Chapter 7

New Technologies and the Intellectual Property Bargain

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FINDINGS

- Technology is spawning a wide range of new opportunities to use information-based products and services. A central question for intellectual property law is who shall benefit from these opportunities. In the Supreme Court's "Betamax" decision, for example, the question was whether proprietors or users would benefit, either directly or indirectly, from home videorecording capabilities. As even newer technologies affect individuals' abilities to copy, store, and modify information, such questions are likely to multiply.
- Because it evolved in a period when duplication and storage technologies were centralized and deployed in a commercial context, copyright law offers little guidance to courts in resolving conflicts over who shall benefit from new uses afforded by technology. Neither the existing framework of rights nor limitations on those rights, such as fair use, clearly apply to the private use of information-based goods.
- Some survey research has been conducted on the financial benefits that would accrue to proprietors if they were remunerated for new technological uses, and unremunerated uses are often considered harmful to copyright proprietors. Estimates of harm, however, are in and of themselves insufficient to assist Congress in resolving the issue of who is to benefit from new uses. They presuppose and cannot be the foundation for a legal right to profit from new uses of copyrighted works made available by technology. Whether Congress wishes to consider new uses as harmful will depend on the goals that it seeks to promote through copyright law, and where it believes the benefits of new technologies should be allocated.
- The need for congressional action on this issue is immediate. Public opinion, while tending to favor free private use, is not yet firmly established. However, as technologies for duplicating, storing, and manipulating information become more prevalent and sophisticated, public opinion and public behaviors may become more entrenched.
- A separate, but related issue is that of access to information goods distributed electronically. Traditionally, copyright law has provided a *quid pro quo* between proprietors and the public in information goods sold in copies. The sale of copies ensured public access to copyrighted works. However, because electronically disseminated works are not sold in copies, but accessed through communications media, Congress may need to rethink the intellectual property bargain to ensure adequate access to information goods. The policies pursued with respect to access and communications law will affect the resolution of the private use issue.

INTRODUCTION: A NEW INTELLECTUAL PROPERTY CONTEXT

Innovations in information technology require that policy makers address two fundamental questions about property rights in information-based products and services: 1) what rights in information products and services should be granted to a proprietor and 2) what

rights should be retained by the public? Although copyright law has traditionally answered these questions, information and communication technologies have created a new context in which the application of copyright law is uncertain. In some cases, the technology is shifting the capabilities of printing, publishing, and distributing information from the centralized commercial entrepreneur to private individuals. In others, the technology is creating new and unprecedented uses for information products and services. The videocassette recorder, for instance, not only allows a user to watch motion pictures where and when he will, but also to store video transmissions taken off the airwaves.

The current debate before the courts and Congress centers on whether copyright proprietors or the public shall benefit from these new technological capabilities, and whether and how both can benefit. On the one hand, technology gives the public an unprecedented ability to access, store, transmit, and manipulate information, with little or no need for publishers, printers, or distributors. On the other, the same technologies simultaneously permit the copyright proprietor to exploit markets that have never before existed. In many cases, the interests of the proprietor and the public are in conflict; as, for example, with home video recording.

In resolving the question of who should benefit from new technology, one must begin by understanding that rights granted to a proprietor in a work act as prohibitions on the subsequent uses that others may make of it. To grant a right is to make certain activities illegal for all but the author of a work. Thus, the benefit conferred on an author by the grant of a right exacts a corresponding cost from the remainder of society.

The rights granted the author are not, however, meant to be gratuitous burdens on the freedoms of the public. Congress has in the past stressed that rights are granted to authors for the purpose of benefiting the public, and so,

> . ,. [i]n enacting a copyright law Congress must consider . . . two questions: First how much will the legislation stimulate the producer and so benefit the public, and, second, how much will the monopoly granted be detrimental to the public? The granting of such exclusive rights, under the proper terms and conditions, confers a benefit upon the public that outweighs the evils of the temporary monopoly. [1]

The effect of technology on this 'cost/benefit" equation underlies the discussion in this chapter. To understand how the current debate arose, the chapter looks first at the U.S. Constitution and the bargain that it established between authors and the public. It then examines how technology has changed the context in which that bargain is carried out, causing ambiguity and uncertainty over which rights should belong to the proprietor and which should be retained by the public. Finally, this chapter suggests that resolving this issue will depend on which criteria are chosen for analysis, and which goals Congress seeks to implement through intellectual property policy. Four such criteria are considered: harm, efficiency, access, and public opinion.

'H. R, Rep, No. 2222, 60th Cong., 2d sess. (1909).

THE INTELLECTUAL PROPERTY BARGAIN

We saw in chapter 2 that American intellectual property law can be thought of as a bargain between individual creators and the publie. In exchange for granting authors and inventors exclusive rights in their writings and inventions, the American public is to benefit from the disclosure of inventions, the publication of writings, and the eventual return of both to the public domain.[2] The purpose of copyright, in particular, is to benefit the public by encouraging learning through the dissemina-

'U.S. Const., Art., I, sec. 8, cl. 8. At the time the constitution was written, the word "science" meant knowledge in the broadest sense of the word.

tion of works. Although the Supreme Court has consistently interpreted the intellectual property bargain to be "primarily" for the benefit of the public,[3] James Madision—the principal author of the intellectual property clause—believed that "[t]he public good *fully coincides* . . . with the claims of individuals' in intellectual property.' In Madison's view there was no question of subordinating the interests of either the author or the public. The purpose of the intellectual property clause—the public benefit–and the mechanism for achieving that purpose—the creator's exclusive right—were merged in one simple bargain.[5]

Although few disagree that the ends that intellectual property seeks to promote are in the public interest, many feel that the means chosen are in fact inimical to it. Because the constitution grants exclusive rights, copyrights and patents are sometimes considered "monopolies," and—at best—necessary evils. Thomas Macaulay, a British legal historian, voiced this opinion in a speech on the subject of copyright before Parliament:

> Copyright is a monopoly, and produces all the effects which the general voice of mankind attributes to monopoly. The effect of monopoly generally is to make articles scarce, to make them dear, and to make them bad. It is good that authors should be remunerated; and the least exceptionable way of remunerating them is by a monopoly. Yet monopoly is an evil. For the sake of the good we must submit to the evil; but the evil ought not last a day longer than is necessary for the purpose of securing the good.'

James Madison, too, was aware of the monopolistic connotations of a governmentally granted exclusive right.[7] However, he distinguished American intellectual property and thus copyright from the pernicious monopolies that had preceded it:

> Monopolies are sacrifices of the many to the few. Where the power is in the few it is natural for them to sacrifice the many to their own partialities and corruptions. When the power as with us is in the many not in the few the danger cannot be very great that the few will be thus favored.[8]

To avoid the evils of monopoly, Madison intended that the exclusive rights afforded by copyright be very limited; he envisioned limited rights, owned by "many," for limited periods of time.

Madison's concerns over monopoly and his confidence in the "coincidence" of the public and private interest were reflected in the parsimonious bundle of rights granted by the first copyright act.[9] To accomplish its stated goal of encouraging learning, the act granted authors rights that were far more limited than those of the most recent copyright statute. Copyright law gave authors only the rights to "print, reprint, publish and vend" their writings. The author retained the right to reproduce the copyrighted work for sale, but he held no property rights in books as such. A copyright was infringed, not by the uses to which a work was put, but by the unauthorized exercise of the author's commercial rights to sell the work and to print copies of it. '" Thus, af-

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"'The Copyright law, like the patent statute, makes reward to the owner a secondary consideration.'" *Fox Film v. Doyal, 286* U.S. 123, 127, as quoted in *Sony Corp. v. Universal City Studios,* 464 U.S. 417, 429 [1984).

'From *The Federalist, No.* XLIII, 281 (italics added).

Leon Seltzer, author of a noted book on copyright, wrote that "to say that the benefit to the author is a 'secondary consideration' is like saying that when reliance is put on a flask to transport wine across a carpeted room, whether or not the flask leaks is, with respect to getting the wine there, a 'secondary consideration. " Leon Seltzer, *Exemptions and Fair Use in Copyright* (Cambridge, MA: Harvard University Press, 1978), p.14.

'Thomas Macaulay, "Speeches on Copyright" (1841), quoted from Barbara Ringer, *The Demonology of Copyright (New* York: R.R. Bowker, 1974), p. 13. More recently, Stephen Breyer and Benjamin Kaplan have expressed similar views on copyright, calling for limits on its scope and duration. See: Stephen Breyer, "The Uneasy Case for Copyright, 84 *Harvard La w Review 281,* 1970; and Benjamin Kaplan, *An Unhurried View of Copyright (New* York: Columbia University Press, 1967).

As ch. 2 discussed, many of the earliest intellectual property schemes, such as the Stationers Copyright, were true monopolies, concentrating a good deal of economic and social power in the hands of a small number of people.

'Letter from James Madison to Thomas Jefferson, Oct. 17, 1788, as quoted in Bruce Bugbee, *Genesis of American Patent and Copyright Law* (Washington, DC: Public Affairs Press, 1967), p. 130.

[9]Act of May 31, 1790, ch. 15, 1 Stat. 124.

"At the time that the constitution was written, printing and publishing required large, costly equipment that made them essentially commercial enterprises. The constitutional bargain therefore presupposed a commercial environment for the exploitation of Writings; it could hardly have done otherwise, since the technology of the day necessitated a publisher. Thus, because of the economics and technology of publishing, the rights

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ter a work had been commercially printed and sold, others could display it, read from it publicly, or even write other books based on it, without infringing the author's copyright.[11] Even though the author might have profited from these subsequent uses, the drafters of the first copyright act did not believe it necessary to grant such extensive rights in order to encourage learning.

Numerous other features of the first copyright law ensured that the bargain struck between the author and the public would not constitute a monopoly.[12] For example, the term of copyright protection was limited to 14 years,[13] after which time the work would return to the public domain and anyone would be free to print it. The copyright term ended within the lifetime of both the author and his reading public, so that, even if copyright were a monopoly, it was one that could not last long. Moreover, copyright was initially vested in the author, although he could thereafter assign his copyright to others. By creating as many copyrights as there were authors, the law avoided the concentration of market power, as Madison said, in "hands of the few. "

Transformation of the Constitutional Bargain

During the 19th and 20th centuries, this constitutional bargain was gradually transformed, perhaps the most significantly through the gradual expansion of rights. Like the expansion of copyrightable subject matter (see ch. 3), the expansion of rights granted under copyright largely tracked technological development. Those granted under the first copyright act of 1790 corresponded to the capabilities of the printing press; these were the rights to print, reprint, publish, and vend a writing.[14] New rights were gradually added to the copyright scheme as social and technological change prompted Congress to include an expanding variety of subject matter. The "right to perform, " for example, was first granted in 1856 for dramatic compositions, [15] and in 1897 was applied to musical compositions.[16] In 1909, Congress granted musical compositions a "mechanical recording right, "[17] at which time the duration of copyright was also lengthened from its initial 14 to 28 years,[18] and on renewal, to 56 years.[19] Finally, in 1976, the term of copyright was extended to the life of the author plus 50 years.[20]

During this period of statutory expansion, the judiciary also sought to mark the boundaries of the exclusive right. In the beginning, the courts confined infringement to literal word-for-word plagiarism, and seldom assessed the ostensible similarities between one work and another. They did not extend copyright protection to protect what are now known as "derivative works."[21] A playwright, for example, did not require permission from the author of a novel to base his play on the novel. Courts strictly limited infringement to printing the author's book without his consent.

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conferred by the intellectual property clause on authors had operational significance as a regulation of the business of publishing. Indeed, this notion of copyright as a form of trade regulation is, as we shall see, substantiated in other developments. The precursor to the concept of copyright—the Stationer's Charter-granted publishing rights to printers, rather than authors; furthermore, the first Federal copyright statute was held to extinguish any common law rights of the author upon publication (an activity which at the time required the commercial publisher as intermediary).

"Each of these activities would be illegal today,

[12]It is doubtful that a copyright would qualify as a monopoly as defined by antitrust law. Monopoly, as the term is used in antitrust, is the power to set prices or exclude competition in a relevant geographic and product *market. See, e.g., United States v. Grinnell Corp.,* 384 U.S. 563 (1966). A single copyright is at most a monopoly of a *product,* which seldom gives the copyright proprietor market power. Others are free to compete with the author, so long as they do not copy or produce works that are substantially similar.

[13]This term was renewable by living authors for another 14 years. The drafters of the act may have arrived at 14 years based on previous experience. Several of the States had, per a 1783 recommendation of the Continental Congress, passed copyright legislation with a term of 14 years. The recommendation was modeled on the Statute of Anne, which also implemented a 14-year term. L. Ray Patterson, *Copyright in Historical Perspective* (Nashville, TN: Vanderbilt University Press, 1968), p. 183.

[14]Act of May 31, 1790, ch. 15, 1 Stat. 124.

"Act of Aug. 18, 1856, ch. 169, 11 Stat. 138.

"Act of Jan. 6, 1897, ch. 4, 29 Stat. 481.

[17]Act of Mar. 4, 1909, ch. 320, 35 Stat. 1075.

[18]Ibid.

"Former Title 17 U.S.C. §24.

[20]Current 17 U.S.C. §302.

"For example, a German translation of the entirety of *Uncle Tom Cabin* was held not to infringe. *Stowe v. Thomas, 23* Fed. Cas. 201, No. 13514 (C. C. E. D. Pa. 1853).

Gradually, however, the courts began to adopt a broader and more qualitative approach to the question of similarity.[22] They began to interpret "copying" to mean more than simple duplication and to include mimicking or extensive borrowing within its definition. They decided whether a defendant had infringed a plaintiff's right to print, reprint, publish, or vend on the basis of an often subjective estimation of what was essential and unique to a given author's writing.[23] As chapter 3 details, the courts began to use the concept of "idea" versus "expression" as the accepted tool of analysis for determinations of similarity. They ruled that infringement occurred not only when an individual printed the writings of another, but also when one author adopted an expression that was similar to another's. Courts found no infringement only when the similarities between works were confined to ideas—the abstract concepts or themes employed in the work.

It was Congress however, that, unwittingly and perhaps accidentally, granted written works the most far reaching of rights in the act of 1909. To the exclusive rights of printing, reprinting, publishing, and vending, it added the right to *copy*.[24] Before then, "copying' was a right applied only to photographs, paintings, engravings, and other graphic works: works that were not ordinarily reproduced through "printing" or "reprinting." Although section 1 of the 1909 act claimed to "retain without change" the rights granted under prior law,[25] it nevertheless extended the right to copy to a new subject matter.[26]

This seemingly trivial change in the wording of the law would have far-reaching consequences. The change meant that "copyright proprietors, without seeking it and apparently quite by accident, acquired at least the semblance of a right of an activity that was to have increasing importance in the new century. "2[7] For the ambiguity of the word "copy" subsequently endowed proprietors with rights, not only against commercial piracy, but also against noncommercial personal or private use.[28] To some, this expansion of copyright law is at odds with the traditional intention of copyright. Commenting on the issue of photocopying, Francis Nevins, a copyright scholar, notes that:

> . . . [copyright is intended to govern relations between the creator of a work and all those business people who intervene between the creator and the work's ultimate consumers. It *is not intended to control non-commercial*

[22] See, for example, the case of *Daly v. Palmer, 6* Fed. Cas. 1132, No 3552 (C.C.S.D.N.Y. 1868), in which an escape from bondage to a train track constituted the sole common theme between two plays, and the basis of infringement.

[23] Kaplan, *Unhurried View,* p. 28.

[24] The word "copy" was first used in conjunction with the infringement of etchings in an amendment of 1802, ch. 36, §3, 2, Stat. 171. Again, in an amendment of 1831, copying was a term applied to the infringement of other than literary works. See the Revision of 1831, Ch. 16, §§6-7, 4 Stat. 436. In 1870, when paintings, drawings, chromos, statuettes, and other three-dimensional works were added to the growing list of subject matter, the rights afforded all copyrighted works were aggregated under one section (§86), but the activities constituting infringing conduct were separated so that "copy" applied to works other than maps, books, and charts. Revision of 1870, ch. 230, §§99-100, 16 Stat. 198. In the general revision of 1909, infringing conduct was not defined, and "copy" was retained as a right applying to all works.

[25] H.R. Rep. No. 2222, 60th Cong., 2d sess. 4 (1909).

[26] Thus, the redundancy of the terms "print, reprint, and copy" was noted years later in a Report of the Registrar of Copyrights on the General Revision of the U.S. Copyright Law, 87th Cong., 1st sess., 1961. Although the verbs "copy" and "print are nowhere defined in the law, Webster offers a definition of print most clearly fitting the context of authorship and publication: "to publish in print. " This defintion would make sense of phrases such as "out of print. " "Copy" is described as a synonym for "imitate, mimic, ape, mock. "

[27] L. Ray Patterson, "Copyright, Congress and Technology: The Public Record '" —Book Review, 34 *Vanderbilt Law Review, 833 (1981),* n.30; see also Vernon Clapp, *Copyright—A Librarian View (1968),*

[28] The dubious pedigree of the right to copy was later recognized in the watershed case of *Williams & Wilkins Company v. United States, 487* F.2d 1345, 1351 (Ct. Cl. 1973), *aff'd, 420* U.S. 376 (1975), which stated that " 'copy' is not to be taken in its full literal sweep, thus raising "a solid doubt whether and how far 'copy' applies to books and journals. In this case, publishers of medical journals sued the United States for the copying activities of the National Libraries of Medicine and National Institutes of Health, which, in a split decision, the Court of Claims determined to be fair use. Professor Nimmer notes the ambiguity regarding "copy," and says that the confusion is no longer present "since under the 1976 act the term 'copy' clearly includes a photocopy (citing Section 101 of the Act which defines "copies")." *Nimmer on Copyright* §13.05[E] (]984). However, the definition to which Professor Nimmer alludes is of the noun form—i.e., "the tangible object' '—while the ambiguity noted in *Williams & Wilkins* revolves around the meaning and application of the verb form—i.e., whether the activity of copying is one in which the copyright owner holds a right.

use of copyrighted works nor to permit lawsuits against non-commercial users. [29]

At a critical juncture in the emergence of new technologies such as the photocopier and the tape recorder, the vagaries of copyright law may have yielded a fundamental change in the bargain between the proprietor and the public. A literal interpretation of the right to copy transformed copyright from the *right to control the use of copyright for commercial profit (vis-à-vis* competing publishers) to *the right to control the copyrighted work itself (vis-à-vis* the user of the copyrighted work) .30 Ironically, proprietors' control over the copyrighted work emerged at same time as technology was perfecting methods of denying them that control—the photocopier and the tape recorder.

This distinction between control over a copyright and control over a copyrighted work is critical. If copyright is essentially the right to commercially exploit an intellectual creation, then it is a form of *regulation* designed to ensure that only an author will be allowed to sell his work to the public. It also means that end users of the work are free to copy, store, manipulate, and share copies that they have purchased. If, on the other hand, copyright is a right to control how a work is used, then it is a form of *property;* a bundle of rights that follows each and every copy of a book, record, or computer program. Under this theory, proprietors have rights to profit from the uses to which the work is put.[31]

The theory of copyright as property is the source of much confusion and conflict over copyright law. It provides the basis for saying that copyright proprietors have a problem of enforcing unauthorized uses, such as home videotaping (see ch. 4). If copyright is a public policy tool, directed toward regulating competitors in the marketplace, rights to these uses do not exist. Nor do problems of enforcing them. Also, as new uses for copyrighted works are bred by technology (see later in this chapter), conflicts arise over who benefits from these new uses. Again, if copyright is construed as a right to commercialize one's creation, rather than a property right in each copy of that creation, the benefits of new technologies will go to the public.

The central question that Congress needs to address is whether copyright shall be considered property or regulation. If Congress were to resolve the question, clear guidelines on the legality of the "private use"[32] of copyrighted works might be possible. So far, however, Congress has not given a clear statement of the nature and purpose of copyright. When it enacted the latest revision of the copyright law in 1976, Congress folded the exclusive rights to print, reprint, and copy into the right "to reproduce the copyrighted work in copies. "[33] Ambiguities remain, however, about whether this and other exclusive rights are proprietary or regulatory in nature, and therefore, whether they apply to private use activities. The House Committee Report that accompanies the act sheds little light on the question, but suggests that at least the right to reproduce copies is directed at commercial printing and publishing activities, and is therefore regulatory .34 Significantly, no court has yet held private use to be an infringement, which also suggests that

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"Francis M. Nevins, Jr., "University Photocopying and Fair Use: An American Perspective, " 8 *European* lntellectual *Property Review 222 (1985)* (italicx added). Support for this notion of copyright as an essentially commercial right can also be found in Supreme Court opinions:

> An author who possesses an unlimited copyright may preclude others from copying his creation for *commercial purposes* without permission. . Congress may guarantee to authors and inventors a reward in the form of control over the sale or *commercial use* of copies of their works.

Goldstein v. California, 412 U.S. 546,555 (1973) (italics added).

"'Note that this is different than the distinction made in Section 202 of the Copyright Law between the work and the copy.

"Today, rights to these uses is confined to reproducing, deriving, publically performing or displaying, and distributing the copyrighted work. 17 U.S.C. § 106. Other rights to uses of a work have been proposed, such as rights to royalties on library lending.

[32]Private use is defined and discussed in greater detail in the next section.

"17 U.S.C. § 106(1).

"H.R. Report No. 94-1476 says that:

> A single act of infringement may violate all of these rights (under §106) at once, as where a publisher reproduces, adapts, and sells copies of a person's copyrighted work *as part of a publishing venture.* Infringement takes place when any of the rights is violated: where, for example, *a printer* reproduces copies without selling them or a *retailer sells* copies of a person's copyrighted work as *part of a publishing venture.*

copyright is regulatory and not meant to prohibit copying by end users of a work.[35] The "Betamax" decision, in which the Supreme Court ruled that videotaping for purposes of "time-shifting' is legal, left the question of private use open. The status of rights in sound recordings are also ambiguous. Although the House Report accompanying the 1971 recording rights amendment says that "private copying' is excluded from the act,[36] advocates of the recording and electronics industries disagree over whether these comments apply to the 1976 revision. Proposed legislation, which would provide for "royalties' on blank tape,[37] and exemptions for home-taping activities are all predicated on the resolution of this policy issue, which existed since the time the photocopier was introduced over 20 years ago.

The issue of whether copyright is regulatory and governs only commercial entrepreneurs, or whether it is proprietary and controls the ultimate users of copyrighted works is still unsettled. A definitive answer will require congressional action. Whether, in deciding the issue, Congress wants to strike a new bargain will depend on a number of criteria, four of which are considered in the next part of this chapter.

The *Williams & Wilkins* case seems to be the closest that courts have come to deciding the issue of private use. That case— which decided that the substantial and systematic copying and distribution of journal articles by two governmental institutions was fair use— has little resemblance to the private use concerns of the record, software, and motion picture industries. The case was heard by a total of 16 judges, and was split 8 to 8 *on* the issue of infringement. In dicta, *SONY Corp. v. Universal City Studios*, 464 U.S. 417 (1984), the Supreme Court has said that:

> ,, [e]ven copying for noncommercial purposes may impair the copyright holder's ability to obtain the rewards that Congress intended him to have

But, the status of such private use was further obscured in the next sentences:

> But a use that has no demonstrable effect upon the potential market for, or the value of, the copyrighted work need not be prohibited in order to protect the author's incentive to create. The prohibition of such noncommercial uses would merely inhibit access to ideas without any countervailing benefit.

The issue of private use, as a class of uses to which copyrighted works may be put, remains unresolved.

"H.R. Rep. No. 92-487, 92d Cong., 1st sess. 2(1971) reads:

> Specifically, it is not the intent ion of the C'ommittee to restrain the home recording, from broadcasts or from tapes or records, of recorded performances, where the home recording is for private use and with not purpose of reproducing or otherwise capitalizing on it This practice is common and unrestrained today, and the record producers and performers would be in no different position from that of the owners of copyright in recorded musical composition over the past 20 years.

[37] S.31 and H.R. 1030 (Sen. Mathias and Rep. Don Edwards), 98th Cong., 1st sess.

[38] S.175 and H.R. 175 (Sen. DeConcini and Rep. Foley), 98th Cong., 1st sess.

THE INTELLECTUAL PROPERTY BARGAIN IN A NEW TECHNOLOGICAL CONTEXT

Technology is transferring activities such as printing, publishing, reproducing, and modifying works from the commercial entrepreneur to the end user. As a result, policy questions are emerging about whether and how the copyright proprietor is to be remunerated for end user, or private use, activities. The private use of copyrighted works raises questions of how far the rights currently granted to the copyright proprietor should extend when new technologies change the context in which these rights operate. Because copyright law does not clearly extend to private use, Congress needs to consider whether it should, and if so, under what conditions. Whether copyright should extend to private use depends, in turn, on a number of criteria, including whether it causes harm to copyright proprietors, whether it would be economically efficient to extend rights, whether political support for an extension of rights exists, and whether access to information can be ensured.

Private Use

Private use of copyrighted works differs from commercial piracy in several ways. Private use is private, meaning that it is difficult,

if not impossible, to detect, monitor, and control the use.[39] Unlike commercial piracy, private use is not a commercial activity. The person who makes a copy of a television program or a magazine article does not ordinarily attempt to sell that copy. He is typically an end user of the information, and as such, does not compete commercially with the proprietor. However, as is discussed below, the aggregate economic effect of individuals' private use may be equivalent to what might occur with commercial piracy.

For puposes of this discussion we shall define private use as the unauthorized, uncompensated, noncommercial, and noncompetitive use of a copyrighted work by an individual who is a purchaser or user of that work.[40] The "time shifting" videotaping involved in *Sony Corp. v. Universal City Studios*,[41] the home recording of a piece of music, the copying of a magazine, a newspaper article, or a computer program might all be considered instances of private use. Private use may be occasional or insubstantial-as when a cartoon is photocopied (possibly infringing reproduction rights) and posted on an office door (possibly infringing display rights) -or it can be systematic and substantial-as when music "libraries" are built on blank tape (possibly infringing reproduction rights) and shared amongst friends (possibly infringing distribution rights) .42

Technology has fostered private use, and it will continue to expand individuals' capabilities to make private use of copyrighted materials. With each new application of technology, new forms of private use will occur. At present, these uses principally involve the copyright proprietor's *right to reproduce* the copyrighted work.[43] The photocopier and the audio and videocassette player, for example, each enable users to reproduce information, and perhaps infringe the proprietor's reproduction right. As more information becomes distributed electronically and downloaded over networks, the issue of private use involving reproduction may become more complex. In the age of print, for example, a person could purchase a book, and read and re-read it as often as he pleased. When accessing information over a network, however, a person may need to reproduce a work tore-use it. Thus, conflicts may arise between proprietors and users requiring a policy decision about the rights people have in information they have purchased.

Private use involving reproduction rights may be only the beginning of private use issues. As inexpensive home computers become more prevalent, and as more information is stored in computer processible media,[44] the proprietor's exclusive *right to make derivative works* may become an equally important issue.[45] The extreme manipulability of digitally mediated information will allow individuals to reconstruct, enhance, and modify information to suit their taste or needs. This is already possible with computer programs, and may soon be feasible for music, video, and text. In the future, a user might enter the digital version of a song—perhaps stored in a medium similar to today's compact disk-into the memory of his computer. Once in the computer, he could subject the song to any number of modifications: he may take the vocals out and substitute them with his own; he may vary the pitch, rhythm, and melody; or he may add instruments. The issue will then be whether the copyright proprietor has the exclusive right to provide users with modified versions of his work. Just as today's audiotaping potentially harms proprietors by displacing a sale (see below), so too might proprietors say that user derivation of their works deprives them of potential sales.

[39] The difficulties of enforcing private use activities is discussed in ch. 6 on enforcement.

[40] See Anne Branscomb, *The Accommodation of Intellectual Property Law to the Introduction of New Technologies*, OTA contract report, December 1984, discussed under the term "personal use." It should be noted that "unauthorized" here does not mean "illegal" -it means without consent. "Noncompetitive" means that the fruits of private use are not sold commercially. Private use is also referred to as "personal use," "private copying," "noncommercial use," and "home use."

[41] *SONY Corp. v. Universal City Studios, 464* U.S. 417 (1984).

"The literal application of Section 106 of Title 17 would, subject to the application of fair use or exemptions, make any reproduction, derivation, dissemination, performance or display, regardless of its context, an infringement. It may well be that the new wave of technological uses, unlike the technologies of reprography and reproduction, would implicate each of these rights.

[43] 17 U.S.C. §106(1).

[44] See ch. 4 on enforcement.

[45] 17 U.S.C. §§ lOl, 106(2).

As computer networks proliferate, private use may assume other forms, and create issues involving the proprietor's exclusive *rights to distribute, perform, or display* the copyrighted work.[46] If, for example, a user in a computer network sends copyrighted information to another network user, has he infringed the proprietor's right to distribute the work? If policymakers or the courts liken this sharing over networks to sending a book to a friend through the mail, they will find no infringement of copyright, and hence no issue of private use. If, instead, they compare it to a person photocopying and sending a book to a friend, they may find that the proprietor's copyright has been infringed. Whether private use is considered an illegal activity will often depend on the analogies that policy makers use.

New methods of distributing information, such as Cable Television, Satellite Master-Antenna Television (SMATV), Multichannel Multipoint Distribution Service (MMDS), and Direct Broadcast Satellites (DBS), augment the technologies for private use and exacerbate existing tensions with respect to it.[47] In many cases, the communication issues created by the new distribution technologies are very similar to copyright issues involving private use.

The case of DBS and "satellite viewing rights' is one example. A recently enacted law allows people to sell and own receiving equipment, such as dish antennae, but requires them to pay a "reasonable" fee to program owners if a marketing system for collecting such fees has been set up.[48] Although ostensibly a communications law, this prohibition of unauthorized reception is bound up with intellectual property issues, including private use.[49] As with activities such as home taping, the proprietors of DBS programming assert that the unauthorized and unremunerated reception of signals deprives them of revenue. Cable Television operators, who are the intended recipients of many of these satellite signals, also assert that unauthorized reception undermines their subscription system. Like private use, the satellite viewing rights issue also involves the balancing of compensation to proprietors with public access to the signals.[50] Like private use, unauthorized reception is difficult to monitor and prove, and detection may raise privacy problems.[51] Because of these similarities, much of the following analysis of private use applies with equal force to unauthorized reception.

Private Use as Fair Use

Fair use is a judicially developed doctrine, which originated in 1841 in the case of *Folsom v. Marsh*.[52] Its purpose, like that of the copyright itself, is to benefit the public by facilitating the access to and dissemination of works. It is a "safety valve" for cases in which copyright law does not serve the public interest.[53] In other words, fair use concerns those uses of a work that would be technically infringing, but for the fact that they themselves further the promotion of science and useful arts.

Fair use is not subject to precise definition. Which uses are fair will often depend on the particular circumstances of a case. For this reason, fair use is often called an "equitable rule of reason. '[54] Although Congress codified the

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"*17* U.S.C. *§ 106(3),(4), (5).*

'Although these communication technologies are presently used primarily for television, their application need not be so limited. Telephone signals, videotext, teletext, and data transmissions may eventually be routed through cable and satellite systems. Trudy Bell, "The New Television: Looking Behind the Tube," IEEE *Spectrum,* September 1984.

"'Section 705 of the Communications Act (Section 5 of the Communications Policy Act).

"'Unauthorized reception of signals by an individual infringes none of the rights of the copyright holder. SMATV, which ties many receivers to a master antenna, may infringe the right to perform.

"'S.1618 (Sen. Gore), "Satellite Viewing Rights Act of 1985, " for example, seeks to ensure access by limiting broadcaster discretion over distribution, pricing, price discrimination, and decoder availability.

"'Short of Staking Out the Farmhouse, How Can Program Owners Prove That a Farmer Ripped Them Off? Answer: They Probably Can't. " *Forbes, Nov. 5, 1984. See* **also** ch. 4 on enforcement.

[52]9 Fed. Cas. 342,246, No. 4,901 (C.C.D. Mass. 1841).

[53]In some cases, "courts in passing upon particular claims of infringement must occasionally subordinate the copyright holder's interest in a maximum financial return to the greater public interest in the development of art, science and industry. " *Berlin v. E.C. Publications, Inc., 329* F.2d 541,544 (2d Cir. 1964).

"[4]7 U.S.C.§ 107; "Indeed, since the doctrine is an equitable rule of reason, no generally applicable defintion is possible, and each case raising the question must be decided on its own facts. " H.R. Rep. No. 94-1476 (1975).

doctrine in the 1976 Copyright Act, it preferred not to define the term, and instead delegated its interpretation to the courts. Even the type of 'use" that falls under the term 'fair' in the statute was left unspecified by Congress, but a House Report says that such uses would "include" reproduction.[55]

Fair use is not, however, a *tabula rasa.* It is a defense to a claim of infringement that, if successful, negates a finding of infringement.[56] Section 107 of the 1976 Copyright Act lists four factors that courts may consider in deciding whether a particular use is fair:

1. the purpose and character of the use, including whether such use is of a commercial nature or is for nonprofit educational purposes;
2. the nature of the copyrighted work;
3. the amount and substantiality of the portion used in relation to the copyrighted work as a whole; and
4. the effect of the use upon the potential market for or the value of the copyrighted work.[57]

Although the fair use factors are neither exhaustive nor determinative of the "fairness" of a particular use, they are nevertheless used by courts to balance the competing claims of learning and economic incentive. Judicial history is replete with interpretations of the fair use factors, and the types of activities that can be labeled fair use are well charted. The fair use doctrine has proven most difficult and controversial in cases of first impression, where the court must proceed with little or no guidance from prior rulings.

Despite its usefulness as a safety valve for copyright protection, the fair use doctrine may be an inappropriate mechanism for resolving the private use issue for a variety of reasons. First, and perhaps most important, the application of the fair use doctrine presupposes infringing conduct. Although legal scholars disagree about whether fair use excuses or negates a claim of infringement, it is clear that the defense of fair use is only relevant where infringement is alleged.[58] For instance, one need not claim that sharing a book with a friend is fair use, because sharing books is not infringing conduct under copyright law. Since neither the courts nor Congress has unequivocally determined that private use constitutes an infringement, the application of the fair use doctrine to private use may be premature.

Secondly, fair use is a tool used by the judiciary to resolve competing claims over the use of copyrighted works. However, the judiciary may be an inappropriate forum for addressing the private use issue. Private use is essentially a policy issue. It involves a determination of whether whole classes of activities, such as audio or video taping, should be considered infringements. It requires, moreover, an evaluation of who shall benefit, and how, from new technological uses, and whether copyright protection should extend beyond protecting commercial activities to protecting profits in markets that did not exist before the introduction of new technologies. However, the function of courts is not to make policy, but to interpret law. In recognition of this point, the Supreme Court stated in Sony v. *Universal Studios,* "it is not our job to apply laws that have not been written. '[59]

[55] Id. Arguably, fair use comes into play anytime there is an allegation of infringement of any of the exclusive rights in § 106 of Title 17.

[56] See n. 58.

[57] 17 U.S.C. §107.

[58] "Professor Nimmer seems to favor the latter interpretation (despite a substantial similarity of works, "the defendant is rendered immune from liability because the particular use which he has made of the plaintiff's material is a 'fair use.' " *Nimmer on Copyright, § 13.05 (1985))*; as does Professor Goldstein ("[t]he effect of the fair use defense is to excuse otherwise infringing conduct in circumstances where the public interest compels free access " Goldstein, "Copyright and the First Amendment, 70 *Columbia Law Review* 1011 (1970)). Messers Kaplan ("policy runs throughout our subject . . . it would, I think, be possible to dispense with it (fair use) in relation to (infringement). " Kaplan, *An Unhurried View of Copyright (New* York and London: Columbia University Press, 1967), pp. 69-70 and Seltzer ("[f]air use. . . has to do with whether a particular cost-free use is one both foreseen by the author and contemplated by the Constitution." Seltzer, *Exemptions and Fair Use in Copyright,* (Cambridge and London: Harvard University Press, 1978), p. 29 seem to favor the former. For purposes of this discussion, the matter may be academic, since the fair use defense arises only in cases where a claim of infringement is made.

[59] Sony *Corp. v. Universal City Studios,* 464 U.S. 417 (1984). For a discussion of the institutional reasons why the courts may not be best suited to deal with these issue, see ch. 9.

Moreover, because fair use evolved in a commercial context, the fair use doctrine may simply be inapplicable to private use activities. Traditionally, fair use has been limited to cases in which a copyrighted work was used in the production of yet another work.[60] The use of a work for its own sake-for intrinsic purposes–has traditionally fallen outside of the fair use doctrine. The reason for this interpretation had to do with the very purpose of copyright: the promotion of learning. [61] Without some "give" in the exclusive rights of an author to his or her work, other authors might be thwarted in their ability to make contributions to the public good by way of "criticism, comment, news reporting, teaching, scholarship or research."[62] Fair use, then, does not shield every ostensibly infringing use of a work, only those justified by the very purpose of copyright itself.

Fair use evolved in the context of print era technologies, and was designed to resolve the tensions between an author and others making use of his work. Typically, the doctrine was invoked by an author who wanted to use portions of another's work. Thus, it was aimed primarily at the resolution of tensions between copyright interests, broadly construed to include those activities for the promotion of learning. The emergence of reprographic technology, however, created a new and uncertain context for fair use. For the first time, it was end users and not competing authors who invoked the doctrine, seeking to use material for its intrinsic purposes.[63] Thus, fair use was called on to resolve extra-copyright claims between proprietors and end users.

To decide the issue of reprography, the courts drew an analogy between photocopying and making a handwritten copy of the work for private consumption. Photocopying was regarded as merely a more efficient way of doing the same thing as hand copying, and as such, was not considered to be an infringement.[64] Although similar in principle, the analogy between hand and photocopying soon breaks down, however. For, precisely because photocopying is more efficient than hand copying, its potential to cause economic harm is much greater.[65] This is the problem of *harm in the aggregate*, a problem that becomes more troublesome as technology continues to improve the efficiency of private copying.

In addressing the private use issue to which the new technologies give rise, the fair use doctrine, as we have seen, is of limited value. Instead, policy makers will need to decide the *issues* on the basis of value judgments about who should benefit from the new uses that technology creates—proprietors or private users. The four criteria discussed below may serve as the basis for such a discussion.

1. The Criterion of Economic Harm

Within the copyright community, many people argue that private use damages the copyright proprietor economically by displacing potential sales and thus profits. This argument, founded on an interpretation of existing law and on economic analyses of harm, presup-

[59] Fair use "has always had to do with the use by a second author of a first author's work. Leon Seltzer, *Exemptions and Fair Use in Copyright*, p. 24. This principle, termed "productive use" by the Circuit Court in *Universal City Studios, Inc. v. Sony Corp.*, 659 F.2d 963 (9th Cir. 1981), *rev'd*, 464 U.S. 417 (1984)104 S. Ct. 774 (1984), was rejected as a sole criterion by the Supreme Court majority in the *Sony* **case,** but the rejection has no support in prior case law. Indeed, in a study prepared by Alan Latman for the Senate Committee on the Judiciary, Copyright Law Revision, Subcommittee on Patents, Trademarks, and Copyrights. 86th Cong., 2d sess., 1 (1960), not a case was found upholding the fair use defense in the instance of intrinsic, private use.

[60] See: Patterson, *Copyright and New Technology: The Impact on the Law of Privacy, Antitrust, and Free Speech*, OTA contract report, 1985.

[61] 17 U.S.C. §107.

[62] *Williams & Wilkins Co. v. United States*, 487 F.2d 1345 (Ct. Cl. 1973), *aff'd*, 420 U.S. 376 (1975).

[63] "The legal status of hand-copying for personal use is not known. Nimmer reports that "[t]here is no reported case on the question of whether a single handwritten copy of all or substantially all of a book or other protected work made fort he copier's own private use is an infringement or fair use," *Nimmer on Copyright* §13.05[E], but the *Williams and Wilkins* case states that "... it is almost unanimously accepted that a scholar can make a handwritten copy of an entire copyrighted article for his own use..." 487 F.2d at p. 1350. "[A]nyway," says Professor Kaplan, "it was a question no one would be interested to litigate," op. cit. p. 68.

[64] "Few people hand copy, but millions find machine copying economical and convenient. . . .(the argument) fails to take into account the true economic effect when thousands of individual decisions are aggregated." "New Technology and the Law of Copyright," 15 *U.C.L.A. Law Review 931, 951 (1968)*. Whether such deleterious economic effects exist is uncertain (see ch. 4).

poses the existence of a right to profit on private use.[66] Such a right, however, does not clearly exist. Instead, policymaker have yet decide to what uses the proprietors' exclusive rights should extend. In doing so, they may want to take the economic consequences of private use into account. They should also note that assertions that private use causes economic damages presupposes the transgression of a legal right, and cannot, therefore, be the foundation of that right.

One of the difficulties of using economic harm as a criterion for determining the issue of private use is that the economic consequences of new technological uses vary significantly according to the type of use, the type of work, and the marketing adaptations that copyright proprietors make to accommodate that use. Moreover, technologies that permit copying can either *harm or benefit* both proprietors and users, depending on several empirically determined factors: the costs of production and distribution, the behavior of producers and consumers in the absence of unauthorized copying, and the effects of copying on subsequent purchasing behavior. Using harm as a criterion for determining rights in new technological uses would require, therefore, the compilation and analysis of a significant amount of information.

It is not surprising, therefore, that not all of those involved in the intellectual property debate agree that harm should be used as a basis to determine rights. David Ladd, a former Register of Copyrights, for example, argues that to require a showing of harm in order to secure protection would inevitably prejudice the interests of proprietors, since such a showing is difficult in any event, and it assumes that a neutral observer could determine what "fair" compensation is for new technological uses.[67] Others, however, suggest that a heavy burden of proof for extending rights to new areas and showing harm should lie on those seeking proprietary rights. David Lange would have the proponent of a new right prove not only that it would make him more secure economically, but that the public domain would ultimately be enhanced by the extension of existing or new rights to the new uses.[68] The Supreme Court, in *Sony Corp. v. Universal City Studios,* proposes yet a different standard:

> . . . **[a]** challenge to a non-commercial use of a copyrighted work requires proof either that the particular use is harmful, or that if it should become widespread, it would adversely affect the potential market for the copyrighted work.[69]

The use of harm as a criterion is made even more difficult by the fact that the concept has no clear qualitative definition. Rights define harm. Where there is no right, there may be economic consequences, but not harm. If, for example, a person wished to charge money every time his name was uttered in public, he would need a right to do so. If his claim to remuneration went uncompensated, he might be said to suffer economic consequences (he would not receive money), but in lieu of a right to receive money, one would hesitate to say he had been harmed. Harm to intellectual property owners therefore hinges on how policymakers define the proprietors' rights, but new technologies have made the application of rights to new contexts ambiguous.

Notwithstanding these difficulties, OTA found that a calculation of harm is unavoidable in instances where new technology rearranges the relationships between proprietors and the public. Because intellectual property

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'Notwithstanding those uses which are fair uses, or which are exempt or not covered by the act.

"Mr. David Ladd, from a speech, "Seven Years of the New Copyright Act, " sponsored by the American Bar Association Forum Committee on the Entertainent and Sports Industries, Section on Patent, Trademark and Copyright Law, Washington, DC, Oct. 26-27, 1984. Some have also argued that since Section 504(c) of the Copyright Act permits a court to, in its discretion, award statutory damages in lieu of actual damages for willful infringement, the issue of harm is irrelevant to infringement. This argument, however, is not entirely germane to the policy issue of whether a right should be granted or extended in the first place, and assumes that a fair use defense is unsuccessful.

'Statement of Professor David Lange, Duke University School of Law, Hearings Before the Subcommittee on Courts, Civil Liberties, and the Administration of Justice of the Committee on the Judiciary, House of Representatives, 98th Cong., 1st sess., July 20 and 21, 1983.

"Sony Corp. v. *Universal City Studios,* 464 U.S. 417 (1984).

law itself serves to compensate for market failure in the production or dissemination of a public good,[70] and because the allocation and strength of rights determines who and what will be compensated, the question of harm cannot be dispensed with.[71] Moreover, in the absence of clearly defined rights to new uses,[72] it is still possible to distinguish between at least two different types of claims to harm in intellectual property: *actual harm* and *potential harm*.

Actual harm occurs when there is a reduction in the profits of the producer below their level prior to a new unauthorized use.[73] Actual harm does not occur, however, if the unauthorized use leaves profits from all previous *uses* unaffected.[74] The criterion of actual harm looks to whether new uses made available by technology compete with proprietors' preexisting economic interests. For example:

- if a commercial broadcaster's programs are taped off-air by a viewer, and the broadcaster's advertising revenues from that program do not decline, the broadcaster has suffered no actual harm;[75]
- if a radio broadcaster or cable company transmits a long-playing album to an audience, and the audience avoids purchasing the album by taping it off-air, the proprietor has suffered actual harm;[76]
- if a purchaser of a computer program runs that program simultaneously on several machines, no actual harm has occurred;[77]
- if the purchaser of a computer program modifies the program to run more efficiently, the copyright proprietor of the unmodified program has suffered no actual harm;[78] and
- if a SMATV system is set up in a hotel to receive commercial broadcasts and distribute them to the hotel rooms, no actual harm has occurred.[79]

Actual harm cannot be presumed on the basis of infringement—it is a thoroughly empirical measurement. The same standard of measuring actual harm can be used regardless of the technology involved: if a new technologically based *use causes* a reduction in profits by substituting for previous uses, then actual harm is present. Causation, however, is not always easy to establish, even with empirical data available, since mere correlation (e.g., declining sales in the presence of a new use) is not tantamount to causation (e.g., the substitution of a new use for a previous one).

The second type of harm is *potential harm*, where harm occurs if the new use reduces profits below the level they would have reached had the producer been able to exploit the market served without authorization.[80] In other words, potential harm arises where a proprietor could have and would have been able to supply the product and receive compensation. Unlike actual harm, potential harm occurs even if existing markets are unaffected.

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[70] For a discussion of market failure, see ch. 6.

"Moreover, copyright law–through the vehicle of the Copyright Royalty Tribunal—is already determining what constitutes a "fair return' to creators and "fair income' to users under two of the compulsory licensing provisions of the act. 17 U.S.C. §801(b)(1)(A), governing the objectives of rates under Sections 115 and 116. In addition, bills submitted in the 98th Congress (S.31 and H. R.103O), which deal indirectly with the issue of private use by imposing a' 'compulsory license' on purchasers of video and audio equipment and tape, would have an arbitration board determine "the projected impact of home video recording on copyright owners. The 'compulsory license' created by these bills differs from any previous compulsory license. Formerly, compulsory licenses were imposed on the copyright owner for the benefit of competitors; the bills would impose a compulsory license on the user for the benefit of the copyright owner. Patterson, *Copyright and New Technologies*.

[72] The analysis of harm that follows is, in other words, based on the assumption that the proprietor's exclusive rights under §106 of Title 17 do not clearly apply to private use.

[73] Besen, op. cit., p. 46.

[74] Ibid.

[75] Even though the copyright holder's right to reproduce the work may have been infringed.

[76] Note that the copyright owner of the sound recording has no performance right, and a broadcast of sound recordings is not an infringement, even though the broadcast may be taped. The end-user's taping may be an infringement, but this is uncertain.

"Technically, loading programs into several machines may be an infringement of the reproduction right, but this is uncertain under Section 117 of the Copyright Act.

[78] The modification of the program is probably an infringement of the proprietor's right to prepare derivative works, unless allowed by Section 117.

[79] This conduct may be in violation of Section 705 of the Communications Act.

[80] Besen, op. cit., p. 46.

Claims of potential harm are based on a right to the new opportunities provided by technology. In a potential harm situation, proprietors and users have competing claims to the value of the new use. To the copyright proprietor, these new opportunities represent new and profitable markets. To the copyright user, the opportunities provide enhanced flexibility, widespread availability and inexpensive access.

Arguments based on an analysis of harm presume—and so cannot be the basis of—a proprietary right in the new opportunities for use.[81] Potential harm, therefore, cannot in and of itself justify the extension of a right. Instead, some other criterion, such as an increase in efficiency or access (see below), is needed in order to determine whether to extend a right to new uses.

Like actual harm situations, potential harm can take many different forms and appeal to many different rights:

- An unauthorized off-air videotape of a subscription television motion picture is made by a consumer. The proprietor of the motion picture has suffered potential harm if the consumer could have and would have purchased the motion picture from the proprietor-or if the consumer could have and would have paid for the right to make an authorized videotape of the motion picture.[82]
- A computer program designed to run in BASIC computer language is translated, without authorization, by a user to run in FORTRAN. The author of the program has suffered potential harm if the user could have and would have purchased a translated version of the program from the author.
- A user of an on-line database downloads, without authorization, the entire text of an article. The user thereafter consults the article at his leisure. Database articles are normally paid for on a "pay per use" basis. The proprietor has suffered potential harm if the user could have and would have paid for each use.
- A television station broadcasts its news stories and shortly thereafter erases the videotapes on which they are fixed. A business videotapes the news programs off-air, and later sells copies of the tapes to interested parties. The news program has suffered no potential harm, since interested parties could not have purchased the tapes from the television station.[83]

The criterion of potential harm makes intellectual property rights considerably more powerful than that of actual harm. This added strength of rights under a theory of potential harm stems from the fact that the potential uses to which a work can be put are unlimited in number and variety. Once the criterion of potential harm is accepted, its amount is limited in principle only by the activities covered by intellectual property rights. So long as a case can be made that a user *could have and would have*[84] remunerated the proprietor for the use, all conceivable uses that infringe a right could be said to cause potential harm.

Potential harm, however, is not an easy case to make. Empirical studies of the potential harm done to proprietors all suffer from a basic methodological shortcoming: they do not clearly describe the behavior of either consumers or producers in the absence of private use.[85] The assertion that consumers "would have" purchased an original in the absence of private use

[81] To predicate a proprietary right on a potential harm analysis is circular: X is harmed because X has a right to the new use *and X* has a right to the new use because X is harmed.

[82] Note that in this scenario, potential harm exists even though the conduct may be entirely legal.

[83] See: Duncan v. Pacific and Southern, 744 F.2d 1490 (11th Cir. 1984), *cert. denied,* 105 S. Ct. 1867.

[84] Note that even "would have and could have" suffers from definitional ambiguity. "Would have" can refer to a subjective disposition of the user to buy in the absence of an ability to copy (a most difficult item of proof), or to the collective economic behavior of the market in the absence of copying (it is the latter of these that Besen uses in his resolution of the problem of indeterminacy (see below)). "Could have" can refer to either the financial ability of the user to buy in the absence of copying (calculated either individually or in the aggregate) or to the availability of an original (problematic in the case of television broadcasts).

[85] See Besen, op. cit.,pp 52-54.

depends on what the price of the original would have been in the absence of private use. But by the same token, the price of the original cannot be determined until the behavior of consumers in the absence of copying is known, The harm done to producers by private use is therefore *indeterminate."*

The situation is even more complicated when no copy (i. e., no original tangible object) is available-as is the case with television and radio broadcasts, teletext and videotext, and on-line databases. In these instances, the allegedly infringing copy is often not a substitute for the sale of an original, since the original is seldom sold in copies (i. e., published or distributed). The copyright holder must then use other empirical criteria to demonstrate harm-i. e., the user would have and could have made further use of, or further access to, the ephemeral copyrighted work. It should be noted, moreover, that works disseminated over electronic media, instead of in copies, also raise questions of access. This issue is discussed below.

Most estimates of harm to producers of intellectual property are based on surveys of user practices, in combination with data on sales and the costs of production. However, a consideration of the beneficial effects of new technological uses to either new or existing markets for intellectual property is often absent from such estimates. Although the videocassette recorder may give rise to copying, it also permits the exploitation of markets that would otherwise not exist. Both factors must be taken into account in considering harm. The policymaker is therefore still left with a decision over who will benefit from new technological uses, and for what reasons.

To make such decisions, Congress may itself need to gather timely and accurate data on harm. Existing surveys vary considerably, and rapid changes in technologies and use make previous surveys of harm increasingly less relevant. Conducted by parties involved in the intellectual property debate, most of the surveys that are available are, moreover, subject to bias.

The discrepancies in previous analyses are clearly illustrated in a sampling of principle findings of surveys conducted over the last 10 years, listed below. Because these surveys often focused on a unique product or geographical market, and because each employed different methods of research and presentation, no attempt has been made to list them in a comparable form.

Survey *Sponsor:* Recording Industry Association of America (RIAA)
Year: 1983 {for sales year 1982)
Domain: audiocassette taping
Conducted by: Greenspan
Principal Findings;

- Overall, more than two-fifths of home taping was in lieu of the purchase of prerecorded records and tapes, representing lost sales of approximately 32 percent, or about $1 billion out of a total of $3.2 billion in actual sales. This sales displacement is said to have depressed all record sales by 5 percent, bringing total losses from home taping to $1.4 billion. In particular, the study found that:
  –Approximately 50 percent of taped, borrowed records or tapes "would have generated" purchases of originals, if no taping had occurred.
  —Forty-two percent of taping from owned records "would have resulted' in purchases of additional records and tapes, if no taping had occurred.

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"'To know what consumer behavior "would have been, " one must determine price in the absence of private use; but price is itself partially depend ant on consumer behavior. A model for estimating harm that may account for this indeterminacy has been suggested, but has not yet been used in any empirical study of harm.

> In order to estimate the effect of copying. it is necessary to determine what would have been the situation if copying had not occurred. the determination of a counterfactual. The technique is to 'calibrate' the model. using data on the number of copies made per original, the cost of copying, the cost of producing originals, the number of originals sold, and the price being charged for originals m the absence of copying, The intercept of the demand curve can be determined using data on the price of originals, the costs of producing originals and copies, and the number of copies per original. The intercept, together with the cost of originals, can then be employed to derermine(sic; in original) the price of originals that would have prevailed if there were no copying. With data on the number of originals sold, the estimated' intercept of the demand curve, and the number of copies per original, the slope of the demand curve for originals can be calculated. Together wit h information on the cost of producing originals, the market equilibrium that would have existed in the absence of copying can he estimated.

Besen, op. cit., pp. 54-55.

—Forty percent of all off-air taping "would have generated" record and tape purchases.

Survey Sponsor: Motion Picture Association of America (MPAA)
Year: 1983 (for sales year 1982)
Domain: videocassette taping
Conducted by: Battelle Pacific Northwest
Principal Findings:

- *Tape-to-tape copying:* If no blank videocassettes were sold, the market for prerecorded videocassettes would approximately double (by inference, lost sales due to tape-to-tape copying). Using this figure, lost sales for 1982 would be about 1.1 million units, or about $11 million in royalties (based on a $10 per unit royalty rate). Projections for 1990, using the same assumptions, amount to approximately 11.2 million units lost sales, or $112.4 million in lost royalties
- *Off-m-r taping:* The survey predicts that prerecorded videocassette sales would again approximately double, were there no off-air taping from television. Using this result, they estimate royalties lost in 1982 of approximately $26.9 million for commercial television, and approximately $19,3 million for pay television. Comparable estimates for 1990 are $273.7 million and $196.7 million, respectively, for commercial and pay television.

Survey Sponsor: International Federation of Phonogram and Videogram Producers (IFPI)
Year: 1979
Domain: video and audio cassette taping (United Kingdom)
Conducted by: G. Davies
Principal Findings:

- *Audiotaping* In 1979, approximately 280 million LPs had been copied. Approximately 25 percent of these copies replace retail sales, resulting in lost sales of approximately $622 million-or the equivalent of 70 percent of the value of retail sales in 1979.
- *Videotaping* A' 'tentative estimate' of losses to the video industry of $24 million at the retail level, and $9 million to the copyright holders. (No details of methodology provided.)

Survey Sponsor: British Phonograph Industry
Year: 1973, 1975, 1977
Domain: audiocassette taping (United Kingdom)
Conducted by: Anna, Impey, Morrish & Partners (AIM)
Principle Findings:

- Loss estimates based on the length of time of music taped in-home correlated with the LP equivalent-hours were used. . .
- . . . in combination with a survey of whether consumers would have purchased if not for taping. This yielded a loss sales estimate of between £ 63 and £ 98 million.
- . . . in combination with estimates of the proportion of blank tape used for home taping and with the above survey. This produced a loss sales estimate of between £ 90 and £ 139.5 million.
- . . . a third estimate based on a comparison between actual sales and projected sales (using data from 1972 to 1974) produced an estimate of lost sales of £ 85 million.

Survey Sponsor: National Music Publishers Association (NMPA) and Recording Industry Association of America (RIAA)
Year: 1982
Domain: audiocassette taping
Conducted by: Roper Organization
Principle Findings:

- Based on a survey of people who taped at home from any source, in which the respondents were asked how many records and tapes they saved buying as a result of taping. The survey revealed that 90 percent of everything taped from other than respondents' own collections would have been purchased if not taped at home. This translates into 268 million albums and 213 singles. Roper ultimately accepted a potential sales loss of 14 percent.

Survey ***Sponsor:*** Audio Recording Rights Coalition
Year: 1982
Domain: audiocassette taping
Conducted by: Yankelovich, Skelly & White, Inc.
Principal Findings:

- This survey—unlike others—concerned primarily audiocassette taping practices and the reasons cited for those practices, rather than estimates of harm done by audio taping. Among the major findings were:
  - –Seventy percent of the respondents recorded primarily to construct their own program selections, rather than to avoid paying for prerecorded selections. From 1 to 3 percent cite cost as the only reason for home taping.
  - –Seventy-five percent tape for reasons of portability; 51 percent cite quality; and 57 percent cite convenience.

– Fifty-two percent of all audiotaping was of something other than prerecorded music. Fifty-one percent of tapes were made from respondents's own selections.
– "Heavy tapers" owned approximately three times as many prerecorded selections (which, according to the survey, indicates that taping stimulates purchases).

Survey Sponsor: Recording Industry Association of America (RIAA)
Year: 1983
Domain: audiocassette taping
Conducted by: Audits and Surveys
Principal Findings:
- Americans tape the equivalent of 564 million albums of music annually, resulting in lost sales of 325 million albums. Non-copyrighted materials accounted for 302 million album equivalents.
- Only 7 percent of retail purchases of prerecorded tapes are stimulated by taping.
- Eighty-four percent of blank tapes are used to record prerecorded music,

Survey Sponsor: Warner Communications, Inc.
Year: 1981 (1980 Survey Year)
Domain: audiocassette taping
Conducted by: M. Kapp, S. Middlestadt, and M. Fishbein
Principal Findings:
- A "conservative estimate' the total value of home-taped music is $2858.5 million.
- Seventy-five percent of all blank tapes purchased were ultimately used to record music. Consumers spent $609 million for blank audio tape for the purpose of recording music or other professional entertainment
- Twenty-five percent of all home tapers taped in order to avoid buying prerecorded music.

Survey Sponsor: CBS Records
Year: 1980 (1979-80 Survey Year)
Domain: audiocassette taping
Conducted by: CBS Records Market Research
Principal Findings:
- Audiocassette taping costs the prerecorded music industry 100 million units annually—or lost sales of $700 to $800 million.
- Seventy-five percent of home tapers tape in order to "customize" tape selections,
- Fifty-five percent of home tapers tape in order to save money. Twenty-five percent cite "better quality" as the reason for taping.
- Forty percent of consumers tape from their own records or tapes, and 30 percent tape from borrowed records or tapes. An additional 20 percent tape from radio broadcasts.

Survey Sponsor: The Association of Data Processing Service Organizations (ADAPSO)
Year: 1985 (Survey Year 1984)
Domain: Computer Software
Conducted by: Future Computing, Inc.
Principal Findings:
- Fifty percent of all programs (database programs, spreadsheet/accounting programs, and word processing programs) are unauthorized copies. (No distinction made between legal "backup" copies authorized by 17 U.S.C. § 117 and other copies).
- Estimated loss revenues in 1985 were $800 million.

2. The Criterion of Efficiency

Another criterion for determining rights in private use is that of efficiency: does private use either hinder or promote an economically efficient market for particular types of information-based products or services.[87] The term "efficiency" assumes that the welfare of producers and users will both be simultaneously maximized. It is a relevant criterion, therefore, because the intellectual property bargain also assumes that the interests of the public and the author coincide. Like harm, however, efficiency is hard to determine. Depending on the particular market for the type of information that is being produced and on the costs of transactions in these markets, uncompensated use may either increase, decrease, or have no effect on efficiency. The problem of determining efficiency is made more difficult by the fact that, as the previous chapter points out, information markets are subject to market failures, and our understanding of, and knowledge about, these markets is still quite limited.

[87] A market is economically efficient when the cost of producing an additional unit of a good equals the value of that unit to consumers. An economically efficient market maximizes the welfare of both the producers and consumers of information, and allocates resources to their most valued use. These concepts, as they apply to information markets, are discussed in greater detail in ch. 6.

Using efficiency as a criterion for allocating rights, policymakers might extend proprietors rights to private use so as to allow them to recover income equal to the value of private use to consumers. Under ideal market conditions, the producer would then be able to invest this additional income in more information products, and the market would receive the signal it needs to identify and supply consumer demand. Consumers would also benefit from the resulting increase in productivity and from a market that was attuned to their preferences.

In the case of information markets that are not ideal, however, the criterion of efficiency is more difficult to apply. Because information is a public good, it does not operate efficiently in the marketplace. Hence, it is impossible to determine precisely at what point rights to private use would maximize the joint welfare of users and producers.[88]

The costs of transactions in information impedes efficiency, and thus greatly complicates this problem. The user's need to obtain clearance and pay for use, and the producer's need to monitor use and obtain payment may offset the actual value of the use to the user, or the income to the provider. Transactions costs may be reduced through the formation of collecting societies (for example, Copyright Clearance Center), or by compulsory licenses administered through a governmental or nongovernmental agency (such as The Copyright Royalty Tribunal). In these arenas, outcomes often have less to do with efficiency than with the extent of the resources that stakeholders can bring to bear.

[88]For example, if all consumers pay the same rate to download from a database, those who value the use at less than that price will be unwilling to purchase it. This is inefficient since there are no additional costs to serving these consumers, At the same time, consumers who value the use at more than the market price contribute less to its production and distribution than its value to them. This, too, is inefficient, because the value placed on the use by the consumer is not reflected in the price that he is charged. In the absence of an ability to price discriminate between users based on value, a market based on legal rights to private use is unlikely to be efficient. In other words, it is impossible to determine whether rights to private use would simultaneously maximize the welfare of both producers and users of information.

Determining efficiency in the granting of intellectual property rights will become even more troublesome as new technologies allow individuals not just to copy, but to reprocess information in their homes. In effect, private use will take the form of derivative use. And, as in all cases of derivative use, policy makers will find it difficult to use efficiency as a criterion for determining rights. For they will not be able to anticipate all future uses to which a work might be put, or the values that might be attached to them.

Unable to establish an efficient level of rights, policy makers may want to leave some leeway for unremunerated private use. In the absence of clear evidence to the contrary, flexibility may be the best way to encourage the greatest variety of works and those that are best suited to individual needs. In this way, if they err, it will be on the side of creativity.

3. Access as a Criterion

One criterion that will have to be used in resolving issues surrounding private use is access. This criterion differs from efficiency or harm in one important respect: the right to access is part of the constitutional bargain. Moreover, unlike the other criteria, access is not hard to define or measure. Rather, the problem for policymakers in an electronic era is in establishing rules that will continue to provide access to information.

Problems of access can arise, for example, when copyright protection is extended to information that is communicated through a means other than publication- e.g., television, teletext and videotext, and computer networks. The access problem occurs because electronic dissemination—unlike printing—does not involve the publication of copies. As a consequence, copyright ownership is transformed from the right to reproduce a copyrighted work in copies for sale to the right to control access to the copyrighted work for any reason.[89] Thus, when copyright is applied to works that are

[89]This potential was articulated by L. Ray Patterson, *Copyright and New Technology: The Impact of the Law of Privacy, Antitrust and Free Speech,* OTA contract report, 1984.

electronically disseminated, the balance between the rights held by the proprietor and those retained by the public is changed. This problem of access can best be seen by contrasting what happens when works are disseminated by print and electronic technology.

Dissemination by Print. Copyright law, from the Statute of Anne in 1710 to the Copyright Act of 1976, has adopted the technological paradigm of printing—the distribution of a work in copies for sale-as its underlying conceptual paradigm.[90] Indeed, until the invention of radio around 1900 and television in about 1928, no other form of dissemination was possible; copyrighted works were always found in printed copies.[91]

Until the Copyright Act of 1976, copyright protection was conditional on publication. That is, unless the work was available to the public in copies, it did not receive statutory copyright protection.[92] Common law protection was available for unpublished works, but Federal law required that, if statutory protection was sought, the author's discretion over whether to publish was relinquished.[93] The 1976 act abolished this requirement, replacing it with the principle of "automatic copyright '–that is, copyright now subsists from the moment the work is created and fixed in a tangible medium.[94]

Where a work is sold in copies, a proprietor's control over these copies (but not the copyright) ceases after they are sold.[95] This is known as *the first sale doctrine* and it permits a purchaser of a copy of work to lend, sell, or freely reuse that copy without authorization from the proprietor. Once a copy enters the public arena, its presence there is permanent and uncontrolled; determining who sees the copy, for how long, and under what conditions are not the prerogatives of the proprietor. Copyright control extends to the first sale of the copy,[96] after which efforts to control distribution or price are prohibited by law. In print publishing, the proprietor does not control the conduits through which the public has access to a work—or, if he does, the control was not based on copyright. Thus, a publisher's effort to maintain the retail prices of its books was rejected as counter to the first sale doctrine.[97] Even when the copyright owner does not exercise his right to vend the work, and instead licenses its use, attempts to maintain prices or control performance of work sometimes may run afoul of antitrust laws.[98]

Under a print system, the legal rights are also limited to control over the first sale of a copy. Property rights in the intangible "work," such as a literary work, do not extend to the tangible "thing," such as a book, in which the information is embodied. The public access to a copyrighted work—the number and variety of conduits through which copies of a work can be obtained and the ability to use and dispose of the copy freely—is thus guaranteed under a print system requiring publication as a con-

[90]The Statute of Anne was concerned exclusively with books, since the printing press was the only "information technology" then in existence. The Statute is prefaced by this phrase: "An Act for the Encouragement of Learning, by Vesting the Copies of Printed Books in the Authors or Purchasers of such Copies, during the Times therein mentioned. "8 Ame C. 19(1710) (underline added). The Statute contemplated that the only method for distributing information was in books.

The 1909 Act predicated copyright protection on publication of a work in copies. Former Title 17 U.S. C. §10).

Similarly, the Copyright Act of 1976 contemplates the distribution and publication of a work in copies, 17 U.S.C.§§ 106, 101, and the formal requirements of ❑ otice (§§ 401-406) and deposit (§407) are also based on publication.

"A copy is the material object in which a work is fixed; it is, for example, the printed and bound version of the literary work *Gravity* 's *Rainbow,* or the exposed strip of celluloid in which the work known as *Citizen Kane* is fixed. For sound recordings, the material object is referred to as a "phonorecord" 17 U.S.C. §101.

[91]"section 10 of the 1909 act required publication of the work with notice as a condition of copyright. An exception to this rule was found in Section 12, concerning works, such as motion pictures or statuary, which are not normally reproduced for sale (published), but performed or exhibited in public.

[92]17 U. SC. §§2, 10 (repealed).

[94]Sections 102 and 302 of Title 17. The act also preempted commonlaw copyright.

[95]This principle is known as the doctrine of first sale. See: 17 U.S.C.§109 (formerly §27). Under the first sale doctrine, copyright permits no restraints on the alienation of a copy.

[96]Former Title 17 U.S.C. $27, the first codification of the "first sale doctrine. "

[97]*Bobbs-Merrill Co. v. Straus,* 210 U.S. 339 (1908); See also: *Scribner v. Straus, 210* U.S. 352 (1908) and *Straus v. American Publisher's Association, 231* U.S. 192 (1913),

[98]E.g., *Interstate Circuit, Inc. v. United States, 306* U.S. 208 (1939) and *United States v. Paramount Pictures, Inc., 334* US. 131 (1947).

dition of protection. The bargain between author and public is built into the law, and assumes the dissemination of a work in copies.

Electronic Dissemination: A New Copyright Milieu. While the system of print publication may to an extent still reflect reality, it has in recent years been largely superseded by a new system of dissemination.[99] For purposes of this discussion, we will refer to the new system as *electronic dissemination,* [100] and define it as the transmission of information in the form of electronic signals. Under this system, a work is communicated, rather than distributed. In other words, the work is disseminated in an intangible, rather than tangible, medium.[101] Hence, novels and newspapers, which have traditionally been distributed in print on paper, may now be stored and delivered electronically. [102] The last **vestiges** of information as a tangible "thing" to be bought and sold have been removed, and it has taken on the attributes of a service.[103]

Not all technologies for electronic dissemination have the same potential to raise issues of access. The technologies differ widely in their format, limitations, and suitability for use with particular types of information.[104] Moreover, technological limitations, consumer demand, and the economics of production will variously affect the likelihood that these technologies will replace or augment a traditional mode of distributing copyrighted works. Other factors, such as whether the dissemination system is "open' or "closed, "[105] and prohibitions on copying or downloading, may also affect the salience of the access issue. Also, many of the technologies now being developed are of unknown technological or commercial viability,[106] or lack definite application. These uncertainties further obscure the possibility of conclusive statements regarding affect of access concerns on private use.

In general, the technologies of electronic dissemination can be, or are now used for communicating copyrighted or copyrightable works to the public. Each technology makes it unnecessary to distribute copies. Each also represents a way of moving information from place to place that has no clear analog in the system of print. Electronic dissemination requires a consideration of how copyright principles that apply to it—automatic copyright,[107]

[99] As Ithiel de Sola Pool observes:

> The nonprint media are not just passing the print media (in terms of the amount of information as measured by the number of words), but are for the first time showing signs of displacing them in part.

Ithiel De Sola Pool, *Technologies of Freedom,* (Cambridge, MA: Belknap Press, 1983), p.20.

[100] The word "dissemination" is used in place of either "distribution" or "publication." The latter are terms of art having a unique legal denotation. Under the Copyright Act, ' 'publication" is the distribution of copies or phonorecords of a work, 17 U.S.C.§101, and "distribution" occurs by offering copies or phonorecords of the work for sale or other transfer of ownership, 17 U.S. C. § 106(3). Both terms are predicated on the notion of a copy–the material object in which the work is fixed. 17 U.S.C.§101.

[101] Electronic dissemination can be said to be an intangible medium for a number of reasons:

1. electrons, electromagnetic waves or photons are transient (for our purposes these can be considered the same phenomena); they disappear when their energy stimulus is turned off. On a high speed telecommunications circuit they appear and disappear as rapidly as 10 billion times each second;
2. without a receiving devise of some kind, the transmission is for all practical purposes, non-existent; and
3. unlike physical media (disks, tapes, film), wire or other transmission does not lend itself to physical controls (such as a locked box).

From Solomon, "Intellectual Property and the New Computer-Based Media, " OTA contractor paper, p.8.

[102] The demise of the book has been prophesied for some time now (See; e.g., C. Overhage, and R. Harmon, *Project Intrex* (Cambridge, MA: MIT Press, 1965), speculating on the promising future of microfilm), but despite a growing infrastucture (i.e., the growing popularity of the home computer, the growing availability of online information, and the prospect of the Integrated Services Digital Network), it is likely that–for certain uses, such as temporary storage media—printed information will always be with us. OTA Workshop on Storage Technologies, 1985.

[103] Electronic dissemination is not new, only the copyright protection of electronically disseminated works. Television and radio broadcasts have been around since early in the century, but were not copyrightable until the 1976 act.

[104] For present purposes, electronic dissemination technologies comprise television (including broadcast, cable, SMATV, DES, STV, and others); radio; video and teletext (included, perhaps, under the designation of television); and online services.

[105] Broadcast television is an example of an open system; pay television or on-line database services are examples of a closed system.

[106] Pay-per-View television is a case in point. See: "Here We Go Again, " *Forbes,* Aug. 26, 1985, pp. 108-114.

[107] *Automatic copyright,* endows the proprietor with copyright protection from the moment a work is created, with no obligation to make the work available to the public—in copies or otherwise. 17 U.S.C. §102(a).

uniform protection,[108] and the first sale doctrine[109]—affect private use issues.

Because no copies are distributed, electronic dissemination means that the proprietor must either monitor or control access in order to be remunerated. [110] [111] In broadcasting, where access to works can be measured but not controlled, advertising has proven a successful method of paying for the copyrighted work. [112] In other cases, advertising may not be viable or desirable. In these instances, the communications medium must lend itself to the measurement *and* control of access, whether by subscription, pay-per-use, or user-identification. The proprietor is remunerated through control over access to either the medium (e.g., cable television) [113] or the work (e.g., on-line databases, and videotext and teletext).[114]

Copyright protection is, however, still useful to proprietors whose works are electronically disseminated. Indeed, the value of copyright to the proprietor may be enhanced, since he may avoid the consequences of the first sale doctrine. Consequently, the proprietor can capture payment for more of the value of additional uses of the copyrighted work, and can price discriminate among buyers, thereby recovering the marginal utility of a work to a variety of users.[115] The proprietor may also avoid the need for channels of distribution, including shippers, wholesalers, and retailers. The result may be an overall increase in the economic efficiency of production and distribution, but may pose problems insofar as the dissemination of copyrighted works is encumbered with the public interest.

Electronic dissemination creates some very complex issues with respect to the public interest, and involves the intellectual property system in other issues, such as communications, antitrust, and freedom of speech. The very means by which the proprietor secures remuneration is by controlling dissemination to the public. The public does not gain access to copyrighted works by buying or borrowing published copies, but through the reception of ephemeral performances or displays, such as television programs. Because works are never published, the proprietor need not give up legal control over access. As a consequence, the public is dependent on the information provider for each and every access made to a work, and the provider may be the sole source for the work. Competitive pricing between retailers, and the competition for the copyrighted work from alternative sources, such as libraries and "second hand" booksellers is removed.

Situations in which access is controlled by a proprietor heighten the potential for anti-

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"All original works of authorship are copyrightable, regardless of how they are disseminated, as long as they are perceptible either directly or with the aid of a machine or device. 17 U.S. C. §102(a). Thus, books disseminated in tangible copies and books that are distributed in the form of intangible electromagnetic signals receive the same protection. While the copyright holder of the printed book loses control over price, use, and distribution of the copy once the work is published, the copyright holder of the "electronic" book does not. Performances and pictures of events transmittedlive are also protected as long as a tangible copy —e. g., a videotape—is fixed simultaneously when the signal is transmitted. However, a performance, e.g., a news broadcast, does not constitute publication. (It should be noted that different rights for different kinds of subject matter are provided in Section 106, and that Section 108 through 118 set subject matter specific limitations on rights).

[109]"The doctrine of first sale, Title 17 U.S.C.§109, which has always abbreviated the rights of the copyright holder in the copy, is largely irrelevant to works disseminated electronically, since no tangible version of such works is ever sold. Instead, what is sold is access to the copy in limited slices of time or quantity.

[110]"The copyright proprietor of many television shows, for instance, is also the broadcaster, but need not be—the copyright proprietor may be the producer, or even the filmmaker. Ultimately, a copyright proprietor must be compensated for proceeds of a broadcast (whether by assignment of performance or display rights, or license, or royalty).

"The measurement or control of access may take many forms. In television, for example, it maybe based upon by viewer penetration rate, as measured by "Nielson Ratings,"' which is in turn translated into advertising revenues (as with network-broadcasts); or it may be based on a set royalty (as is the case with cable television rebroadcasts); or on a pay-per-use basis (as with many database services).

[111]- For a discussion of private alternatives, see ch. 6.

[112]"Where access to the medium is controlled, the copyright proprietor is often remunerated indirectly. In cable television, for example, the copyright proprietor is remunerated (often via a compulsory license) indirectly on the basis of the cable companies' ability to control access to the coaxial cable.

[113]The situation occurs most often in cases in which the proprietor, assignee, or licenser and the disseminator are one and the same entity. In such cases, copyright control is direct: access to the work itself is controlled.

[114]See: Besen, op. cit., p. 4; and David Waterman, *Videocassettes, Videodiscs, and the Role of Theatrical Distribution*, Waterman and Associates, and Annenberg School of Communications, University of Southern California, Mar. 13, 1984, from a conference on "Rivalry Among Video Transmission Media: Assessment and Implications." (Harriman, NY: Arden House, Apr. 13-15, 1984).

competitive behavior, especially where cross-ownership exists between the medium of communication and the material that is communicated. This potential becomes even more acute when the copyrighted content is accessed, but not purchased by the consumer. Since the copyright owner need not lose control over distribution, it can at once be the owner and the sole source of access to the copyrighted work.[116] This combination of content and distribution is a form of *vertical integration,* and forms the junction between copyright policy-which has traditionally dealt with ownership of content —and communication policy-which has traditionally dealt with the ownership of carriage.

When communications becomes the necessary condition for access to a work, it is necessary to consider what interrelations exist between carriage and content. In particular, when control over content and control over carriage are located in one and the same entity, the power of copyright becomes closely related to the number of channels of access to a given work. Some cross-ownership restrictions[117] address themselves primarily to cross-ownership between the media (telephone and broadcast television), but do not deal with the medium-content issue. The FCC's Computer I and II, and most recently, Computer III regulations are efforts to address the issue of vertical integration through restrictions on the communications industry.[118]

There may also be first amendment considerations involved in the issue of access. When no copy of a copyrighted work is available to the public, the "right to receive information and ideas"[119] may conflict with the right to restrict access based on proprietary discretion.[120] Robust debate requires that information be available for public inspection and analysis.[121] Fair use may be a way of reconciling conflicts between private rights and political rights, but there are important theoretical as well as practical differences between fair use and the first amendment.[122]

5. The Criterion of Public Opinion

Finally, the importance of public opinion in decisions about intellectual property rights cannot be overlooked. For the public's perception of what is fair and equitable is bound up with questions of legitimacy and enforceability y:

> On few points in the longstanding debate over the "rule of law" is there greater consensus than on the close and necessary relation between societal support for a system of

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[116] "There are some indications that the vertical integration of production and dissemination through cross-ownership is beginning to occur, especially in the cable industry. The motion picture industry is presently an oligopoly of seven companies which comprising 85 percent of the market (based on box office gross]. *Business Week,* Feb. 21, 1983, p. 78. Each major production studio, or its parent, either owns or is involved in joint ventures in pay-television stations. See Ithiel de Sola Pool, *Technologies of Freedom* (Cambridge MA: Belknap Press, 1983); and Who *Owns Whom* (London: Dun & Bradstreet, 1984). In general, acquisitions and mergers in the information industry hit a new record in 1984. *Information Hotline,* vol. 17, *No. 5,* May *1985, pp.* 1, 12.

[117] For example, Section 613 of the recently enacted Cable Communications Policy Act of 1984 (Title VI of the Communications Act of 1934).

[118] See ch. 6 on information markets for a more thorough discussion of the vertical integration.

[119] *Board of Education v. Pico, 457* U.S. 853, 867 (1982); Cf. *Stanley v. Georgia, 394* U.S. *557, 564 (1969).*

[120] In *Duncan v. Pacific& Southern Co., Inc., 744* F.2d 1490 (11th Cir. 1984), *cert. denied, 105* S. Ct. 1867 (1985), for example, a defendant to a copyright infringement suit was enjoined from taping local television newscasts and selling them to interested parties. Despite the fact that the television station erased tapes of its news programs after they were retained a week, and the fact that the news clips were sold only to the subjects of the station's broadcasts, the court found for the plaintiff. Unlike the recent case of *Harper & Row, Inc. v. Nation Enterprises, S.* Ct. No. 83-1632 (citing the *Duncan* case), the plaintiff in the *Duncan* case, per its own admission, was neither in competition with nor harmed by the defendant news service. I n the *Duncan* case, ironically, the infringed videotape was obtained through a customer of the defendant's.

[121] Such was the basis of the defense in the *CBS v. Vanderbilt University* litigation (Civ. No. 7336 (M.D. Tenn., filed Dec. 21, 1973), a case in which Vanderbilt University was engaged in copying CBS's news coverage for archival and educational purposes. The suit was later dropped when Section 108(b) of the new copyright law essentially mooted the issue.

[122] "The scope and extent of fair use falls within the discretion of the Congress itself. Fair use, when properly applied, is limited to copying by others which does not materially impair the marketability of the work which is copied. The First Amendment principle, when appropriate, may be invoked despite the fact that the marketability of the copied work is thereby impaired. Nimmer, Cases *and Materials on Copyright* (1978), Section 1.10 A, pp. 1-64 as quoted in Rosenfeld, "The American Constitution, Free Inquiry, and The Law," in *Fair Use and Free Inquiry,* Lawrence and Timberg (eds.)(Ablex Publishing Corp.: New Jersey) 1980, p. 287, 302.

> law and the effectiveness of such a legal system in regulating conduct. The viability of the legal order of a free society cannot rest solely on applications or threats of force by authorities. It must rest on a people's sense of the legitimacy of the rule-making institutions and of the rules these institutions make. [123]

A survey of the public commissioned by OTA on the issue of intellectual property rights reveals a number of findings of relevance to the public's perceptions of what rights should and should not exist in information products.[124] With respect to the issue of private use, in particular, the public's attitudes seem to reflect a rough congruence to the distinction between commercial and noncommercial uses.

The survey reveals that two-thirds of the public is neither familiar with nor feels affected by intellectual property rights issues. However, neither familiarity nor self-interest appear to be related to their responses; the knowledgeable and the uninformed responded in very much the same way. Among the more significant of those responses were:

- The vast majority of the public (over 7 in 10) believes that *copying personal possessions,* like a record or a program from one's own TV, is *acceptable* behavior.
- A majority of the public believes that *trading and copying* information and entertainment such as computer programs and records is *acceptable* behavior.
- When there is an *issue of* access–either the information is readily available such as a library book or there is a question whether the information (broadcast signals or airwaves) should be free—the public is *divided.*

While each of these behaviors involved personal or private behavior which might give rise to *civil* liability under copyright law,[125] there appears to be little public support for such consequences.

However, when asked about conduct which generally involved commercial, for-profit activity or willful, active attempts to avoid paying for something the public responded as follows:

- More than 8 in 10 among the public find behaviors that *obviously circumvent a fee or service* (such as purchasing a descrambler to watch pay TV, or secretly recording a concert) to be *unacceptable.*
- There is almost complete unanimity among the public that behaviors which jeopardize privacy, such as entering a database without permission are *unacceptable.*
- If copying of copyrighted materials is done for reasons *other than private use, for public display,* for sale *or personal gain,* or on behalf of a large *corporation,* the majority oft he public found the behavior less acceptable.

While the public was not informed of the illegality or criminal nature of any of the behaviors on which they were questioned, it is interesting to note that many of their responses reflect the criteria for criminal infringement set forth in in the copyright law: the infringement of copyright "willfully and for purposes of commercial advantage or private financial gain."[126] In general, the public seems to be in support of laws regarding criminal infringement or access, and competitive or institutionalized copying activities, but it withholds support for prohibitions on civil infringement or private use copying behavior.

Shattuck, *Public Attitudes and the Enforceability of Law,* OTA contract report. 1985, p 2. "Sometimes . the official sector may be detached from the private sector, in the sense that there is no longer general obedience tot he rules which are valid according to the criteria of validity in use in the courts. The variety of ways in which t his may happen belongs to the pathology of legal syst e In s . ' ' H.L.A.Hart, *The Concept of Law* (London: Oxford Universi J Press, 1961), p 114.

[124] *"Public Perceptions of the "Intellectual Property Rights'' issue,* prepared by The Policy Planning Group Yankelovich Skelly & White, Inc., February 1985.

[125] Under 17 U.S. C §§106,501, if these protrusions are interpreted to cover private use,

[126] 17 U .S. C, §506. This is not to suggest that criminal infringement is not a problem for the motion picture and recording industries. "While reports of raids and confiscation of pirated materials are quite common, it should be emphasized that the statistics suggest that there are many more pirates operating than are ever apprehended, . " Statement of Mr. Donald C. Curran, Acting Registrar, Library of Congress, Hearing on Civil and Criminal Enforcement of the Copyright Laws Before the Senate Subcommittee on Patents, Copyrights and Trademarks, Commit tee on the Judiciary, Apr. 17, 1985. According to industry sources, criminal infringement has stabilized. William Nix, MPAA and Joe Moscaret, Vice Prescient of Film and Video Security at Paramount Pictures, as cited in Curran, op. cit.