return for that very publication. That is how copyright law works.

Behind these nonsensical facial arguments about advertising, we can discover a much more principled assertion that focuses on authors' incentives to create. In copyright terms, the advertising argument can be understood as saying that because a particular new-use benefits copyright authors, those authors do not need any further incentive to create for the new-use medium. If they need no further incentive, then imposing infringement liability for the new-uses merely penalizes the public by requiring them to pay for something that would have been created and available for free anyway.¹⁴⁹

148. In the June 1906 hearings on what became the 1909 Copyright Act, the testimony of witness Paul Cromelin of the Columbia Phonograph Company, went for pages and pages, with numerous quoted letters from others to him, all designed to convince Congress that phonograph record sales did indeed benefit music composers through the sale of sheet music. At one point, Mr. Cromelin was interrupted by Representative John Chaney, who asked how the granting of a right to composers to control recordings would make any difference to that state of affairs:

MR. CHANEY. Let me ask you this question: There is not very much doubt but what your theory of this is all right—that all these people [i.e., composers] want to get their music before the public, and they are seeking every means of advertising it. Now, in this bill, should it pass [and give composers the right to demand royalties from recording], is there anything to prevent that continuing, and, if so, what is it that would interfere with it?

See BRYLAWSKI, *supra* note 22, Part H at 333.

At which point Cromelin appeared mildly flustered and was saved when another witness, attorney Albert H. Walker, quickly steered the discussion to other concerns, namely that music publishers, acting on behalf of composers, would all sign exclusive contracts with a single manufacturer of piano rolls, the Æolian Company, and hence create an unstoppable monopoly:

MR. WALKER. [A]s soon as the Æolian contract goes into effect the [music] publishers will no longer be at liberty to send these pieces to Mr. Cromelin, and will be under an ironclad contract running for thirty-five years to sell them to the Æolian Company only.

See *id.* at 334.

The arguments that music publishers would tie up composers in a web of exclusive contracts, and that such exclusive arrangements constituted a harmful monopoly, seem a bit hypocritical: recording companies like Cromelin's routinely signed exclusive contracts with *performers*, contracts that at times included royalty payments based on the sales of the records. See *id.* at 215–17 (testimony from various parties concerning recording companies' exclusive contracts with certain performers).

149. See, e.g., GOLDSTEIN, *supra* note 129, § 1.14 at p. 1:40 (noting the argument that "To give greater property rights than are needed to obtain the desired quantity and quality of

Even understood in this more principled way, the arguments about advertising and authors' incentives miss the mark. The question is not whether an incentive is necessary when works of authorship like music already exist and a technology like the phonograph, radio, cable television, or the Internet is new. At its earliest stages—say, on the date of its first invention—a new-use technology will obviously not have an effect on authors' incentives. It would be silly to suggest that the day Edison first achieved the playback of a recorded sound or the Internet first transmitted an audio file of music, music composers everywhere suddenly had a need for an additional royalty incentive in order to continue composing.

Obviously the day of invention—even if it could clearly be identified—is too soon to look at the question of a new technology's effects on copyright incentives. We should instead ask: will this new-use technology grow in economic importance, at some point in the future, to the point that not imposing royalty obligations on it would seriously diminish authors' incentives to create? If that point never comes, then we should never impose royalty obligations on the new-use. If it does come, then we should.

Determining the “right” degree of incentives, let alone when they become necessary, is an issue fraught with difficulty. Rather than undertake that task, we can make a simplifying assumption. Let us assume for purposes of analysis that at the time a new-use technology arises, the existing copyright incentives are already at the “right”—the necessary and appropriate—level for all other technologies and uses. That is, instead of trying to calculate a measure of incentives and asking when authorial incentives in the aggregate, from all possible uses of copyrighted works, have reached or deviated from the “right” level, we can instead ask the easier question of when, if ever, will current incentives *decline* because of a new-use technology? By assuming that current incentives are at the “right” level to start with, if we can determine a point at which they decline from that level, then we have determined the point at which incentives need to be added to bring authorial creativity back up to the “right” level.

In short, we can focus on displacement: will a new-use technology eventually displace existing uses of copyrighted works—the uses that do generate royalty income and hence provide a present incentive? If the new-use industry ends up displacing present forms of copyright exploitation, then

works would impose costs on users without any countervailing benefits to society”) *Id.* (footnotes omitted); Jessica Litman, *Revising Copyright Law for the Information Age*, 75 OR. L. REV. 19, 31–32 n.43 (1996) (stating “it is conventional to argue that copyright holders should receive only such incentives as are necessary to impel them to create and disseminate new works”) (citation omitted); Wendy J. Gordon, *Fair Use as Market Failure: A Structural and Economic Analysis of the Betamax Case and its Predecessors*, 82 COLUM. L. REV. 1600, 1610 (1982) (stating “[c]opyright . . . create[s] ownership rights in intellectual property, with the primary goal of generating monetary incentives for the production of creative works”).

a new incentive in the form of royalties from the new industry's use will be needed. If it does not ever displace present-day forms of exploitation, then a new incentive will not be needed.

The problem, of course, is that without foresight, neither Congress nor the courts can know which growth path a new-use industry is likely to follow. Will the new-use remain forever an aside to some existing market, potentially¹⁵⁰ only a minor source of income to copyright owners because the primary sources are not displaced; or will it outgrow and dominate that existing market, displacing it to become a major source of income for copyright owners; or something in between?

The short and accurate answer is "no one knows." But this situation is a classic case of the need for a decision maker — court or Congress — to make decisions under uncertainty; techniques exist to help us in that effort. The decision maker will be faced with what statisticians call "Type I and Type II" errors.¹⁵¹ The labels themselves mean nothing and provide no useful insights into the problem, but they do constitute a kind of shorthand that makes further discussion a bit more convenient. The terms are used here solely for that reason. A Type I error means that a decision was made to do something that need not or should not have been done. A Type II error means that a decision to do something was not made, but should have been.

In the context of technologies that allow new uses of copyrighted works, that cryptic summary means this. A Type I error would be committed if a decision-maker decided to impose royalty obligations on a new-use industry when royalty payments were unnecessary because the industry was destined to remain only marginally important to copyright owners. A Type II error would be committed if the decision-maker concluded that the new-use industry should not be required to pay royalties, and yet the industry was destined to become a major market for copyright owners.

One way to address the problem of uncertainty in this copyright context is to ask which of these two errors is the more likely and the more serious; other things being equal, if one error is both more likely and more serious than other errors, then that error should be avoided. That is, if one error is likely to bring about a greater harm to the public than the other, and the decision maker has no independent reason to pick one outcome over the other, then the error most likely to cause the greatest harm should be avoided. The question of infringement for new uses of existing copyrighted works therefore reduces itself to an inquiry as to which harm is likely to be greater, a Type I or a Type II error.

150. The new-use is only "potentially" a source of income because whether it is or is not an actual source depends on how the copyright issues are decided.

151. *See, e.g.*, MICHAEL O. FINKELSTEIN & BRUCE LEVIN, *STATISTICS FOR LAWYERS* 124–26 (1990).

A. Type I Errors

A Type I error means that a decision is made that the new-use is an infringement, and consequently that the copyright owner has a right to demand royalties, even though it will eventually prove to be the case that the new-use industry does not become a significant market for copyright owners. What is the harm from that outcome?

Two related harms seem possible. First is that a requirement to make royalty payments may be enough to stifle the new-use industry, leaving it to founder when it might have survived, or perhaps leaving it weakened, amounting to less than it might have amounted. We might call this a Type Ia error—again, only for convenience; there is no special magic in labels. This possibility of this type of error has been indirectly noted in academic literature. Professor Jessica Litman has written about the many new technologies that have not been required to pay royalties, but instead, have been allowed to grow up in the “shelter of a copyright exemption.”¹⁵² This view, that being sheltered from royalty obligations fosters and promotes the growth of desirable new industries, implies the contrary: that if these new-use industries *had* been obligated to pay royalties, they would have been stifled or suppressed¹⁵³—and that would be what this article terms a Type Ia, or “suppression” error.

Perhaps worse, a second type of harm from Type I errors would arise if copyright owners were content with their own system of exploiting copyrighted works and simply did not want any competition from new uses. They might therefore deny a license to the new industry even if the industry were willing and could afford to pay a suitable royalty. We can call this a Type Ib, or “status quo” error, implying that the existing copyright owners and copyright industries are happy with the status quo and simply do not care to authorize a change by licensing any new uses.¹⁵⁴

152. Litman, *supra* note 149, at 29 n.33; *see generally id.* at 27 (stating “copyright shelters and exemptions have, historically, encouraged rapid investment and growth in new media of expression”).

153. *Accord Twentieth Century Music Corp. v. Aiken*, 422 U.S. 151, 166 (1975) (Blackmun, J., concurring) (stating “I had hoped, secondarily, that the reasoning of *Fortnightly* and *Teleprompter* would be limited to CATV. At least in that context the two decisions had the arguably desirable effect of *protecting an infant industry from a premature death*”) (emphasis added).

154. Litman, *supra* note 149, at 25 (stating “[m]ost [current copyright stakeholders] would prefer that the new copyright rules for new copyright-affecting technologies be designed to enable current stakeholders to retain their dominance in the marketplace”) (footnotes omitted).

B. *Type II Errors*

A Type II error means that a decision is made that the new-use is not an infringement, even though the industry is destined to become potentially a major source of income to copyright owners. What is the harm here?

Most obviously, the harm is that the lack of royalties from the new industry will mean a significant disincentive for authors as the old royalty paying industry gradually shrinks in importance. In that event, the public will lose the benefit of whatever a greater incentive might have brought.

Let us take the phonograph record industry as an example. In the early days of the industry, the incentives for the creation of musical compositions came almost entirely from the sale of sheet music, which dominated the market for music in the home.¹⁵⁵ Yet eventually the phonograph recording industry grew enormously more important in sales and dollar volume than the sheet music industry.¹⁵⁶ Had the recording industry been exempt from royalty payments, for example, it is most unlikely that composers' income from the sale of sheet music would have continued to this day to induce the creation of the socially desirable amount of music.

C. *Which Harm is Greater?*

So which harm is the greater, a "Type I" or a "Type II" error? The first harm from a Type Ia error is that a new-use industry might be suppressed or weakened by the obligation to pay royalties. That is only a harm, though, if the public would have derived greater total benefits from the new industry's presence and strength than its absence—that is, if the new-use industry had survived *and* all other things had been equal.

Manifestly, however, all other things would not be equal. In particular, authors unable to derive revenue from the new-use of their works are worse off than they would be if they were able to derive revenue. In a rough sense, what the new-use industry gains by not having to pay royalties is offset by what authors lose by not receiving royalties.¹⁵⁷ Conversely, under the opposite copyright liability regime (one of full liability), the new royalty revenues that authors can command from the new-use are offset by the corresponding increased royalty costs for the new industry.

In short, we want to maximize the benefits—less the costs—of *both* old and new uses of copyrighted works. A new-use industry strengthened means

155. See *supra* text accompanying note 70.

156. See FEIST, *supra* note 82 and accompanying quotation. See also the phonograph company earnings figures listed *supra* note 72.

157. The trade-off will not necessarily be one for one: not all authors entitled to demand royalties would demand them, or demand as much as they might.

an old use industry weakened. And vice versa. Unless one is committed to the proposition that new things are *ipso facto* superior to old things,¹⁵⁸ one cannot say that the stifling of a new-use industry is necessarily bad. So the question of the Type I error becomes not just “was the new-use industry stifled or weakened,” but more precisely “was the new-use industry stifled or weakened *inappropriately*, i.e., to the public’s overall detriment?”

How might the “stifling of an industry to the public’s detriment” happen? Start with this assumption: Apart from the royalties question, the new-use industry would have to bring benefits greater than its costs to survive in any event. If it did not earn a profit, it would fail to survive in the marketplace. Absent some sort of larger market failure,¹⁵⁹ an individual business’s or industry’s failure would be a socially useful result because it would free up resources to be used in more socially desirable ways. If a new-use industry brought so little value to the public that it was destined to fail even without paying royalties, then the requirement of paying royalties might hasten its demise—and that would be a good thing.

On the other hand, if the new-use industry were so socially beneficial that it was destined to earn substantial profits, then an obligation to pay royalties within some reasonable range would not be enough to stifle it. At least we know that an obligation to pay royalties does not *necessarily* prevent an industry from growing—both radio and television, and for that matter, motion pictures,¹⁶⁰ have grown up under such royalty obligations.

We come to an important conclusion. Whether a new-use industry is obliged to pay royalties or not makes the most difference when that new

158. Cf. Litman, *supra* note 149, at 27, where Professor Litman appears to hold the view that new is *ipso facto* better than old. (stating “[suppose] we imagined the viewpoint of a hypothetical benevolent despot with *the goal of promoting exciting new technology*”). *Id.* (emphasis added).

159. “Larger market failure” implies some sort of externality. Pollution is the classic negative externality: something that affects others but with effects that are not captured in a marketplace transaction and hence not reflected in the price of polluting company’s product. A firm with uncorrected negative externalities imposes costs on others that the firm does not have to bear; that means that the firm might succeed when it “ought” to fail. A firm might also generate “positive externalities,” or benefits provided to others that the firm cannot capture through appropriate pricing of its products. For example, a firm that designed especially good looking Internet sites might find their sites used as “teaching aids” or models for emulation by aspiring Internet page designers. To the extent that the aspiring designers do not themselves pay for the “instruction” they receive from studying the firm’s site designs, the firm has conferred external benefits on those designers.

160. See *Kalem II*, 222 U.S. at 62 (1911) (stating that a motion picture made from a novel infringes the novel owner’s right to control dramatizations of the novel, even though the right of “dramatization” in the statute was enacted at a time before the development of motion pictures when stage plays were all that was expressly contemplated).

industry is barely profitable. And—again, absent market failures—an industry that is barely profitable is one that makes a comparably small contribution to society. Finally, that conclusion leads us to a useful rule of thumb: If a decision maker makes a Type Ia error, finding infringement liability where the industry is of only slight significance and consequently for which the obligation to pay royalties is likely to be a significant factor in causing the industry to fail, the magnitude of the error is likely to be quite small.

Now we must address the second type of harm, a Type Ib error: Congress or courts impose infringement liability and a corresponding obligation to pay royalties in a situation in which authors will refuse to license the new-use in order to preserve their existing business. For industries destined to fail for want of providing any significant public value, we are no worse off if copyright owners refuse a license. By hypothesis, a copyright owner's refusal to permit licensing merely hastens the demise of a nonbeneficial industry, a socially desirable outcome. But for those new-use industries that might have provided significant value to society, a copyright owner's refusal to license would presumably put the new-use industry out of business, and that would be harmful to the public.

Is this outcome likely in practice? Do authors (copyright owners) actually refuse to license uses of their works when it would be profitable for them to do so? Of course, anything can happen. People can be motivated by "irrational" forces: anger, spite, etc. But in the main, one would expect that if authors can make money by licensing, they will.¹⁶¹ It is in their self-interest to do so. In other words, the likelihood that authors given both a right and a market that permits them to demand royalties in some profitable amount, would instead refuse royalties in any amount, seems small—far less than the likelihood that they would happily receive them. At the very least, if one has to make rules that govern most situations, most of the time, one is more likely to be right if one predicts that when money can be made, the people in a position to make it will try to make it.

161. Cf. RICHARD A. POSNER, *ECONOMIC ANALYSIS OF LAW* 316 (5th ed. 1998) (stating in relation to patents that "it is always more profitable to license production to a more efficient producer than it is to produce oneself"); ARMEN A. ALCHIAN & WILLIAM R. ALLEN, *EXCHANGE AND PRODUCTION: COMPETITION, COORDINATION, & CONTROL* 292 (3d ed. 1983) (describing in relation to patents the fallacy of "a commonplace of modern folklore that gasoline producers have a new fuel or carburetor that would enormously reduce the demand for gasoline, but to protect their wealth they have withheld the device"); ROBERT COOTER & THOMAS ULEN, *LAW AND ECONOMICS* 138 (1988) (referring to patents: "[T]he use of a patent to suppress an invention is exceedingly unlikely. The far more common case is that the licensing of a patent for a fee is much more valuable to the patentee than is the act of not revealing an invention").

Summing up, we can see that the harm from a Type Ib error is significant, but the likelihood that such an error will be made—in which a new-use industry would have prospered, to the public's overall benefit, but the relevant authors refused, on economically irrational grounds, to grant a license for that use—is low.¹⁶²

D. *Type II Errors*

A Type II error means that the new-use industry is found not to infringe but is destined to grow in importance to the point that the industry's failure to pay royalties will constitute a significant disincentive to authors. What is the harm here?

The obvious harm is that with inadequate incentives, authors create (or publishers publish, or distributors distribute, etc.) less than they might have and the public is worse off as a result. Is that a likely harm? Surprisingly, we have no examples of an important industry that was held to have no royalty obligations and for which the lack of obligation persisted throughout the industry's history. The examples that would likely have fit that pattern all ended up eventually with some form of royalty obligation, frequently in the form of a compulsory license. The phonograph and cable television certainly fit this model, as did the jukebox until 1993.¹⁶³

One might question, then, whether there is any harm at all when a court declines to impose infringement liability and hence a royalty obligation on a new-use industry. If the industry is destined to remain of little public benefit, then the loss of its royalties to authors will not be significant. Yet, if the industry does become important, then Congress will act to impose compulsory license royalties. That has at least been something of the historical pattern.

The problem with this reasoning is that it assumes two things: first, that the royalty obligation (again, typically in the form of a compulsory license) will be imposed at about the same time as the industry becomes significant enough to justify the requirement and not earlier or later; and second, that compulsory licenses—if that is the mechanism—are a desirable way to accommodate the royalty obligation. The evidence to date suggests that the

162. One counterargument is that we do not care about "authors" literally. It is the old use *industry* that matters, the industry that is not an "author" itself but a licensee of authors. The counterargument fails, however: New authors arise all the time and have the option to transfer their rights to old *or* new-use industries. To the extent that the old use industry is itself the "author" of the works it sells, then the argument in the text holds directly.

163. See 17 U.S.C. § 115 (Supp. 1995) (phonorecords); 17 U.S.C. § 111(c), (d) (1994) (cable television); 17 U.S.C. § 116(b) (1988), *repealed by* Act of Dec. 17, 1993, Pub. L. No. 103-198, § 3(a), (b)(2), 107 Stat. 2309.

first assumption is questionable and that the second is correct only as a matter of politics, but certainly incorrect as a matter of economics.

The first assumption is that a decision to impose infringement liability on a new-use industry will not just happen eventually, but will happen at roughly the "right" time. The "right" time is the time that the need for an incentive to authors arises. If the obligation is imposed later than that, then the public will be the poorer for the delay; moreover, a belated imposition of royalties will almost certainly not be retroactive,¹⁶⁴ so that the loss to the public is one that can never be repaid. When exactly that time first arises is obviously a difficult question to answer. Certainly authors and the new-use industry would not agree on the matter: Authors are likely to believe that the "right" time for royalty payments is from the beginning, whenever the new-use first arose; the new-use industry is likely to believe that the right time is "never."

The very difficulty of determining objectively when the right time arises, coupled with a strong self-interest on both sides that effectively prevents them from having an objective view at all, implies that there is little or no incentive in either the legislative or judicial arenas for decision makers to discover what the "right" time is for the imposition of a royalty obligation. That is, no one in a position to take action—the parties, the courts, or Congress—stands to gain by trying to determine the right time for royalty imposition. Consequently, one must conclude that when infringement liability and a royalty obligation is belatedly imposed on a new-use industry, the assumption that this imposition will come at the "right time" is probably wrong. At the very least, we can say that there is no built-in incentive for the assumption to be true and hence, no reason to expect the timing to be "right."

The point about economics—that compulsory licenses are wasteful of resources—is easier to demonstrate. A compulsory license is a form of price fixing: Congress or an agency sets the price for a broad class of bargains¹⁶⁵—those that deal with the buying and selling of certain copyright

164. A retroactive imposition of liability would mean this: First, a new-use industry is found (by a court or Congress) not to infringe some existing works; second, the new-use industry grows in importance to the point that the lack of royalty payments becomes a significant disincentive to authors; third, a decision is made (by court or Congress) that the new-use industry *should* pay royalties; and finally, the decision maker extends this new royalty obligation to past acts that have already been determined not to infringe. This last step seems very likely to be a denial of due process and hence unconstitutional.

165. For example, for pre-1998 transactions, the license to record a musical composition that has already been recorded is set in the statute at "either two and three-fourths cents, or one-half of one cent per minute of playing time or fraction thereof, whichever amount is larger." 17 U.S.C. § 115(c)(2) (1994). After 1998, the decision maker shifts from Congress to the Copyright Office, which has acquired the authority to establish license prices

licenses; the parties have little or no room to change the price term.¹⁶⁶ As such, a compulsory license has whatever drawbacks price controls have. Absent significant market failures,¹⁶⁷ a compulsory license makes for a wasteful allocation of social resources.¹⁶⁸

Compulsory licenses might be justified on two other grounds, however. First, that such a license can reflect a Congressional policy determination simply to favor one industry or activity over another. For example, Congress might decide to favor cable television with compulsory license payments that were lower than fair market value precisely to foster the growth of cable at the expense of other activities. Whether this is a desirable way to create subsidies instead of alternatives like tax deductions or outright subsidy payments from general tax revenues is partly a matter of politics and political philosophy.

In addition, there is a possibility that a compulsory license will lower transaction costs. This is at times offered as a justification for such licenses,¹⁶⁹ but this point is misleading at best. Other things being equal,

under 17 U.S.C. §§ 801–803 (1994). In the case of cable royalties, the price is based on a station's annual revenue and determined from a complex series of conditions. *See* 17 U.S.C. § 111(d) (1994).

166. Under many copyright compulsory license provisions, the statutorily specified price serves as a ceiling; the parties may reach agreement for a lower price. *See, e.g.*, 17 U.S.C. § 115(c)(3)(B) (Supp. II 1997) (stating "copyright owners of nondramatic musical works and any persons entitled to obtain a compulsory license [for cover records] . . . may negotiate and agree upon the terms and rates of royalty payments"); 17 U.S.C. § 118(b) (1994) (stating that owners of copyright in certain musical and other works and "any public broadcasting entities, respectively, may negotiate and agree upon the terms and rates of royalty payments"). From early on, lesser-known music recordings "covered" by better-known artists have in fact received less than the statutory royalty. *See* SEGRAVE, *supra* note 70, at 18, 20.

167. *See supra* text accompanying note 159.

168. *See, e.g.*, Stanley M. Besen & Robert W. Crandall, *The Deregulation of Cable Television*, 44 *LAW & CONTEMP. PROBS.* 77, 77–79 (1981); ALCHIAN & ALLEN, *supra* note 161, at 62. Note that by hypothesis I am describing a new-use industry that has grown to the point where royalties from an "old use" industry have fallen off significantly; consequently, I am describing a situation for which a royalty obligation from the new-use industry is consistent with overall reliance on copyright as an incentive for the public's benefit. One can always assert that Congress is free to deny copyright to any activity and that it can certainly extend a limited copyright in the form of compulsory licenses to any activity as well. I do not gainsay that point; I am not talking about Congressional *power* but rather about a situation in which anyone who agreed with the fundamental principles of copyright—an incentive for creation that redounds to the public's benefit—would agree that a royalty is called for.

169. Transaction costs were offered as the reason for a statutorily specified compulsory license for cable television in the 1976 Copyright Act: "[I]t would be impractical and unduly burdensome to require every cable system to negotiate with every copyright owner whose work was retransmitted by a cable system." H.R. REP. NO. 94-1476, at 89 (1976).

price fixing *always* lowers transaction costs because it avoids the need for bargaining. If that were a suitable justification in general, then Congress ought to establish prices for every transaction in every market, copyright or otherwise. That Congress has never systematically attempted to fix the prices of all goods and services in the United States marketplace suggests that the transaction cost rationale alone must not in fact be a helpful explanation for the existence of compulsory licenses.¹⁷⁰

In any event, there is no evidence in our recent compulsory license provisions such as for jukeboxes,¹⁷¹ cable television,¹⁷² phonograph recording,¹⁷³ public broadcasting,¹⁷⁴ satellite transmissions,¹⁷⁵ and others that social welfare is improved by that mechanism.¹⁷⁶ Whereas there *is* reason to think that the fair use provision—itsself a kind of compulsory license that operates in situations with additional indications of public benefit—accomplishes overall socially desirable objectives.¹⁷⁷

Economics aside, it appears that the large number of compulsory licenses in copyright law is based on the fact that politically, the compulsory license makes a great deal of sense. When a Type II error is made early on, and an industry prospers without liability that should, at some point, be obliged to pay royalties, it is politically difficult—perhaps impossible—for Congress to switch the industry “cold turkey” from no liability to full liability. Nor would that switch be fair to the industry which, after all, has relied for its investments on a past decision that its actions did *not* constitute

170. See also Hardy II, *supra* note 112, at 446 (stating “[a] reduction in transaction costs through legislation is beneficial only if all sides benefit from the reduction. If one side benefits but only to the corresponding detriment of the other side, then Congress has merely shifted resources from one side to the other by a form of price-fixing”).

171. 17 U.S.C. § 116(a) (1988), *repealed by* Copyright Royalty Reform Act of 1993, Pub. L. No. 103-198 § 3, 107 Stat. 2309 (1993).

172. 17 U.S.C. § 111(d) (1994).

173. *Id.* at § 115.

174. *Id.* at § 118(b)(3).

175. *Id.* at § 119.

176. Compulsory licensing may at times have even more pernicious and unexpected consequences than a simple failure to promote the general welfare. The compulsory licensing of recorded music, for example, which takes the form of allowing the making of “cover records” without permission, has been said to have encouraged both racism and payola. See SEGRAVE, *supra* note 70, at 18–19 (stating the compulsory licensing of cover records allowed: “racism to be more prevalent, especially noticeable in the 1950s when racist radio stations refused to play, for example, Little Richard, substituting instead a white cover by Pat Boone. [The presence of multiple versions of the same song in] turn has put more pressure on companies to dispense payola”).

177. See Gordon, *supra* note 149, at 1602.

infringement.¹⁷⁸ A compulsory license, then, is often the only compromise that can be reached at that stage in the growth of the new-use industry.¹⁷⁹

Finally, whenever a decision about infringement liability reaches Congress, one expects a fair amount of lobbying and arguing about the outcome. The 1909 Copyright Act hearings, for example, were full of witnesses and lengthy testimony about the issue of phonograph recordings and piano rolls.¹⁸⁰ The issue of cable television's copyright liability consumed a substantial amount of debate during the 1976 Copyright Act revision process—as, for that matter, did nearly every issue!¹⁸¹ In a sense, whenever an important issue like cable television or recorded sound surfaces in Congress during a revision effort, substantial “transaction costs” are entailed in lobbying and testifying.

The cost of a Type II error, in sum, consists of three parts. First is the cost of the public's loss of access to creative expression during the period in which the new-use industry should have been paying royalties.¹⁸² Second, there is the cost of a compulsory license, which is essentially the waste of

178. For example, see the 1908 arguments of counsel for the Apollo Company (piano roll manufacturer), Charles S. Burton and John J. O'Connell, that past court decisions holding piano rolls not to infringe musical compositions constituted “prior decisions [that] have established a rule of property *and of business*, and should be sustained under the doctrine of *stare decisis*, unless greater injury would result from sustaining than from reversing them.” *White-Smith Music Publ'g Co. v. Apollo Co.*, 209 U.S. 1, 7 (1908) (emphasis added); *Revision of Copyright Laws: Hearings Before the Joint Comm. on Patents*, 59th Cong. (1906), reprinted in BRYLAWSKI, *supra* note 22, Part J at 289 (statement of Frank L. Dyer, of the Edison Manufacturing Company and National Phonograph Company) (stating

I submit, gentlemen, that a radical change in the law would seriously disturb vested interests which have enormously developed under the present law. The National Phonograph [company] has a pay roll of over \$45,000 per week, over 4,000 employees, and makes over 100,000 records and 1,500 machines daily The business has developed under the security of the present law).

179. For useful exposition of the events behind the adoption of the compulsory license provision for cable television in the 1979 Copyright Act, see Litman, *supra* note 7, at 326–32. See also Darlene A. Cote, Note, *Chipping Away at the Copyright Owner's Rights: Congress' Continued Reliance on the Compulsory License*, 2 J. INTELL. PROP. L. 219 (1994).

180. See generally Copyright Act of 1909, Pub. L. No. 60-349, 35 Stat. 1075 (codified as amended at 17 U.S.C. §§ 101–914 (1994)).

181. See Litman, *supra* note 132, at 857.

182. I apologize for possibly beating a dead horse, but once again I remind the reader that I am talking here about an industry that “should have been paying royalties” because, *by hypothesis*, the industry has grown to the point that its failure to pay royalties constitutes a significant loss of incentives to authors and therefore, a loss to the public.

resources inherent in any price fixing arrangement.¹⁸³ And finally, there is the cost of the decision making process when authors line up against a new-use industry during the process of copyright revision. These include: lobbying costs, publicity campaigns, time consumed in Congressional hearings by participants, time given up by members of Congress that might have been applied to other issues, and whatever other expenses accompany a major legislative battle between opposed industry groups.¹⁸⁴

E. *Type I and II Errors: Summary*

We can chart the various errors and their harms. As is so often true with copyright issues, assessments of the magnitude of harm and its frequency from various courses of action are largely subjective; this article makes no claim otherwise. With the subjective nature of the following assessments taken into account, on balance, we have something like this chart:

Error type	Likely frequency	Likely harm
Type Ia	?	insubstantial
Type Ib	low	substantial
Type II	high	substantial

Unless the expected frequency of Type Ia errors is extremely high, the greatest expected harm from wrong decisions about the infringement liability of new-use industries is that of a Type II error. That is, the error we should be concerned to avoid is that of failing to impose infringement liability on the new-use industry. In turn, this means that—all other things being equal, and there being no other basis for a decision—the *decision maker faced with deciding whether a new-use industry should be obliged to pay royalties will more likely be right when deciding “yes” than “no.”*

The history of various new technologies sketched out in this article tends to confirm this general rule of thumb. The technologies discussed here

183. There is no *requirement* that the imposition of a belated royalty obligation take the form of a compulsory license with its inefficiencies. It is just that as a practical matter, that seems to be the usual course for Congress to take because it reflects a political compromise. Note also that one may choose to put a high value on government decision making such as price controls for its own sake. From that perspective, the “cost” of a compulsory license in poorly allocated resources may perhaps be offset by whatever “gain” inheres in the fact that a resource allocation decision was made by Congress rather than privately.

184. See generally Trotter Hardy, *Property (and Copyright) in Cyberspace*, 1996 U. CHI. LEGAL F. 217, 252–58 (1996).

that grew to enormous significance in American life have included the phonograph and subsequent mechanisms for recording sounds, motion pictures, radio, television, cable television, and the Internet. Motion pictures, radio, and television were new-use technologies that were subject to the usual copyright royalty obligations from the start. All have prospered nonetheless. Recorded sound and cable television were not subject to such obligations and have evolved under complex and economically wasteful compulsory license provisions that have long since outlasted any conceivable justification other than the inertia of the status quo. Though anything is possible, one would be hard-pressed to conclude that either of these latter technologies would have suffered a premature death under copyright's usual royalty regime.

Whether one agrees or disagrees with this analysis, at the very least the analysis shows what the relevant inquiry is. In particular, the relevant inquiry is *not* merely looking at the new-use industry and its current financial health alone, without considering the effects on the old use industries, and without taking into account the various possibilities for the new-use industry's future growth. Proper decision making about copyright's application to new-use technologies requires instead an inquiry into the future growth possibilities of the new-use industry and the potential for its negative effect on existing copyright using industries.

VI. CONCLUSION

Copyright law seems never to be caught up with technology, with the result that Congress is under constant pressure to amend the Copyright Act to bring the law up to date with new developments. At first blush, this need for continual amendment is puzzling: Congress expressly tried to make the last major revision of copyright laws, adopted in 1976, flexible enough to handle future technologies without need for frequent changes. A closer look reveals, however, that Congress only solved one of at least four issues that almost invariably arise with new technologies.

Looking back at technological developments over the last century that include photography, piano rolls, phonograph recording, motion pictures, radio, television, cable television, and the Internet, we can see copyright issues emerging in four recognizable patterns: 1) the question of subject matter coverage for new media of fixation; 2) the question of subject matter coverage for new types of works; 3) the question of decentralized infringement; and finally 4) the question of new uses of existing copyrighted works.

We also see a checkered history of courts' and Congress's accommodation to these four issues, with the most success accruing to the first issue, that of new media of fixation. By and large, the current Copyright

Act's focus on intangible "works" as copyright's subject matter reasonably well handles new developments in media of expression such as laser disks or the like.

The other issues remain far more problematic. One of the most intriguing is the last, that of a new technology that creates a new way of using existing copyright works. Frequently, courts and Congress have viewed this new-use issue in the wrong light. By focusing on the industries and technologies prominent at the time the new-use issue first arises, copyright decision makers have tended to assess the royalty obligations of the new-use by examining the new technology's effects on existing uses. Thus in hearings on the 1909 Copyright Act, Congress clung doggedly to the argument that phonograph records would only enhance the "real" market, the market for sheet music.¹⁸⁵ Radio broadcasters in the 1920s argued that radio only enhanced that same market. The Supreme Court in the 1970s was strongly swayed by the view that cable television was merely an enhancement to the "real" market, the market for broadcast television.

In none of these cases did the decision maker focus on the more important question: Will the new-use industry eventually grow to displace today's technologies for exploiting copyrighted material? For if that displacement occurs, then authorial incentives will decline unless offset by a new royalty stream from the new-use technology. Given that no one can predict the future growth of today's technology, copyright decision makers should rely instead on an analysis that looks at this question: How bad could it be if the decision maker guesses wrongly about the growth of a new-use technology? By using the statistical concept of "Type I" and "Type II" errors, this article concludes that, other things being equal, copyright decision makers ought to resolve the issue of copyright royalty obligations arising from uncertainty about the future of a new-use technology by deciding in favor of royalty obligations.

185. See generally Copyright Act of 1909, Pub. L. No. 60-349, 35 Stat. 1075 (codified as amended at 17 U.S.C. §§ 101-914 (1994)).