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A Common Law for the Ages of Intellectual Property

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A Common Law for the Ages of Intellectual Property

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This Article maintains that the rapid pace of technological advances requires that courts take an activist posture in intellectual property cases by updating the Copyright Act and the Patent Law instead of awaiting congressional response.

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I am indebted to Guido Calabresi of the Yale Law School and Lorne Tepperman of the University of Toronto for comments on a draft of this article. Additionally, Stuart Robinowitz of the New York law firm of Paul, Weiss, Rifkind, Wharton and Garrison provoked my thinking on a number of issues. Nevertheless, final responsibility for the opinions expressed rests solely with me. This is especially worth noting with regard to Calabresi, for although this Article extends the ideas in his book to a particular area of the law, we differ somewhat in how those ideas should apply.

Guido Calabresi has written a provocative book about the "statutorification" of American law, a neologism intended to be as ugly as the condition it describes.¹ Like his intellectual progenitor Grant Gilmore, Calabresi decries the "orgy of statute making" that has shifted the initiative from courts to legislatures.² As a result, in *A Common Law for the Age of Statutes*, Calabresi attempts to fashion a theory of judicial revision of statutes and a defense for that position. Courts, he says, ought to be as free to alter a statute as they are to change one of their own decisions by the common law method.³

The problem that animates the book is obsolescence. Calabresi is concerned that out-of-date statutes may remain in force while courts declare themselves powerless to update them. Alternatively, courts may resort to a variety of devices to change the law but in a less than candid way. Instead, Calabresi wants courts to forge ahead honestly. Courts ought to decide when a retentionist bias is appropriate.⁴ When it is not, courts should have the ability to change the law or to threaten to change it if a legislature does not act.⁵ Consequently, if Calabresi's theory is in fact helpful, it ought to show its value in an area of law that is constantly forced to update: intellectual property.

Thus arises the mission of this Article: to examine the challenges that new technology places on the copyright and patent law systems for evidence that the system would be better served by courts taking a more active role. The home videotaping issue resolved by the Supreme Court in *Sony Corp. of America v. Universal City Studios, Inc.*⁶ is the most recent example of such a challenge. The Copyright Act does not directly address the issue. One side urged the Court to hold the practice a violation of the Act and to devise a remedy such as a "tax" on the sale of tapes. The other side wanted the Court to hold that home taping was fair use. The Court opted for the latter, choosing to let Congress address home videotaping in specific legislation.

Under Calabresi's theory, courts should decide these questions

1. G. CALABRESI, *A COMMON LAW FOR THE AGE OF STATUTES* 1 (1982).

2. G. GILMORE, *THE AGES OF AMERICAN LAW* 95 (1977).

3. G. CALABRESI, *supra* note 1, at 165-66.

4. *Id.* at 164.

5. *Id.* Put another way, Calabresi's position is that the common law function to be exercised by courts is "no more and no less than the critical task of deciding when a retentionist or a revisionist bias is appropriately applied to an existing statutory or common law rule." *Id.* at 164.

6. 104 S. Ct. 774 (1984); see *infra* notes 219-72 and accompanying text.

not by tugging the language of a statute to allow a strained interpretation, but rather by forthrightly considering the issue involved and changing the law, if necessary, to treat like cases alike.⁷ The consequences of such an approach to a unified statutory system of intellectual property would be significant. In the pages that follow, I will attempt to determine whether they would be significantly better or worse.

I. INTRODUCTION

By nature, copyright and patent laws must accommodate new technology. Patent, by definition, concerns the protection of that which has not existed before.⁸ Thus, it is impossible for a statute to specify the items it will protect. All it can do is set forth the conditions under which inventions will be entitled to patent protection. Under the current law, the primary criteria are novelty, utility, originality, and nonobviousness.⁹

Similarly, people are continually finding new ways of expressing themselves, often through new inventions that themselves might be patented. Thus, a copyright statute cannot specify all the modes of expression that qualify for protection. Rather, it should only describe the attributes of expression that it protects—currently, original works of authorship.¹⁰ Under both patent

7. G. CALABRESI, *supra* note 1, at 165.

8. The first patent statute is thought to have been enacted in Venice during the thirteenth or fourteenth century. It provided: "If somebody invents any machine or process to speed up silkmaking or to improve it, and if the idea is actually useful, the inventor can obtain an exclusive privilege for ten years from the General Welfare Board of the Republic." Prager, *The Early Growth and Influence of Intellectual Property*, 34 J. PAT. OFF. SOC'Y 106, 130-31 (1952).

9. 35 U.S.C. § 101 (1982) provides: "Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title."

35 U.S.C. § 103 (1982) provides:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Section 102 of the Copyright Act does acknowledge the futility of attempting to anticipate technology. It extends protection to "original works of authorship fixed in any tangible medium of expression, now known or later developed, from which they can be perceived, reproduced, or otherwise communicated, either directly or with the aid of a machine

and copyright, an idea itself is insufficient. To be patentable, an invention must be reduced to practice.¹¹ To be copyrightable, a work must be "fixed in any tangible medium of expression."¹²

The continuing challenge of intellectual property law is not deciding how to treat new creations that are *sui generis*. Rather, it is determining whether a new thing is like an old. Put another way, it is the classic problem of the common law: treating like cases alike.¹³ That being so, the argument for judicial activism is a strong one—courts, not legislatures, are the bodies with experience in such matters.

Historically, courts have indeed addressed these issues and no less successfully than legislatures. In 1884, the Supreme Court in *Burrow-Giles Lithographic Co. v. Sarony*¹⁴ faced the question of whether a photographer could be considered an author within the meaning of the copyright clause of the Constitution and the then-existing copyright statute. The answer to this question lay not in the physics of photography but rather in an examination of the actions of the photographer.

Is a photograph of Oscar Wilde (the picture at issue) an original work of authorship? No, said the defendant. The camera simply makes a mechanical transfer of nature. To the contrary, replied the Court. The photographer, like a writer, had an original mental conception that he brought into physical form. He posed Wilde in a particular position. He selected the costume and background. He

or device." 17 U.S.C. § 102 (1982). The section then goes on to specify some existing works of authorship included in the Act.

11. 35 U.S.C. § 102(g) (1982). An inventor who does not exercise due diligence in reducing his conception to practice loses his priority of claims under the Act. *Id.* Actual reduction in the form of a model or prototype is not always necessary. Constructive reduction—disclosing the idea in the patent application and showing how it could be carried out—generally will suffice. See generally *Bowers v. Valley*, 149 F.2d 284, 286 (C.C.P.A. 1945) (activities amounted to a reduction of the invention to practice). No protection, however, can be given to a naked idea. Thus, litigation in patent cases commonly concerns the sufficiency of the reduction. Compare *Farrand Optical Co. v. United States*, 325 F.2d 328 (2d Cir. 1963) (mock-up of optical device used by airplane gunners was sufficiently reduced to practice, although never tested in airplane) with *Radio Corp. of Am. v. International Standard Elec. Corp.*, 232 F.2d 726 (3d Cir. 1956) (airplane radar system tested only on top of office building not reduced to practice).

12. 17 U.S.C. § 102(a) (1982).

13. This is not to say that all courts would reach the same result in any case. Judges may engage in comparisons at different levels of generality. The strength of the common law method is that it facilitates the creation of a legal topography consisting of the opinions of a number of courts. Over time, a dominant position is likely to emerge. In the meantime, at least the individual cases are resolved in a manner that considers something more than what a legislative body said before this technology arose. See G. CALABRESI, *supra* note 1, at 165.

14. 111 U.S. 53 (1884).

arranged the lighting. Thus, the Court held that photographers were authors, as were engravers, whom the Act specifically mentioned.¹⁵ The common law process was sufficient to answer the question.

The Supreme Court in 1908 could have used the same process to decide whether a perforated player piano roll was a copy of a piece of music; does an unauthorized piano roll infringe the copyright in a song just as an unauthorized copy of the sheet music does? Although that was the issue in *White-Smith Music Publishing Co. v. Apollo Co.*,¹⁶ Justice Day concerned himself with legislative intent and statutory interpretation. "In the last analysis," Day wrote, "this case turns upon the construction of a statute, for it is perfectly well settled that the protection given to copyrights in this country is wholly statutory."¹⁷

Having made that statement, Justice Day compared piano rolls to music boxes and other devices that reproduce music mechanically. These devices were known to Congress when it passed the Copyright Act. "Can it be," he asked, "that it was the intention of Congress to permit them to be held as infringements and suppressed by injunctions?"¹⁸ No, he decided.

Only at the end of his opinion did Justice Day come close to the heart of the problem—a piano roll is like a piece of sheet music because, in the absence of any legal restriction, the manufacturer enjoys the use of the composition without having to pay for it.¹⁹ Nonetheless, Day said, "such considerations properly address themselves to the legislative and not to the judicial branch of the Government."²⁰

Considering these two cases together, the approach of the former case seems to be much more satisfying than that of the latter. In the photography case, the Court extended the principle of affording certain economic advantages to creative people to include a new form of art. In the piano roll case, the Court arbitrarily distinguished between the old technology and the new. The Court treated like cases differently due primarily to the Court's reticence to update the law on its own. Consistency was sacrificed on the altar of deference to the legislature. In response, Congress was

15. *Id.* at 58-59.

16. 209 U.S. 1 (1908).

17. *Id.* at 15.

18. *Id.* at 18.

19. *Id.*

20. *Id.*

forced to legislate. The next year, it passed a new copyright law that included mechanical reproductions of music²¹ within the scope of "copy."²² The delay, however, was unnecessary and, if the rationale underlying Justice Day's opinion were carried to the extreme, coverage would have been withheld from any invention until Congress specifically mentioned it.

Justice Day's deference, however unlaudable, is nonetheless understandable. The Constitution gives Congress power to grant copyrights,²³ and since the first Congress, the legislators have exercised this power.²⁴ Day and many of his successors have been reluctant to interfere with Congress's control of copyright. As a result, even most of the "activist" decisionmaking has gone on under the guise of interpretation. This is akin to the subterfuge of which Calabresi speaks.²⁵ Subterfuge, however, depends on the willingness of courts to engage in diversionary tactics. Unwilling to assume an "activist" posture in *White-Smith*, the Supreme Court reached a result that was inconsistent with the result in *Burrow-Giles*, where the Court held that the Act protected a photographer.²⁶

Calabresi, in contrast, proposes a guilt-free jurisprudence, one that would allow a court either to reform a law that is out of date—for example, a copyright statute that deals only with old forms of copying—or simply to declare that the law is out of date and not enforce it, thus pushing Congress to update. Under his proposal, courts would not do anything they do not do already. Instead, they

21. Section 1(e) of the 1909 Act defined performance as "any arrangement or setting of it or of the melody of it in any system of notation or any form of record in which the thought of an author may be recorded and from which it may be read or reproduced." It also created a licensing system for music with a statutory royalty. 1909 Act, ch. 320, 35 Stat. 1075.

22. The broad definition of "copy" in the 1909 Act carried over into the 1976 Act. "Copies" are defined in the 1976 Act as "material objects, other than phonorecords [which are treated separately], in which a work is fixed by any method now known or later developed, and from which the work can be perceived, reproduced, or otherwise communicated, either directly or with the aid of a machine or device." 17 U.S.C. § 101 (1982).

23. "The Congress shall have Power . . . To promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries . . ." U.S. CONST. art. I, § 8, cl. 8.

24. See Act of May 31, 1790, 1 Stat. 124.

25. See G. CALABRESI, *supra* note 1, at 173.

26. Despite his reliance on the statute, Justice Day did take account of the legal terrain in a limited sense. He cited two lower court and two foreign decisions that a piano roll was not a copy of the music. 209 U.S. at 12-14. Justice Holmes found the decision to be anomalous but concurred in the judgment because of these precedents. *Id.* at 18-19 (Holmes, J., concurring).

openly would reform the Copyright Act or force Congress to do so.²⁷

A. Federal Preemption

Under the current copyright statute Congress seemingly has asserted jurisdiction over all forms of copyright protection. Prior to the 1976 Act, copyright ran on two tracks. The first was common law copyright, a creature of the courts. Until a work was published—made generally available—it fell under this regime. The author maintained the right to determine if and when a work would be published. This right remained in effect indefinitely.²⁸ Indeed, section two of the 1909 Act expressly disclaimed any interference with “the right of the author or proprietor of an unpublished work, at common law or in equity, to prevent the copying, publication, or use of such unpublished work without his consent, and to obtain damages therefor.”²⁹

Once a work was published, common law copyright came to an end. The author then had the responsibility of securing his rights on the second track—statutory copyright. The 1976 Act preempts all legal or equitable common law rights equivalent to those granted in the Act,³⁰ thereby putting common law copyright out of business.³¹ Under the 1976 Act, publication is no longer relevant, because the statute now protects a work from the moment of creation.³²

Exactly how much copyright legislation has preempted legal and equitable common law rights was a subject of concern under the old Act, and the 1976 Act fails to alleviate this concern. In two 1964 cases dealing with patent law, the Supreme Court held that states could not offer unfair competition protection to inventors of

27. Neither of the two reasons for subterfuge Calabresi identifies applies to the updating of the Copyright and Patent Acts. See G. CALABRESI, *supra* note 1, at 172-73. Judicial updating in this instance does not mask some fundamental value conflict that is too destructive to acknowledge publicly. Neither is it necessary to prevent courts from going too far. *Id.* The value choices already have been made. The task for judges is to apply those choices to the new technology. If anything, courts have been excessively timid in making intellectual property protection comport with new technology. The problem is not runaway lawmaking but rather law that lags behind.

28. See generally 2 M. NIMMER, NIMMER ON COPYRIGHT § 9.01 (1983).

29. 1909 Act, ch. 320, 35 Stat. 1076 (amended 1976).

30. 17 U.S.C. § 301(a) (1982).

31. “[N]o person is entitled to any such right or equivalent right in any such work under the common law or statutes of any State.” *Id.*

32. 17 U.S.C. §§ 102, 302(a) (1982). This change gives rise to perplexing questions regarding manuscripts written on computers. See *infra* notes 140-42 and accompanying text.

unpatentable items.³³ In *Sears, Roebuck & Co. v. Stiffel Co.*, Sears copied a pole lamp that was not patentable for want of invention. In *Compco Corp. v. Day-Brite Lighting, Inc.*, Compco Corporation copied the design of an unpatentable commercial lighting fixture. In both cases, the Court concluded that the supremacy clause of the Constitution prevented states from contradicting the federal intellectual property laws. If a work or product did not meet the criteria necessary for federal protection, it was in the public domain, and the states could not prevent others from freely copying it.

On the other hand, just because anyone was free to copy an item did not mean he was free to palm it off as the original. Thus, the Court said that a state could require proper labeling or packaging to identify the original source of the item.³⁴ To use the parlance of the later 1976 Copyright Act, such a requirement was not an "equivalent right."³⁵ Consequently, state action in this area did not interfere with the federal system.

The Court's pronouncements of preemption in *Sears* and *Compco* were to plague it in a later case under the 1909 Copyright Act. The problem in *Goldstein v. California*³⁶ was simple: the statute was out of date. It did not explicitly allow copyright in phonograph records, and the Justices did not believe they could update the Act themselves. Moreover, in the patent cases they had delivered a strong message of federal hegemony in intellectual property. Now, they were faced with a California statute that criminalized record and tape piracy, and a defense that the 1909 Act preempted the state statute.³⁷

33. *Sears, Roebuck & Co. v. Stiffel Co.*, 376 U.S. 225 (1964); *Compco Corp. v. Day-Brite Lighting, Inc.*, 376 U.S. 234 (1964).

34. 376 U.S. at 232.

35. See *supra* note 31.

36. 412 U.S. 546 (1973).

37. The defendants argued that the state copyright statute conflicted with congressional policy, and that the supremacy clause of the Constitution preempted the statute. 412 U.S. at 551. Furthermore, although the Copyright Act was amended while this case was pending to extend federal protection to sound recordings, the 1971 Amendment by its terms did not apply retroactively to the sound recordings involved in *Goldstein*. *Id.* at 551-52. Records and tapes, the defendants argued, were mechanical reproductions, and the legislative history of the 1909 Act showed that Congress did not intend to extend copyright protection to the reproductions themselves, only to the underlying music. *Id.* at 564. Thus, the defendants contended, neither state nor federal copyright law afforded copyright protection of the sound recordings in *Goldstein*.

In support of their argument that the 1909 Act did not protect sound recordings, the defendants cited the House Report that stated: "It is not the intention of the committee to extend the right of copyright to the mechanical reproductions themselves, but only to give

The California statute at issue in *Goldstein* was designed to fill the gap in the Copyright Act and afford protection to the owners of the master records and tapes. In the guise of interpretation, Chief Justice Burger wrote:

[W]e must remember that our modern technology differs greatly from that which existed in 1909. The Act and the [legislative] report should not be read as if they were written today, for to do so would inevitably distort their intended meaning; rather, we must read them against the background of 1909, in which they were written.³⁸

Having said that, Burger recounted the *White-Smith* case and the congressional response that extended rights to composers whose works were used in mechanical reproductions. Burger noted, however, that nowhere in the legislative report did Congress indicate that state copyright protection that does not conflict with federal copyright protection may not govern records as artistic creations.³⁹ The question, according to the majority opinion, was whether the state protection conflicted with the federal Copyright Act.⁴⁰

The majority answered that in this case it did not—a curious conclusion in light of *Sears* and *Compro*. Burger wrote that copyright was not a matter of exclusive federal jurisdiction:

[I]t is unlikely that all citizens in all parts of the country place the same importance on works relating to all subjects. Since the subject matter to which the Copyright Clause is addressed may thus be of purely local importance and not worthy of national attention or protection, we cannot discern such an unyielding national interest as to require an inference that state power to grant copyrights has been relinquished to *exclusive* federal control.⁴¹

Of course, the record industry is a national industry, just as it was in 1973 when the court decided *Goldstein*. The California statute was nothing more than a stop-gap measure until Congress legislated on the subject. Congress extended copyright protection while the *Goldstein* suit was pending but only for records fixed

the composer or copyright proprietor the control, in accordance with the provisions of the bill, of the manufacture and use of such devices." H.R. REP. No. 2222, 60th Cong., 2d Sess. 9 (1909).

38. 412 U.S. at 564.

39. *Id.* at 558-59.

40. *Id.* at 561.

41. *Id.* at 557-58.

after February 15, 1972.⁴² Burger's decision allowed the good guys to win, but it did so at the cost of candor. The state law was inconsistent with the Copyright Act. It allowed unlimited protection to a form of authorship that the federal Act did not even include.⁴³

What else might the Supreme Court have done? The fact that a criminal conviction was at stake prevented it from creating an ex post facto law. Moreover, Congress had just differentiated pre-1972 sound recordings from later ones. Faced with such a recent legislative action that consciously treated like cases differently, the Court was as pained to alter the balance. Had Congress not yet spoken, the Court might have adopted the Calabresi approach and updated the law itself. Given the existing circumstances, though, that option was not available.

Perhaps the Court should have avoided the question by denying certiorari. The lower courts had upheld the conviction under the state statute. More importantly, the case was to be a vehicle for updating the law, but Congress had already done that. By hearing the case and announcing a principle of nonexclusivity based more on expedience than coherence, the Court only created confusion. In *Goldstein*, the greatest virtue would have been what Professor Alexander Bickel called the "passive virtue."⁴⁴

The 1976 Copyright Revision Act reflects the significance of *Goldstein* because the new Act preempts only equivalent rights within its subject matter. Unfortunately, the Act's legislative history is unclear as to what the 1976 Act preempts. Professor Nimmer has observed that the version of section 301, which is the preemption section, that reached the House floor expressly excluded the common law action of misappropriation from preemption.⁴⁵

42. See *supra* note 37.

43. 412 U.S. at 550-51.

44. See A. BICKEL, *THE LEAST DANGEROUS BRANCH* 111-98 (1962); Bickel, *Foreword: The Passive Virtues to The Supreme Court 1960 Term*, 75 HARV. L. REV. 40 (1961). But see Gunther, *The Subtle Vices of the "Passive Virtues"—A Comment on Principle and Expediency in Judicial Review*, 64 COLUM. L. REV. 1 (1964).

45. M. NIMMER, *CASES AND MATERIALS ON COPYRIGHT* 495-97 (2d ed. 1979). The Supreme Court upheld the misappropriation doctrine in *International News Serv. v. Associated Press*, 248 U.S. 215 (1918), a case in which the Court restrained INS from taking the AP's uncopyrighted news dispatches from bulletin boards and early editions of newspapers and then sending them to INS subscribers until the commercial value of the dispatches had passed. *INS* is of doubtful significance today because the Court decided it before Congress enacted the Copyright Act preemption section, before *Sears and Roebuck* and because the Court decided it as a matter of general federal common law before *Erie R.R. v. Tompkins*, 304 U.S. 64 (1938). See also *Columbia Broadcasting System, Inc. v. DeCosta*, 377 F.2d 315 (1st Cir. 1967) (television network not liable for alleged misappropriation of plaintiff's character and idea for cards bearing the words "Have Gun Will Travel," in the absence of plain-

During debate, Congressman Seiberling asked that the misappropriation example be removed from the statute. Otherwise, he said, it "could easily be construed by the courts as authorizing the States to pass misappropriation laws . . . [that] could be so broad as to render the preemption section meaningless."⁴⁶

In a later dialogue, however, Seiberling said that his purpose was to "leave . . . [existing] State law alone."⁴⁷ With that assurance, Congressman Railsback (the ranking Republican on the subcommittee that reported out the bill) gave his assent to the amendment.⁴⁸ Nimmer noted that if Seiberling wanted to enforce preemption, he could not have wanted to leave state law alone.⁴⁹ The subcommittee chairman, Congressman Kastenmeier, then added to the confusion by accepting the amendment because of his understanding that it was consistent with the Justice Department's position, which was that they should remove the language so as to eliminate any doubt about the full preemptive effect of the bill.⁵⁰ Thus, the Democratic and Republican leaders of the subcommittee endorsed the change, each one thinking it meant something different.⁵¹ The bill passed, but the intent of Congress on preemption hardly can be called obvious.

Thus, Congress has been unclear about the role of common law actions in the area of copyright, and the Supreme Court has made the test of preemption even more opaque. That being the case, state law on intellectual property is something more than just a matter of intellectual curiosity. Indeed, one of the pressing issues presented by new technology is whether one can claim both federal copyright and state trade secret protection on computer software. Section II of this Article discusses this matter. It is a question that neither the "plain meaning" of the Copyright Act nor its legislative history can answer.

B. *Fair Use*

One thing is clear about the current Copyright Act: Congress

tiff's attempt to obtain copyright in cards). Nevertheless, the Court's decision in *Goldstein* places the Copyright Act preemption section in question insofar as it supports the notion that a misappropriation action might be decided as a matter of state law. *But see Mitchell v. Penton/Indus. Publishing Co.*, 205 U.S.P.Q. (BNA) 242 (N.D. Ohio 1979).

46. 122 CONG. REC. 32,015 (1976).

47. *Id.*

48. *Id.* The amendment was adopted. *Id.*

49. M. NIMMER, *supra* note 45, at 496-97.

50. 122 CONG. REC. 32,015 (1976).

51. M. NIMMER, *supra* note 45, at 497.

has recognized that statutory language is insufficient to resolve all disputes over infringement. As a result, it included the "fair use" provision in the Act.⁵² Actually, fair use owes its origin not to Congress but rather to the common law method. It is a doctrine that developed in the courts as a gloss on statutory copyright. Put simply, fair use allows courts to restrict copyright infringement claims when they seem overly harsh. Instead of mechanically applying the statute, courts balance the defendant's use against the plaintiff's rights to reach a reasonable result.⁵³

Section 107 codifies the fair use doctrine and enumerates several factors to be considered—factors that emanate from the common law cases. In effect, the legislature has realized that courts are better equipped to make these decisions on an individual basis.⁵⁴ Congress cannot legislate on every conceivable use of copyrighted material. Similarly, one might observe, it cannot legislate on every conceivable form of technology by means of which authors may express themselves.⁵⁵ If the former is an appropriate subject matter

52. 17 U.S.C. § 107 (1982) provides:

Notwithstanding the provisions of section 106, the fair use of a copyrighted work, including such use by reproduction in copies or phonorecords or by any other means specified by that section, for purposes such as criticism, comment, news reporting, teaching (including multiple copies for classroom use), scholarship, or research, is not an infringement of copyright. In determining whether the use made of a work in any particular case is a fair use the factors to be considered shall include—

- (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 value of the copyrighted work.

Congress specifically did not provide an exact definition of fair use in the 1976 Copyright Revision Act, preferring to delegate to the courts the case by case adjudication of such matters. See H.R. REP. NO. 1476, 94th Cong., 2d Sess. 65, reprinted in 1976 U.S. CODE CONG. & AD. NEWS 5659, 5678.

53. See *Walt Disney Prods. v. Air Pirates*, 581 F.2d 751 (9th Cir. 1978); *Rosemont Enters., Inc. v. Random House, Inc.*, 366 F.2d 303 (2d Cir. 1966), cert. denied, 385 U.S. 1009 (1967). See generally M. NIMMER, *supra* note 28, at § 13.05 (1983); Seltzer, *Exemptions and Fair Use in Copyright: The "Exclusive Rights" Tension in the New Copyright Act*, 24 BULL. COPYRIGHT SOC'Y 215 (1977).

54. See H.R. REP. NO. 1476, 94th Cong., 2d Sess. 65, reprinted in 1976 U.S. CODE CONG. & AD. NEWS 5659, 5678.

55. The House report recognizes the necessarily dynamic nature of the fair use doctrine: "[Section 107] endorses the purpose and general scope of the judicial doctrine of fair use, but there is no disposition to freeze the doctrine in the statute, especially during a period of rapid technological change." *Id.* at 66, reprinted in 1976 U.S. CODE CONG. & AD. NEWS 5659, 5680.

for judicial activism, then the latter is a likely candidate for such treatment as well.

The argument made here is not that the courts should have exclusive power over updating copyright law. Rather, it is that they should not shy away from providing the starting point for revision. Fair use, for example, served as the basis for the Court of Claims decision in *Williams & Wilkins Co. v. United States*,⁵⁶ the major case involving photocopying. At issue was the copying of articles from professional journals by a government medical research organization and its library. The court, in a decision later affirmed by an equally divided Supreme Court, held the practice to be fair use.

More interesting than the holding, though, is the court's message to Congress. In effect, it forced the legislature's hand with its ruling because attention to the problem became crucial. The court correctly identified the problem as one of statutory obsolescence. The 1909 Act did not cover photocopying⁵⁷ because the technology did not exist. Given that state of affairs, the court had a choice: either update the statute itself or force Congress to do it. It chose the latter course.

In so doing, the Court of Claims rejected the suggestion that it create a licensing system.⁵⁸ The court reasoned that such a system would interfere with the copyright owner's right to completely prevent copying of his material, if he so chose. The court was unwilling to force him to accept a licensing arrangement. Instead, it viewed the case as "but a 'holding operation' in the interim period before Congress enacts its preferred solution".⁵⁹

The truth is that this is now preeminently a problem for Congress: to decide the extent [sic] photocopying should be allowed, the questions of a compulsory license and the payments (if any) to the copyright owners, the system for collecting those payments (lump-sum, clearing-house, etc.), the special status (if any) of scientific and educational needs. . . . Intermediate or compromise solutions are not within our authority.⁶⁰

Judge Nichols dissented from the majority's conclusion and its reticence to act affirmatively. "However, hedged," he wrote, "the decision will be read, that a copyright holder has no rights a library is bound to respect. We are making the Dred Scott decision

56. 487 F.2d 1345 (Ct. Cl. 1973), *aff'd* by an equally divided court, 420 U.S. 376 (1975).

57. 487 F.2d at 1350-51.

58. *Id.* at 1360.

59. *Id.* at 1363.

60. *Id.* at 1360.

of copyright law."⁶¹

Indeed, the court could have done more had it not viewed its latitude so restrictively. It might have threatened to implement a solution if Congress did not act. It might have enacted some sort of system until the legislature did respond. Perhaps the court viewed judicial sabre-rattling as unnecessary in that case because the Copyright Act was in the process of being revised, and Congress was aware of the problem new technology was creating.

Congress did respond, albeit incompletely. Just as with the current problem of home videotaping, no congressman yearned to be known as the one who led the fight to restrict photocopying. Section 108 of the 1976 Act directly addresses reproduction by libraries and archives. Copying by individual users remains a question of fair use. The Act specifically exempts libraries from liability for the unsupervised use of copying equipment located on their premises, provided that such equipment displays a notice that "the making of a copy may be subject to the copyright law."⁶²

Since the 1976 Act, of course, photocopying has continued unabated. No one has yet been spotted turning away from a library Xerox machine after reading the required notice. Congress does require reports from the Register of Copyrights every five years on "the extent to which this section has achieved the intended statutory balancing of the rights of creators, and the needs of users."⁶³ The first report, delivered in January of 1983, recommended collective photocopy license agreements, the study of surcharges on copying equipment, and the sampling of selected machine usage as techniques for gauging compensation.⁶⁴

Knowing now that congressional action has been largely ineffective in dealing with the problem created by new technology, can it be said that the best solution was for the *Williams & Wilkins* court to defer to Congress? If the court instead had imposed a licensing system of its own design and that licensing system had

61. *Id.* at 1387 (Nichols, J., dissenting).

62. 17 U.S.C. § 108(f)(1) (1982). Section 107 includes copying for classroom purposes as one example of fair use. *See supra* note 52. Recently, however, a suit was filed against New York University over the systematic copying of copyrighted materials for the purpose of assembling them into course books. Four months later, the University and the plaintiff publishers agreed on an out-of-court settlement. As part of the settlement, the University promised to adhere to guidelines restricting continuous, mass, systematic copying. *See Publishers and N.Y.U. Settle Suit On Colleges' Photocopying Rights*, N.Y. Times, Apr. 15, 1983, at A1, col. 2.

63. 17 U.S.C. § 108(i) (1982).

64. *See* 2 COPYRIGHT L. REP. D 20,205 (CCH) (Feb. 1983).

been in effect for the past five years, would not the aims of the Copyright Act have been better served? The court was no less qualified than Congress to see that the problem posed by photocopying in libraries was of a different order than that of hand copying.⁶⁵ Perhaps it should have pushed Congress harder. The outcome could not have been any worse.

Underlying the photocopying decision is the issue that makes rapid updating of the copyright laws of capital importance: who owns information? In years past, information was primarily a by-product of industrial development. Now, it is a major part of the economy itself. Indeed, sociologist Daniel Bell believes that information is the hallmark of the post-industrial society.⁶⁶ Although labor and capital were the central variables of the industrial society, information and knowledge are the crucial factors in the post-industrial age.⁶⁷

65. It is not even clear that hand copying of an entire work would have been considered acceptable under the fair use doctrine. In his dissent to the majority opinion in *Williams & Wilkins*, Chief Judge Cowen noted that he was unable to find any case law holding that the word "copy" in the Copyright Act would not apply to hand copying. 487 F.2d at 1365 (Cowen, C.J., dissenting). Cowen pointed out the economic and practical differences between photocopying and hand copying, concluding that the effect of hand copying is minimal and poses no threat to the copyright holder's interests. Photocopying, however, is of a different magnitude. *Id.* at 1368.

66. Economic historian Harold Innis estimates that a scribe in a monastery working six hours a day could copy only two to four pages in a day. At that rate, it would take a person about a year to reproduce a copy of the Bible. H. INNIS, *EMPIRE AND COMMUNICATIONS* 138 (rev. ed. 1972). See generally Breyer, *The Uneasy Case For Copyright: A Study of Copyright in Books, Photocopies, and Computer Programs*, 84 HARV. L. REV. 281 (1970) (arguing as to the necessity for copyright protection but not in the form of extending the time period of the protection); Nimmer, *Foreword: Two Copyright Cases, to Project, New Technology and the Law of Copyright: Reprography and Computers*, 15 U.C.L.A. L. REV. 931 (1968) (discussing the further complications that will result from increased technology).

66. Bell, *The Social Framework of the Information Society*, in *THE COMPUTER AGE: A TWENTY-YEAR VIEW* 163 (M. Dertouzos & J. Moses eds. 1979). For a similar view from a Japanese scholar, see Y. MASUDA, *THE INFORMATION SOCIETY AS POST-INDUSTRIAL SOCIETY* (1980) and Kielbowicz, *Book Review*, 5 COM. & L. 79 (1983).

67. Bell, *supra* note 66, at 168. Bell notes that information is different from the staples of the industrial society:

Information, or knowledge, even when it is sold, remains with the producer. It is a "collective good" in that once it has been created, it is by its nature available to all. In fact, the character of science itself, as a cooperative venture of knowledge, depends on the open and complete transmission of all new experiments and discoveries to others in the field.

If knowledge is a collective good there is little incentive for any individual enterprise to pay for the search for such knowledge, unless it can obtain a proprietary advantage, such as a patent or a copyright. But increasingly, patents no longer guarantee exclusiveness, . . . [and] copyright becomes increasingly difficult to police when individuals or libraries can Xerox whatever pages they need for technical journals or books or when individuals and schools can tape music

Williams & Wilkins involved a particularly critical type of information—medical studies. Researchers would request copies of articles from the government's medical libraries. Presumably, researchers were to use this information to guide their own research for the benefit of public health. The publisher of the journals within which the copied articles appeared opposed this free flow of information. It argued that unbridled copying interfered with his economic rights in the publications. Without the potential of profit, it and other publishing companies would be less likely to produce medical research periodicals. The result would be less medical information available, not more. Chief Judge Cowen, dissenting, identified the balance as one between the rights of authors and publishers, on the one hand, and "the legitimate public need for rapid dissemination of scientific and technical literature," on the other.⁶⁸

Writing about the general problem of exclusivity versus free exchange of information, Bell poses the question as one of economic and political structure: "[W]hat kind of technical-economic organization is best designed to be efficient, meet consumer (i.e., industrial, commercial, financial, scientific, library) use, and remain flexible enough to allow for continuing technological development[?]"⁶⁹

Thus, information has both social and economic value. What

off the air or record television performance

Id. at 174 (footnote omitted). This concern with what copyright and patent do for society, not just for authors and inventors, is the motivation for all legal intellectual property protection in the United States. See *Mazer v. Stein*, 347 U.S. 201, 219 (1954) ("The economic philosophy behind the clause empowering Congress to grant patents and copyrights is the conviction that encouragement of individual effort by personal gain is the best way to advance public welfare through the talents of authors and inventors.").

In some instances, the Government has consciously chosen to restrict disclosure of inventions—an act counter to the general purpose of the patent law. 35 U.S.C. § 181 (1982) allows the Government to keep secret any invention the publication of which, in the opinion of the head of the interested government agency, would harm the national security. The Government's use of this section in the area of cryptography is well-known. A debate between the director of the National Science Foundation and the National Security Agency (N.S.A.) resulted in a compromise that allows the N.S.A. to review any requests for National Science Foundation funding of cryptographic research. The N.S.A. itself now provides money for related unclassified civilian research. See Burnham, *The Silent Power of the N.S.A.*, N.Y. Times, Mar. 27, 1983, § 6 (Magazine), at 60, 64-67.

68. 487 F.2d at 1385 (Cowen, C.J., dissenting).

69. Bell, *supra* note 66, at 195; cf. Arrow, *The Economics of Information*, in *THE COMPUTER AGE: A TWENTY-YEAR VIEW*, 306, 315 (M. Dertouzos & J. Moses eds. 1979) (discussing importance of designing incentive structures that will motivate optimal information transfer because the most efficient system is one in which each individual has specialized knowledge to make specialized decisions).

has changed is the speed with which this information can be created and exchanged. When the monk in the Xerox commercial of several years ago was able to copy his manuscripts by machine instead of by hand, it really was "a miracle." By now, he is probably creating concordances on one of the company's computers faster than the copying machine can reproduce them. Matthew, Mark, Luke, and John may have no claim against him, but authors and inventors of more contemporary work are worried about the rapid reproduction of their intellectual property.

The speed of the new technology creates the need for quick legal adaptation. Congress has fiddled while computers and copying machines have churned. The task is not one of striking a new balance between private and public interests. Rather, it is determining how new machines fit into the existing balance.

By and large, courts can be more agile in addressing these questions—if they are willing to act boldly and creatively. By legislating with great specificity in the Copyright Act, Congress reduced its flexibility. Additionally, courts are hesitant to read the more generally-worded patent law expansively; instead, they want Congress to make it more specific. As a result, litigants and courts resort to older and more malleable forms of intellectual property protection, such as an action for misappropriation of trade secrets.

C. *State Trade Secret Protection*

Unlike the more rigid Patent and Copyright Acts, trade secret protection is a creature of the common law. It is subject to modification by the courts of each state. As a guide, though, section 757 of the Restatement of Torts sets forth the generally accepted elements.⁷⁰ Liability attaches if one discovers the secret by improper means or by a breach of confidence. A case of industrial espionage decided by Judge Irving Goldberg of the Fifth Circuit demon-

70. RESTATEMENT OF TORTS § 757 (1939) provides:

One who discloses or uses another's trade secret, without a privilege to do so, is liable to the other if

- (a) he discovered the secret by improper means, or
- (b) his disclosure or use constitutes a breach of confidence reposed in him by the other in disclosing the secret to him, or
- (c) he learned the secret from a third person with notice of the facts that it was a secret and that the third person discovered it by improper means or that the third person's disclosure of it was otherwise a breach of his duty to the other, or
- (d) he learned the secret with notice of the facts that it was a secret and that its disclosure was made to him by mistake.

strates just how useful the Restatement test for liability concept can be.⁷¹

In *E.I. duPont de Nemours & Co. v. Christopher*,⁷² an unknown party hired the defendants to take aerial photographs of a DuPont plant under construction. The photographed plant was designed to produce methanol by a secret and unpatented process. The photographer defended himself on the grounds that he had committed no trespass in flying over the plant and had violated no law in taking a picture of it.

Judge Goldberg disagreed and ruled that Christopher had in fact attempted to obtain DuPont's secret by improper means. His decision was based on the balancing of the economic and social factors involved. "To obtain knowledge of a process without spending the time and money to discover it independently is *improper* unless the holder discloses it or fails to take reasonable precautions to ensure its secrecy," Goldberg wrote.⁷³ To require DuPont to cover its plant during construction would be economically unreasonable.⁷⁴ Moreover, it would contribute to a decline in the standard of business morality.⁷⁵

In reaching this conclusion, Judge Goldberg showed the strength of the common law method in dealing with new and unusual cases. Considering the element of improper means, he wrote:

"Improper" will always be a word of many nuances, determined by time, place, and circumstances. We therefore need not proclaim a catalogue of commercial improprieties. Clearly, however, one of its commandments does say "thou shall not appropriate a trade secret through deviousness under circumstances in which countervailing defenses are not reasonably available."⁷⁶

The continued existence of trade secret protection results from another preemption decision by the Supreme Court. Chief Justice Burger, the author of the *Goldstein* opinion,⁷⁷ also wrote

71. *E.I. DuPont de Nemours & Co. v. Christopher*, 431 F.2d 1012 (5th Cir. 1970), *cert. denied*, 400 U.S. 1024 (1971).

72. *Id.*

73. *Id.* at 1015-16. The case was decided under Texas law, and the Texas Supreme Court had specifically adopted § 757 of the Restatement in *Hyde Corp. v. Huffines*, 158 Tex. 566, 314 S.W.2d 763 (1958).

74. 431 U.S. at 1016.

75. *Id.* at 1016-17.

76. *Id.* at 1017. For a critical appraisal of the economic foundation of the court's decision, see Kitch, *The Law and Economics of Rights in Valuable Information*, 9 J. LEGAL STUD. 683, 696 (1980).

77. *See supra* notes 36-44 and accompanying text.

the opinion in *Kewanee Oil Co. v. Bicron Corp.*⁷⁸ As in *Goldstein*, the Court held that the federal statute—here the patent law—did not preempt the state protection—in this case, trade secret.⁷⁹ The result allows courts and litigants considerable latitude, but the reasoning is less than persuasive.

The purpose of the patent law is to encourage disclosure of inventions for the benefit of the public.⁸⁰ In return, the inventor is afforded certain economic rights for a definite period of time.⁸¹ To the extent that inventors eschew patent protection in favor of trade secret protection, the public remains deprived of the knowledge. This preference for trade secret protection rather than patent law protection thus alters the balance sought between public disclosure and the inventor's economic protection. The inventor gets both economic advantage and secrecy.

In *Kewanee Oil*, the issue was whether the plaintiff corporation could restrain its former employees from disclosing its secret processes to their new employer. Chief Justice Burger analyzed the problem by considering three categories of trade secrets: 1) those the owner believed to be patentable, 2) those the owner knew were not patentable, and 3) those whose patentability was dubious.⁸²

In the second category, Burger wrote, trade secret protection is not inconsistent with the patent law because inventors would not apply for patents they knew they could not obtain, and thus nothing would be disclosed in either event.⁸³ One wonders, however, how this finding corresponds with the Court's decisions ten years earlier in *Sears and Compco* that a state could not afford misappropriation protection to an unpatentable item. Recall that the Court concluded that unpatentable works were free for all to copy, so long as they did not deceive the public as to their source.⁸⁴

Addressing the third category next, Burger said that the risk of a court declaring a patent invalid would deter some inventors from applying for a patent.⁸⁵ That being the case, the Chief Justice said that extended trade secret protection would assist such inventors in exploiting their discoveries.⁸⁶ That finding, however, dis-

78. 416 U.S. 470 (1974).

79. *Id.* at 493.

80. See *Sinclair & Carroll Co. v. Interchemical Corp.*, 325 U.S. 327 (1945).

81. See *Smith, Kline & French Laboratories v. Clark & Clark*, 157 F.2d 725 (1946).

82. 416 U.S. at 484.

83. *Id.* at 485.

84. See *supra* notes 33-34 and accompanying text.

85. 416 U.S. at 487.

86. *Id.*

courages inventors of borderline items from participating in the patent and disclosure process and, thus, would seem to conflict with the statutory policy promoting disclosure.

Finally, the Chief Justice dealt with the first and most difficult category—that of an inventor whose work is clearly patentable. “It is here,” Burger correctly observed, “that the federal interest in disclosure is at its peak.”⁸⁷ If a substantial risk existed that these inventors would opt for state protection rather than federal patents, he said, “we would be compelled to hold that such a system could not constitutionally continue to exist.”⁸⁸ Then, however, he concluded that the risk did not exist, because few inventors would rely on what was thought to be the weaker protection offered by trade secret law.⁸⁹

Chief Justice Burger’s prophecy has not proven true—especially in some areas of computer technology and applications, where trade secret has come to be the protection of choice.⁹⁰ The plethora of recent cases involving accusations of theft of such secrets, not the least of which involved IBM and a competitor, bears witness to that fact.⁹¹

The popularity of trade secret protection is due, in part, to its flexibility. As a common law doctrine, courts can mold it to fit the circumstances. In contrast, courts often are shy about updating the copyright and patent law. If that were not the case, inventors might not avoid the statutory protection, and the public might receive its quid pro quo of disclosure. Far from interfering with a “unified” system of intellectual property, the courts might help achieve that goal. If courts applied the common law method to the statutes, evasion would be unnecessary. Flexibility would be built into the system, and the goal of Congress would be better served. Until that occurs, however, large numbers of inventions are likely to remain hidden in the netherworld of trade secret.

II. THE CONTINUING CHALLENGE OF INTELLECTUAL PROPERTY LAW

According to Calabresi, a proper role for common law courts is to decide when a retentionist bias should apply to statutes. Tech-

87. *Id.* at 489.

88. *Id.*

89. *Id.* at 489-90.

90. See *infra* notes 120-31 and accompanying text.

91. See generally Gilburne & Johnston, *Trade Secret Protection for Software Generally and in the Mass Market*, 3 *COMPUTER L.J.* 211 (1982) (addressing the scope and efficacy of trade secret protection).

nological change, he writes, reduces the rationale for such a bias.⁹² It creates new problems that the elected branch could not have addressed. As a result, he says, courts should consider themselves capable of determining if the old distinctions still apply, and if so, how the new technology relates to them. Alternatively, the courts may simply declare that the old law fails to fit and refuse to enforce it until Congress brings it up to date.

Technological change, obviously, is the central problem in current litigation involving intellectual property. Indeed, that would not surprise Calabresi, for he contends that laws that do not fit the legal landscape lead to court challenges.⁹³ The discussion in the previous section revealed that this is not a new problem. Rather, it is a dilemma intrinsic to this area of law. Historically, there have always been new inventions and modes of expression. What has changed is the speed with which they are occurring now—far faster than any legislature's ability to keep up.

In this section, I will examine a few of the recent controversies. The technology is diverse, but the cases share an important attribute: they all are concerned with extending existing distinctions to new inventions, thereby treating like cases alike. The new technology, however, has received remarkably different treatment by Congress and the courts.

A. *Computers and Computer Programs*

The proprietorship of PAC-MAN would hardly seem to be one of the pressing issues of American society, but in fact the problem of protecting video games⁹⁴ illustrates the more substantial challenge of protection of all computer software. During the 1982 term, the Supreme Court denied certiorari in a case pitting PAC-MAN against a rival, K.C. Munchkin.⁹⁵ The preliminary injunction

92. G. CALABRESI, *supra* note 1, at 130-31.

93. *Id.* at 143. Rapid technological change also is likely to result in crisis lawmaking, according to Calabresi. Other quick changes, he says, can render them anachronistic. Therefore, Calabresi contends, these laws deserve very little retentionist bias. *Id.* at 133.

94. A video game consists of a computer program embedded in a silicon chip called a read-only memory (ROM) that interacts with a microprocessor to create certain patterns on a video screen. See generally Kramsky, *The Video Game: Our Legal System Grapples with a Social Phenomenon*, 64 J. PAT. OFF. SOC'Y 335, 337-38 (1982) (describing physical structure and operation of computers). The actions a player takes with the game's controls during the play mode affect the video screen patterns. The system itself generates patterns during the attract mode—the period in which the game is not being played.

95. *Atari, Inc. v. North Am. Philips Consumer Elec. Corp.*, 672 F.2d 607 (7th Cir.), *cert. denied*, 459 U.S. 880 (1982).

granted to PAC-MAN declared K.C. Munchkin to be an infringing copy.

I. PATENT LAW PROTECTION

The PAC-MAN case illustrates the dichotomy between the treatment of computer programs as intellectual property under the Copyright Act and under the Patent Law. The PAC-MAN case was brought as a copyright action. It could not arise under the patent law, because in 1978 the Supreme Court severely restricted the availability of patent protection for computer programs.⁹⁶ In *Parker v. Flook*,⁹⁷ the plaintiff sought protection for a process that updated alarm limits governing conditions such as temperature, pressure, and flow rates⁹⁸ during catalytic conversion. The computer process, for which patent protection was sought, measured the present value of the variables, employed a mathematical formula to calculate an updated alarm limit value, and adjusted the actual alarm limit to the updated value.⁹⁹

The *Flook* case turned on the construction of section 101 of the Patent Law,¹⁰⁰ which describes the subject matter that is eligible for protection.¹⁰¹ Relying on a previous decision that a mathematical algorithm by itself cannot be patented,¹⁰² the Court held that an algorithm directed at achieving a particular result—admittedly a novel and useful formula—was merely “an improved method of calculation” and, therefore, incapable of patent protection under section 101 of the Act.¹⁰³

96. 437 U.S. 584 (1978). See generally Moskowitz, *The Metamorphosis of Software-Related Invention Patentability*, 3 COMPUTER L.J. 273 (1982) (analyzing *Parker v. Flook* and other cases that address limits on patent protection of computer programs and proposed guidelines for drafting and reviewing software-related claims).

97. 437 U.S. 584 (1978).

98. *Id.* at 585.

99. *Id.*

100. Patent Law, ch. 950, § 101, 66 Stat. 792, 797 (1952) (current version at 35 U.S.C. § 101 (1983)); see *supra* note 9. Section 100(b) of the Act provides “[t]he term ‘process’ means process, art or method, and includes a new use of a known process, machine, manufacture, composition of matter, or material.” 35 U.S.C. § 100(b) (1982).

101. 437 U.S. at 588.

102. *Gottschalk v. Benson*, 409 U.S. 63 (1972). The patent sought in this case was for a method of programming a digital computer to convert numerical information from binary-coded decimal form into pure binary form. Algorithm was defined as “[a] procedure for solving a given type of mathematical problem.” *Id.* at 65.

103. 437 U.S. at 595 n.18. The algorithm in *Flook* was distinct from the end product. The Court described it as simply a new way of calculating alarm limit values. *Id.* at 594-95. *But cf. In re Diehr*, 602 F.2d 982 (C.C.P.A. 1979), *aff’d sub nom. Diamond v. Diehr*, 450 U.S. 175 (1981) (rubber curing process in which algorithm was integral part of achieving end

Underlying the decision in *Flook* was the essential notion of intellectual property that one cannot claim exclusive rights over an idea. A mathematical formula, no matter how elegant, the Court reasoned, is nothing more than a principle of nature. Thus, despite the inventiveness of one who harnesses the formula to do a particular job, it cannot be patented in the absence of an additional inventive concept in its application.¹⁰⁴

In effect, the appropriate inquiry in *Flook* was whether a computer program was more like other patentable processes or ideas. It was an issue of treating like cases alike. Justice Stevens, in his majority opinion, acknowledged that the issue of the application of patent protection to computer programs was a new one, but then he went on to say that he was basing his decision largely on the fact that other courts (with the notable exception of the Court of Customs and Patent Appeals, both in this case¹⁰⁵ and in the previous algorithm case¹⁰⁶) had not held such programs to be patentable. How Stevens expected such a determination to be made before computer programs existed is not clear. Stevens wrote:

To a large extent our conclusion is based on reasoning derived from opinions written before the modern business of developing programs for computers was conceived. The youth of the industry may explain the complete absence of precedent supporting patentability. Neither the dearth of precedent, nor this decision, should therefore be interpreted as reflecting a judgment that patent protection of certain novel and useful computer programs will not promote the progress of science and the useful arts, or that such protection is undesirable as a matter of policy. Difficult questions of policy concerning the kinds of programs that may be appropriate for patent protection and the form and duration of such protection can be answered by Congress on the basis of current empirical data not equally

product held patentable).

104. 437 U.S. at 594-95. The Court reasoned that:

[The] process is unpatentable under § 101, not because it contains a mathematical algorithm as one component, but because once that algorithm is assumed to be within the prior art, the application, considered as a whole, contains no patentable invention. Even though a phenomenon of nature or mathematical formula may be well known, an inventive application of the principle may be patented. Conversely, the discovery of such a phenomenon cannot support a patent unless there is some other inventive concept in its application.

437 U.S. at 594.

105. *In re Flook*, 559 F.2d 21 (C.C.P.A. 1977).

106. *In re Benson*, 441 F.2d 682 (C.C.P.A. 1971).

available to this tribunal.¹⁰⁷

If anything then, the majority opinion in *Flook* displayed a timidity on the part of the Court at becoming involved in the updating of the Patent Law. To be sure, the Court left Congress an opening, but it hardly forced the issue. It also chose to overrule the Court of Customs and Patent Appeals, one of the few judicial institutions that can claim special expertise in this area.¹⁰⁸ This is not to say that computer programs should or should not be patentable, only that the Court was no less competent than the Congress to examine all the evidence and reach a conclusion. The questions of policy that Justice Stevens spoke of are questions of whether computer programs are like other processes that the Law protects. The Court did not have to underestimate its ability to determine the

107. 437 U.S. at 595. *But see* *Diamond v. Chakrabarty*, 447 U.S. 303, 308 (1980) (quoting *United States v. Dubilier Condenser Corp.*, 289 U.S. 178, 199 (1933)), in which the Court said that courts "should not read into the patent laws limitations and conditions which the legislature has not expressed."

Commentary on program patentability prior to *Flook* included Bender, *Computer Programs: Should They Be Patentable?*, 68 COLUM. L. REV. 241 (1968); Buckman, *Protection of Proprietary Interest in Computer Programs*, 51 J. PAT. OFF. SOC'Y 135 (1969); Comment, *Computer Program Protection: The Need to Legislate a Solution*, 54 CORNELL L. REV. 586 (1969).

108. Curiously, the other body with patent expertise, the Patent and Trademark Office, was also against the Court of Customs and Patent Appeals' decision in both cases. The Patent and Trademark Commissioner's objection, however, appeared to have been more concerned with expedience than with patentability. The Commissioner's petition for a writ of certiorari argued that a decision in favor of patentability in *Flook* would require him to process thousands of additional patent applications. 437 U.S. at 587-88. Similarly, in *Benson*, the Court deferred to the policy determination of the President's Commission on the Patent System that computer programs should not be patented, in part because of the Commission's finding that:

The Patent Office now cannot examine applications for programs because of a lack of a classification technique and the requisite search files. Even if these were available, reliable searches would not be feasible or economic because of the tremendous volume of prior art being generated. Without this search, the patenting of programs would be tantamount to mere registration and the presumption of validity would be all but nonexistent.

PRESIDENT'S COMMISSION ON THE PATENT SYSTEM, "TO PROMOTE THE PROGRESS OF . . . USEFUL ARTS" 13 (1966) (quoted in *Gottschalk v. Benson*, 409 U.S. 63, 72 (1972)).

The Patent and Trademark Commissioner's objection underscores Calabresi's contention that administrative agencies respond to their staff's view of the problem rather than society's view. G. CALABRESI, *supra* note 1, at 52-54. Therefore, the courts should not casually accept an agency's judgment on such matters. Rather, they, too, should be receptive to judicial updating in instances in which they lag behind technological change or are inconsistent with other parts of the legal landscape. The Court of Customs and Patent Appeals, however, had the expertise that is the hallmark of an agency, without many of the constrictions that bind the Patent and Trademark Office. Because this court combines judicial attention to principles with agency knowledge of the practical application of those principles, the Supreme Court should have given considerable weight to its views.

answers to such questions.

For whatever reason, Congress has not revised the Patent Law to include computer programs. Consequently, Congress has forced those who devise such programs to look elsewhere for protection. The Copyright Act and trade secret law provide their principal havens.

2. COPYRIGHT ACT PROTECTION

New technology has given rise to an even more subtle question where copyright in a computer program is sought: are programs embedded in silicon chips intelligible to humans? Beginning in 1964, the Copyright Office accepted any program for registration that was eye-readable and intelligible to humans, in addition to satisfying the other eligibility requirements.¹⁰⁹ Congress did not explicitly authorize the practice, but the Office apparently concluded that consistency within the Copyright Act called for it to treat the programs like other "literary works."¹¹⁰

In the Copyright Revision Act of 1976, Congress implicitly validated the Office's registration practice. The Act specifically mentioned those media forms in which programs are commonly written as acceptable for fixation.¹¹¹ Apparently, the legislators concluded that no reason external to the statute demanded that they treat such works like other literary works. Additionally, the 1976 Act eliminated the requirement of eye-readability.¹¹²

In *Stern Electronics v. Kaufman*,¹¹³ a video game case, the Eastern District of New York did not reach that issue, holding instead that unauthorized copying of the ROM-embedded program infringed the copyright in the audiovisual display.¹¹⁴ Although the

109. See Boorstyn, *Copyrights, Computers, and Confusion*, 63 J. PAT. OFF. SOC'Y 276 (1981).

110. *Id.*; see G. CALABRESI, *supra* note 1, at 54.

111. 17 U.S.C. § 101 (1982) provides in part:

"Literary works" are works, other than audiovisual works, expressed in words, numbers, or other verbal or numerical symbols or indicia, regardless of the nature of the material objects, such as books, periodicals, manuscripts, phonorecords, film, tape, disks, or cards, in which they are embodied.

112. The requirement was set forth in *White-Smith Music Pub. Co. v. Apollo Co.*, 209 U.S. 1 (1908). See *supra* notes 16-26 and accompanying text. See generally Boorstyn, *supra* note 109, at 277 (discussing the eligibility requirements for copyright protection).

113. 523 F. Supp. 635 (E.D.N.Y. 1981), *aff'd*, 669 F.2d 852 (2d Cir. 1982).

114. The court compared a video game to a motion picture and, thus, afforded the display protection as an audiovisual work. "An audiovisual display is an appropriate subject for a copyright," the court said, "even if the underlying computer program is not copyrighted." *Id.* at 639. The plaintiff in *Stern* had registered a videotape of the display but not the

display is important in a video game, it is almost inconsequential in many computer programs. Where the audiovisual display is insignificant the courts have been unable to avoid the issue of whether the program itself is intelligible to humans and therefore subject to copyright protection.

The most that can be said at the moment is that the common law method is at work. Most courts have held that because the software contained within a ROM "can be perceived, reproduced, or otherwise communicated . . . with the aid of a machine or device," the language of the statute protects it against unauthorized copying.¹¹⁵

Any attempt to resolve these cases depends on a court's ability to understand the technology involved. Some may argue that this fact emphasizes the need for a legislative determination, but congressmen do not have more expertise in matters of computer chips than judges. Congress would hold committee hearings, at which experts would offer testimony on the subject. Courts would rely on litigants to bring forth the experts. In either case, the experts are heard. What is at issue is whether an embedded program is like a literary work fixed in a media form that is already deemed protected under the statute—a question of treating like cases alike.

The contents of a computer program, as fixed in a ROM, consist of a source code and an object code. The source code, roughly speaking, is the language used to translate human commands into statements the machine can understand. It can be called forth in an intelligible form by a "PRINT" command, and thus filed for registration with the Copyright Office.¹¹⁶ The object code, however, is ephemeral. It is the part of the program that interacts with the

program itself. *Id.* at 638.

115. 17 U.S.C. § 102(a) (1982); *see, e.g.*, *Apple Computer, Inc. v. Formula Int'l Inc.*, 725 F.2d 521 (9th Cir. 1984); *Apple Computer, Inc. v. Franklin Computer Corp.*, 714 F.2d 1240 (3d Cir. 1983), *writ dismissed*, 104 S. Ct. 690 (1984); *Williams Elec., Inc. v. Artic Int'l, Inc.*, 685 F.2d 870 (3d Cir. 1982); *GCA Corp. v. Chance*, 217 U.S.P.Q. (BNA) 718 (N.D. Cal. 1982); *Tandy Corp. v. Personal Micro Computers, Inc.*, 524 F. Supp. 171 (N.D. Cal. 1981). *See generally* Note, *Copyright Protection of Computer Program Object Code*, 96 HARV. L. REV. 1723 (1983) (arguing that copyright law should protect object code).

116. *See Stern, Another Look at Copyright Protection of Software: Did the 1980 Act Do Anything For Object Code?*, 3 COMPUTER L.J. 1, 10-11 (1981). The Computer Software Copyright Act of 1980, Pub. L. No. 96-517, 94 Stat. 3015, amended section 117 of the Copyright Revision Act of 1976 to allow users to make archival copies of the programs they purchase and also added a definition of computer program to section 101: "A 'computer program' is a set of statements or instructions to be used directly or indirectly in a computer in order to bring about a certain result." 17 U.S.C. § 101 (1982). The Act resulted from congressional consideration of the recommendations of the Commission on New Technological Uses (CONTU). *See Stern, supra*, at 8-13.

data entered to produce output. As a result, it varies with each computer run. In form, it is nothing more than a series of "Os" and "1s", intelligible not even to computer experts.¹¹⁷

In *Data Cash Systems, Inc. v. JS&A Group, Inc.*,¹¹⁸ the Northern District of Illinois ruled that an object code embedded in a ROM performs a mechanical function and nothing more. Thus, it is not susceptible to copyright protection. The Northern District of California in *GCA Corp. v. Chance* has held to the contrary, reasoning that the object code is the encryption of the copyrighted source code and that, as a result, both codes should be treated as one copyrighted work.¹¹⁹ Perhaps this disagreement points to a need for Congress to provide an authoritative decision. Yet, the same could be said of any question resolved by the common law method. The weakness of the common law method—incrementalism—is its strength. Moreover, by the time Congress studies the issue, holds hearings, and passes legislation, its timetable may turn out to be just as slow.

a. Overlap with State Trade Secret Protection

Because of all the confusion surrounding copyright of computer software, manufacturers have resorted to the trade secret approach. Although it is a creature of the common law, it is the most reliable mode of protection at the moment. Some software companies, however, have not been content to elect a theory. Instead, they have attempted to keep their secret and obtain their copyright, too—a state of affairs that has generated serious preemption questions, about which authorities also are divided.¹²⁰ Put simply,

117. Stern, *supra* note 116, at 3, 10-11. Stern defined "object code" as: "[the] mechanical counterpart of a source program. Object code is directly usable in a machine, and is not written at all (in the ordinary sense of that word), but is embodied in magnetic tape, disks, or other physical device, such as a read-only memory (ROM)." *Id.* at 2.

118. 480 F. Supp. 1063 (N.D. Ill. 1979), *aff'd on other grounds*, 628 F.2d 1038 (7th Cir. 1980).

119. 217 U.S.P.Q. (BNA) 718, 720 (N.D. Cal. 1982).

120. Compare *M. Bryce & Assocs. v. Gladstone*, [1981-1983] COPYRIGHT L. REP. (CCH) D 25,418 (Wis. Ct. App. Mar. 26, 1982) (affixing copyright notice did not preempt trade secret), *cert. denied*, 103 S. Ct. 258 (1982) with *Avco Corp. v. Precision Air Parts, Inc.*, 676 F.2d 494 (11th Cir.) (trade secret is equivalent to copyright claim and thus is preempted), *cert. denied*, 103 S. Ct. 450 (1982). Commentators also are divided on the issue. Compare *Does the Copyright Act Preempt Trade Secrets?*, COMPUTER L. & TAX REP. 5, 7 (July 1981) (software algorithm not copyrightable, thus trade secret is not equivalent claim and the 1976 Copyright Act does not preempt it) with *Luccarelli, The Supremacy of Federal Copyright Law Over State Trade Secret Law for Copyrightable Computer Programs Marked With a Copyright Notice*, 3 COMPUTER L.J. 19, 43-51 (1981) (simultaneous use of trade secret and copyright protection not possible).

the question is whether one can obtain the benefits of the Copyright Act without bearing its burdens of disclosure.

The answer turns on interpretation of section 301 of the 1976 Act.¹²¹ As was discussed earlier, the legislative history of the Act is not clear as to the extent to which it preempts state copyright law, including state trade secret protection.¹²² It is one thing to rely on trade secret law instead of applying for a copyright. It is something else to try to have each fill the gaps left by the other. The former raises questions of equivalence; the latter—equivalence and failure to maintain secrecy. The second issue undoubtedly is the more difficult—requiring a balancing of the public's interest in disclosure and the author's desire for legal flexibility.

*Warrington Associates, Inc. v. Real-Time Engineering Systems, Inc.*¹²³ illustrates the dilemma. The plaintiff in this case registered the user's manual to his computer program with the Copyright Office; however, it still claimed that it contained trade secrets. The plaintiff licensed the program to a bank for use in business. The Northern District of Illinois held that the Copyright Act did not preempt state trade secret protection, because trade secret protects mere ideas—something beyond the scope of the Act. The dual claim, however, raised the more perplexing issue: by licensing the computer program for use in business and filing the program with the Copyright Office, had the plaintiff not disclosed his secret? If so, his trade secret claim self-destructs.¹²⁴

To counteract this contention, software manufacturers commonly license their programs subject to secrecy agreements. Indeed, that was the case in the related action of *Warrington Associates, Inc. v. Kellogg Citizens National Bank*.¹²⁵ A former vice-

121. 17 U.S.C. § 301 (1982).

122. See *supra* notes 45-51 and accompanying text.

123. 522 F. Supp. 367 (N.D. Ill. 1981).

124. In order to preserve a trade secret cause of action, one must take reasonable steps to preserve his secret. The economic basis of this principle is discussed in Kitch, *supra* note 76, at 699. Luccarelli set forth the weaknesses of trade secret protection:

First, disclosure agreements may be unenforceable after the secret becomes part of the general public knowledge unless contractual terms explicitly provide for enforcement after public dissemination. Second, the trade secret owner cannot maintain a misappropriation of trade secret cause of action against members of the general public who use the secret once it enters the public domain.

Luccarelli, *supra* note 120, at 44 (footnotes omitted). Luccarelli noted that once an owner registers and deposits the work for federal copyright protection, it no longer remains a secret, and the ideas contained therein are not afforded trade secret protection. *Id.* at 46.

125. 215 U.S.P.Q. (BNA) 375 (E.D. Wis., Dec. 3, 1981). See generally *Are Nondisclosure Agreements in Restraint of Trade?*, COMPUTER L. & TAX. REP. 1, 1 (Mar. 1982).

president of the bank had disclosed the contents of the manual to Real-Time, the defendants in the other action. The defendants raised the argument that the secrecy agreement between Warrington Associates, Inc. and Kellogg Citizens National Bank violated public policy. The Eastern District of Wisconsin ruled that it did not; instead, it was merely a promise between noncompeting parties not to disclose confidential information.¹²⁶

The Patent, Trademark, and Copyright Section of the American Bar Association has been no more consistent on this preemption question than the courts. In 1980, its Trade Secrets and Interference with Contracts Committee concluded that no conflict existed in placing a copyright notice on material to which trade secret protection also was afforded.¹²⁷ The next year, the successor to the 1980 committee reported that "the conflicting nature of trade secret and copyright theories seems to negate a conclusion that they may be relied on automatically and simultaneously."¹²⁸

If the Copyright Act provided complete protection to authors of computer software, reliance on trade secret protection would be unnecessary. Copyright lasts for fifty years beyond the death of the author¹²⁹ or, in the case of works made for hire, seventy-five years from the first publication or 100 years from the year of creation, whichever comes first.¹³⁰ Although trade secret protection can persist indefinitely, the statutory duration of copyright protection is much longer than the period during which the program would be valuable. In fact, even the shorter patent exclusivity period of seventeen years would be more than adequate.¹³¹ The problem, of course, is that neither statute is as comprehensive as common law trade secret protection. Until that changes, resort to the common law is inevitable.

Even with legal remedies, software manufacturers have been forced to rely on other means of protecting their product. A computer program, especially one written onto a disk, is just too easy

126. 215 U.S.P.Q. (BNA) at 379.

127. Trade Secrets & Interference with Contracts Comm. of A.B.A. Sec. Pat., Trademark & Copyright, 1980 COMMITTEE REPORT 218-19.

128. Trade Secrets & Interference with Contracts Comm. of A.B.A. Sec. Pat., Trademark & Copyright, 1981 COMMITTEE REPORTS 91, 93. The reports are discussed in Luccarelli, *supra* note 120, at 20. Legislation introduced in Congress would have amended § 301 of the Copyright Act to declare that the Act does not preempt state trade secret protection as to nonequivalent rights. H.R. 6983, 97th Cong., 2d Sess. § 3 (1982).

129. 17 U.S.C. § 302(a) (1982).

130. 17 U.S.C. § 302(c) (1982).

131. 35 U.S.C. § 154 (1982).

to copy.¹³² Computer programs are the record piracy problem of the 1980's. Some companies have built anti-copying features into their programs.¹³³ This, however, interferes with the ability of a legal purchaser to make a backup copy.¹³⁴ One suggested solution is to embed the program in a chip, but that raises the additional copyright problems discussed above. Nevertheless, perhaps the most promising approach is that for which patent approval recently was granted: a ROM chip that will execute a program but not disclose its structure.¹³⁵ Copying still is possible, but it is much more difficult.¹³⁶

The primary point of this discussion is that when Congress fails to respond to new technology quickly and completely, authors and inventors are driven toward old modes of common law protection. These older forms can keep up with technology when statutes cannot because the common law is general enough to afford flexibility. Instead of defining the precise metes and bounds of the field, trade secret law, for example, describes the lay of the land. Armed with that general description, courts can consider whether a new technology should be fenced in or out of the protective scope of trade secret law. The more specific a legislature is in responding to a particular situation, the more problems it creates for subsequent innovations.

b. Copyright Protection for Video Games

To bring the discussion full circle, the copyrightability of a video game is itself a question of considering the applicability of precedent to new technology. In addition to the underlying copyright issues applicable to all computer software, there is the question of whether the game itself can be protected. A game is nothing more than an idea, and an idea cannot be co-opted. Is PAC-MAN merely a maze game and therefore not entitled to copyright?

The *Atari* case resolved that issue—affording copyright protection not to the concept of the game but rather to its characters. In overruling the Northern District of Illinois, the Seventh Circuit wrote that “[t]he expression of the central figure as a ‘gobbler’ and the pursuit figures as ‘ghost monsters’ distinguishes PAC-MAN

132. See *Piracy in Era of Computers*, N.Y. Times, Feb. 24, 1983, at D2, col. 1.

133. See *Battling the Computer Pirates*, N.Y. Times, Jan. 5, 1983, at D1, col. 3.

134. *Id.* at D7.

135. See *supra* note 132.

136. *Id.*

from conceptually similar video games."¹³⁷ K.C. Munchkin infringed because it copied the characters, not the game.

In so holding, the appellate court disagreed with the district court's learned explication of the difference in the games' characters.¹³⁸ The district court described the distinctive features as follows:

In "K.C. Munchkin," the central character, the munchkin, appears as a blue figure with horns, normally with a smile, but when he is attacked by a monster, his smile turns to a frown; and then he evaporates upwardly from the screen. The character, or the appearance of the central figure, is that he initially faces the viewer rather than showing a profile. As he moves along the maze he shows a profile, and when he stops, he turns around to face the viewer with another smile. Thus the central character is made to have a personality which the central character in "Pac-Man" does not have. "K.C. Munchkin" has munchers which are much "spookier" than the goblins in "Pac-Man". Their legs are longer and move more dramatically; their eyes are vacant, all of these features being absent in "Pac-Man."¹³⁹

In terms of social importance, the spookiness content of PAC-MAN and K.C. Munchkin may not mean much, but the institutional ability of courts to resolve the underlying questions is of no small moment. Congress has shown no great distinction in either anticipating new technology or responding to it. As a result, greater judicial activism would provide some current in what otherwise has commonly been a vacuum. A judicial determination would be only the starting point of the process. Congress could legislate if it did not like the result. The argument is that courts are better able to respond quickly to innovation than the legislature, not that the legislature should not respond at all.

c. Copyright Protection for Computer Technology

In the area of computer technology, new questions concerning copyright are destined to arise rapidly. The late Ithiel de Sola Pool, a professor at MIT, has provided several examples.¹⁴⁰ One

137. *Atari, Inc. v. North Am. Philips Consumer Elec. Corp.*, 672 F.2d 607, 617 (7th Cir.), *cert. denied*, 459 U.S. 880 (1982).

138. *Id.* at 617-18.

139. Kramsky, *supra* note 94, at 349 (quoting No. 81-C-6434, slip op. at 7-8 (N.D. Ill. Dec. 4, 1981)).

140. See Pool, *The Culture of Electronic Print*, DAEDALUS, Fall 1982 at 17, 27-28.

concerns evolutionary manuscripts. Under current law, copyright attaches as soon as the writing is fixed. Pool, however, suggests that some manuscripts may not exist in a canonical version.¹⁴¹ That is, they may be written; other people may be allowed to view them on their computer terminals and even asked to edit them; and students may be encouraged to interact with them.¹⁴² At what stage is the manuscript fixed? Is each version fixed much like several drafts of a paper? If so, which is the final official draft? This is important, for if infringement is alleged, the plaintiff must show substantial similarity between his work and the alleged infringing work—presumably similarity at the time the defendant wrote his work or when he had access to it. When the document is constantly evolving, it may be impossible to prove its state at any given point.

Another of Pool's examples is the step beyond photocopying: access to computer data bases. In order to read a work on line, one must write it on his terminal. That is, he must call it up from the computer's memory and place it on his terminal screen or print it out.¹⁴³ Is that more akin to copying the material or merely reading it in a library?

Pool predicts that "[t]otally new concepts will have to be invented to compensate creative work. The notion of copyright based on print simply won't work."¹⁴⁴ In a similar vein, one notewriter

141. *Id.* at 27.

142. *Id.* at 27-28.

143. *Id.* at 28-29. Members of the Newsletter Association of America considered suing the New York Times over its abstracting of their copyrighted newsletters for the Times' computerized data bank. The owner of Energy Daily said he discovered the practice when one of his subscribers failed to renew. Upon calling the subscriber, he was told that the company could get all the information it needed from the Times Information Service. See *NYTIS and Newsletter Publishers In Copyright Imbroglio*, 3 ONLINE DATABASE REPORT 1 (Mar. 1982).

Preparing derivative works is one of the exclusive rights under § 106 of the Copyright Act. See 17 U.S.C. § 106(2) (1982). The fair use exception, § 107, might be thought to justify the abstraction of copyrighted articles; however, the use of computer technology to make the abstracts a substitute for the actual publication makes the fair use defense less valid. One of the factors a court is to consider in determining fair use is "the effect of the use upon the potential market for or value of the copyrighted work." 17 U.S.C. § 107(4) (1982).

144. Pool, *supra* note 140, at 29; cf. Kurz, *Addressing the Reprographic Revolution: Compensating Copyright Owners for Mass Infringement*, 15 U. MICH. J.L. REF. 261, 264-81 (1982) (Courts should not apply old law to new problems; instead, Congress should create a taxing scheme to compensate authors.). Pool's concern extends beyond copyright. He believes that as the boundaries between different media blur—as newspapers are delivered electronically, for example—the regulatory distinctions also blur. As a result, Pool worries that previously unregulated printed messages may become subject to some government control when they are transmitted electronically. This evolution is the subject of his latest book. I. POOL, *TECHNOLOGIES OF FREEDOM* (1983); see Rosen, Book Review, 18 U.S.F.L. REV. 405 (1984).

recently suggested that a "unified theory of copyright infringement for an advanced technological era" be constructed, distinguishing between commercial and noncommercial use and between "iterative" and "interactive" activities.¹⁴⁵ In his new system, only iterative commercial uses would infringe the copyright.¹⁴⁶

Under the latter scheme, the copying of a "book" on line for private use would give rise to no copyright liability because the user received no "direct pecuniary benefit."¹⁴⁷ Similarly, under Pool's thinking, such abuse would be free of liability under existing law because it is "analogous to word-of-mouth communication in the eighteenth century [which was not subject to copyright], not to the print shop of that time [which was]."¹⁴⁸ Thus, Pool says, there arises the need for a totally new system.¹⁴⁹

Both authors ignore the power of the common law. Courts do not need new concepts of intellectual property. They need to fit new technology into existing concepts. The system of affording limited protection to creative people is not outdated. Only the statutory specifications of the system are behind the times. The most effective means of responding to changed conditions is common law updating, not wholesale legislative revision.

The notewriter's solution illustrates the danger of looking for new concepts because of the existence of new technology. As more and more people obtain access to computer terminals and data bases, fewer and fewer have any incentive to purchase a "book" if they can obtain it on line free of charge, or for a nominal fee pursuant to a contract between the author and the data base publisher. A common law court could reason that a computer data base is not like a library. The number of copies the library buys limits the number of persons who can borrow a book from a library at any time. In contrast, the number of people who can obtain copies by tapping a data base is unlimited, and the base buys only one copy. This is the Xerox machine writ large.

Potential diminution in sales, the notewriter says, likely would occur, but that, he contends, "is not where the infringement in-

145. Note, *Toward a Unified Theory of Copyright Infringement for an Advanced Technological Era*, 96 HARV. L. REV. 450, 462-63 (1982). The note defines "iterative" as copying "for the purpose of simply reasserting . . . the contents of the original." *Id.* at 462. "Interactive derivation results in a modification of the original . . . for such purposes as scholarly criticism, parody, or research." *Id.*

146. *Id.* at 463.

147. *Id.*

148. Pool, *supra* note 140, at 28.

149. *Id.* at 29.

quiry ought to lie."¹⁵⁰ Instead, he wants to focus on commercial use.¹⁵¹ That theory fails to take account of the way new technology changes the marketplace. A reader of a book may not obtain pecuniary value from it, but if everyone reads the book without paying, the author has no economic incentive to write it. As a result, the underlying basis of the copyright clause of the Constitution is displaced.

Interaction with media is nothing new. Any communication involves both sending and receiving. The question is whether the interaction with a computer data base is like the interaction with older technology for which the legal balance has been struck. We may indulge ourselves in believing that the nature of the problem has changed, but in fact only the manifestations and the speed with which they occur have changed. That being the case, what is needed is not more statutes but rather more logical reasoning from accepted principles.

d. Copyright Protection for Artificial Intelligence

Having said that, there is one hard case that may in fact present a new problem—that of “artificial intelligence.”¹⁵² Artificial intelligence is the step beyond machines programmed to carry out human instruction. Instead, the machines make their own decisions within a constellation defined by the programmer. Pool says that “[t]he idea that a machine is capable of intellectual labor is beyond the scope of the copyright statute.”¹⁵³ That may be true. At the very least it is a hard case.

The recent activity of an artist named Harold Cohen manifests this new challenge. Cohen has ceased drawing. Instead,

150. Note, *supra* note 145, at 465. *But see* 17 U.S.C. § 107 (1982) (specifically identifying diminution of market as a factor in fair use analysis). The notewriter contends that this economic component offers no guidance as to new technology because of the difficulty of identifying infringers. Note, *supra* note 145, at 467. Indeed, it is difficult to find every person who makes a videotape of a copyrighted television program or prints out a copy of an abstract of a copyrighted article. Ease of ascertainment, however, is an administrative problem related to the fashioning of a remedy not to the right itself. If anything, the difficulty of detection points toward the creation of a compulsory licensing system, with a percentage of the sales price of tapes and disks and perhaps subscriptions to data bases, going to the copyright owners.

151. Note, *supra* note 145, at 465.

152. See generally Denicoff, *Sophisticated Software: The Road to Science and Utopia*, in *THE COMPUTER AGE: A TWENTY-YEAR VIEW* 375-80 (M. Dertouzos & J. Moses eds. 1979) (discussing the 15-year history of artificial intelligence).

153. Pool, *supra* note 140, at 29.

he spends his time programming a personal computer to draw.¹⁵⁴ Unlike most computer artists, Cohen does not program the machine to achieve a particular result. Rather, he instructs it in various concepts of art: rules of space, positioning, and draftsmanship.¹⁵⁵ Then, he allows it to create its own compositions, a task it performs at the rate of twelve drawings per hour.¹⁵⁶

Using existing ideas and processes to create art works, the computer is like a student. As a result, its teacher has no copyright claim to its work. The machine, however, has no rights itself either. Arguably, the work is in the public domain. Yet, that would leave otherwise copyrightable "intellectual" creations without protection.

On the other hand, one might say that the computer is only the artist's brush—the means he uses to create. Thus, its output would be copyrightable in the name of the artist. This, however, seems to minimize the independence of machine from man. Perhaps artificial intelligence is one area in which a decision about protection may be cut from whole cloth, yet the very novelty of the problem serves to prove the principal hypothesis here: the remaining issues involve only new ways of expressing human intelligence and, as such, courts may resolve them by fitting them within the legal landscape.

Difficulty notwithstanding, a court faced with such a case would have to make a decision. A commentator should do no less. The starting point is the statute itself. Section 102 of the Copyright Act extends protection to "pictorial works," as distinguished from the procedure for creating those works. Accordingly, the fact that Cohen uses a machine as part of the process to create art would seem to be irrelevant. It is the work itself, fixed in a tangible medium of expression, that is covered.

The question of originality and authorship is analogous to that raised in *Burrow-Giles*¹⁵⁷—whether a photographer is properly considered the author of a photograph. There, the court ruled that

154. See *Portrait of the Artist As a Young Computer*, N.Y. Times, Feb. 20, 1983, at H31, col. 1.

155. *Id.*

156. *Id.* The less problematic form of computer art, in which the programmer/artist instructs the machine to produce a particular result, is discussed in Negroponce, *The Return of the Sunday Painter*, in *THE COMPUTER AGE: A TWENTY-YEAR VIEW* 21 (M. Dertouzos & J. Moses eds. 1979). For a general discussion of artificial intelligence, see Minsky, *Computer Science and the Representation of Knowledge*, in *THE COMPUTER AGE: A TWENTY-YEAR VIEW* 392 (M. Dertouzos & J. Moses eds. 1979).

157. See *supra* note 14 and accompanying text.

the posing of the subject, the arranging of the scenery, and the lighting showed the picture "to be an original work of art, the product of plaintiff's intellectual invention, of which the plaintiff is the author."¹⁵⁸

The key phrase is "intellectual invention," and the key issue, as characterized in *Burrow-Giles*, is whether the work "owe[s] its origin" to the "author."¹⁵⁹ Viewed in that light, Harold Cohen and other artificial intelligence programmers are indeed the authors of their computers' works.¹⁶⁰ Although the machines make decisions on their own, those decisions are made within confines established by the programmer/artist. A programmer who wanted different types of pictures would provide different rules of drawing to his computer. Thus, while it is true that Cohen, unlike a photographer, does not anticipate the precise appearance of the final product, he contributes that without which the endproduct would not exist at all.

Yet, one does not need a computer to allow forces beyond his control to contribute to this art. Reliance on chance is sufficient. John Cage has composed music in that manner, relying on the random patterns of the I Ching, the Chinese Book of Changes, to make musical decisions.¹⁶¹ Other composers have "written" music that allows orchestra members to decide what and when to play.¹⁶² The decisions to allow chance to decide is itself an artistic decision—one that is no less deserving of copyright protection in principle or in conformity with the Act.¹⁶³

B. Cable Television

The history of cable television's copyright liability is largely a

158. *Burrow-Giles*, 111 U.S. at 60.

159. *Id.* at 57-58.

160. The Copyright Act does not require the actual creator of the work to be the copyright holder. To the contrary, § 201(b) establishes the employer as the copyright holder of works "made for hire" by employees, unless the parties have expressly agreed otherwise in writing. 17 U.S.C. § 201(b) (1982). *But see* Note, *Can a Computer be an Author? Copyright Aspects of Artificial Intelligence*, 4 COMM/ENT L.J. 707, 744-45 (1982).

161. *See generally* J. CAGE, SILENCE 57-61 (1961). Other composers have relied on random numbers and even telephone directories for the arrangement of their compositions. *See* M. NYMAN, EXPERIMENTAL MUSIC 5 (1974).

162. Frederick Rzewski, in his 1969 composition *Les Moutons de Panurge*, encouraged performers who had become lost playing the music to remain lost. M. NYMAN, *supra* note 161, at 5. Morton Feldman, in the 1957 *Piece for Four Pianos*, directed the performers to move through suggested material at their own speed. *Id.*

163. This would not prevent others from employing chance and, perhaps, reaching the same result. Rather, it would only prohibit the direct copying of the first work.

tale of two agencies: the Federal Communications Commission (FCC) and the Copyright Royalty Tribunal (CRT). The FCC often acts like a captive of the primary object of its regulation—the broadcast media. Between these two agencies, the Court and Congress have engaged in an ongoing dialogue that has resulted in haphazard and often inexplicable results in this area.

Cable originated as a means of obtaining television signals in remote areas. A single large antenna received otherwise hard-to-get broadcasts, and a cable linked individual homes to the antenna. Thus, cable television was designated Community Antenna Television or CATV.¹⁶⁴

Before long, entrepreneurs realized that people in urban areas would pay to receive additional channels of television. Because broadcast frequencies are scarce, most communities had no more than five channels.¹⁶⁵ Cable systems could import signals from distant cities to provide additional viewing choices as well as other specialized services.

1. THE COURT AND THE FCC

Until 1962, the FCC took a laissez-faire attitude toward CATV. Beginning in that year, however, the Commission began to regulate the fledgling industry primarily because of pressure from airwave broadcasters to minimize any competition. In 1966, the Commission banned the importation of distant signals into the top 100 broadcasting markets.¹⁶⁶ By and large, the Supreme Court upheld the Commission's restrictions despite the fact that cable held the promise of providing the diversity that local broadcasting never could achieve.¹⁶⁷

Despite the rules, CATV continued to exist, albeit in a retarded form. Some distant signal importation went on under a grandfather clause, while other systems continued to perform the original function of CATV—retransmitting the signals of nearby

164. For a brief history of the development and early regulation of cable television, see STAFF OF HOUSE SUBCOMM. ON COMMUNICATIONS OF THE HOUSE COMM. ON INTERSTATE AND FOREIGN COMMERCE, 94TH CONG., 2D SESS., *CABLE TELEVISION: PROMISE VERSUS REGULATORY PERFORMANCE* (Subcomm. Print Jan. 1976).

165. See generally R. NOLL, M. PECK & J. MCGOWAN, *ECONOMIC ASPECTS OF TELEVISION REGULATION* (1973) (examining the effect of government regulatory policies on performance of television industry).

166. Second Report and Order in Docket Nos. 14895, 15233, & 15971, 2 F.C.C.2d 725, 782-84 (1966).

167. See *United States v. Midwest Video Corp.*, 406 U.S. 649 (1972); *United States v. Southwestern Cable Co.*, 392 U.S. 157 (1968).

but hard-to-receive stations. One such system was the defendant in the lawsuit that established the scope of cable television's copyright liability.

In *Fortnightly Corp. v. United Artists Television, Inc.*,¹⁶⁸ the holder of copyrights in several motion pictures claimed that the CATV systems in Clarksburg and Fairmont, West Virginia, had infringed its copyrights by retransmitting films broadcast by and licensed to five television stations. Congress had not legislated on the copyright liability of cable systems. In fact, the Court observed that Congress had not revised the Copyright Act since 1909 even though Congress authorized a study of its deficiencies in 1955.¹⁶⁹ Justice Stewart wrote for the majority:

[O]ur inquiry cannot be limited to ordinary meaning and legislative history, for this is a statute that was drafted long before the development of the electronic phenomena with which we deal here. In 1909 radio itself was in its infancy, and television had not been invented. We must read the statutory language of 60 years ago in the light of drastic technological change.¹⁷⁰

Thus, if the law was to be updated quickly, the Court was going to have to do it. The Court instead preferred to attempt to create an untenable situation that would force Congress to act.¹⁷¹ Congress, however, did not act for another eight years, finally passing the 1976 Copyright Act that became effective in 1978.

In *Fortnightly*, the majority sought to determine if a cable system was "perform[ing]" the copyrighted work within the meaning of the 1909 Act.¹⁷² The question was whether a cable system is more like a broadcaster or a viewer. "Broadcasters perform. Viewers do not perform."¹⁷³ The Court's conclusion: it is more like a viewer, for it only enhances a viewer's ability to receive a signal by providing a well-located antenna.¹⁷⁴

In so holding, the Court discounted other important evidence in making the comparison—specifically, the facts that cable television was a business and that cable systems were reaping economic benefit from the copyrighted programs. Undoubtedly, it was laudable to make these signals available to the subscribers, but social

168. 392 U.S. 390 (1968).

169. *Id.* at 396 n.17.

170. *Id.* at 395-96 (footnotes omitted).

171. *Id.* at 401-02.

172. *Id.* at 395.

173. *Id.* at 398 (footnote omitted).

174. *Id.* at 399.

utility does not immunize one from copyright liability. If that were so, Barnes and Noble could send bootlegged copies of bestsellers to people in small towns without bookstores. In attempting to treat like cases alike, the Court looked for consistency only within the statute and failed to consider the external context.

The Court was not without alternatives. The Solicitor General suggested in an amicus brief that the Justices fashion a compromise solution.¹⁷⁵ Under this approach, cable systems would be said to perform the programs they carry, but a license would be implied for the carrying of certain signals.¹⁷⁶ The majority rejected this alternative, choosing instead to put the onus on Congress to update the law.

Justice Fortas would not have been so timid. He recognized the difficulty of fitting cable television into an act written before television was invented, but he realized that Congress was not prepared to contemporzize the 1909 Act. If updating was to occur in a timely fashion, he concluded, the Court would have to do it, and not by resorting to a tortured interpretation:

The novelty of the use, incident to the novelty of the new technology, results in a baffling problem. Applying the normal jurisprudential tools—the words of the Act, legislative history, and precedent—to the facts of the case is like trying to repair a television set with a mallet. And no aid may be derived from the recent attempts of Congress to formulate special copyright rules for CATV—for Congress has vacillated in its approach.¹⁷⁷

Fortas presciently observed that “it would be hazardous to assume that Congress will act promptly, comprehensively, and retroactively.”¹⁷⁸ Recognizing the important legal issue and economic values at stake, he examined the factual context in which CATV operated and rejected the determination of the majority that CATV equipment performed a function like that of equipment generally furnished by a television viewer.¹⁷⁹ A CATV antenna was not like a home antenna. A home antenna could not pick up these signals. CATV carried the programs beyond the range they would normally reach. Thus, it “perform[ed]” the material that it picked up and carried, making it functionally distinct from a passive

175. *Id.* at 401.

176. *Id.* at 401 n.32. This is similar to the proposal advanced in the home videotaping case. See *infra* notes 217-72 and accompanying text.

177. *Fortnightly*, 392 U.S. at 403 (Fortas, J., dissenting) (footnote omitted).

178. *Id.* at 404.

179. *Id.* at 405-07.

receiver.¹⁸⁰

Fortas would have held that a cable system does perform the programs it transmits. Rather than casting off precedent without a compelling reason, he believed that Congress should implement any necessary changes. "Our ax," he said, "being a rule of law, must cut straight, sharp, and deep; and perhaps this is a situation that calls for the compromise of theory and for the architectural improvisation which only legislation can accomplish."¹⁸¹

In 1972, the FCC once again entered the picture. After the White House Office of Telecommunications Policy (OTP) negotiated an agreement among the broadcasters, cable operators, and copyright holders, the Commission embedded the consensus in its Cable Television Report and Order.¹⁸² The rules kept importation of distant signals on a tight rein.¹⁸³

Dissenting in part from the Report, Commissioner Nicholas Johnson revealed how the rules resulted not from an independent analysis by an expert regulatory agency but rather from a captive agency tethered to the industry it is supposed to control:

In future years, when students of law or government wish to

180. *Id.* at 407. Fortas compared the cable television system to the wired hotel room system at issue in *Buck v. Jewell-LaSalle Realty Co.*, 238 U.S. 191 (1931). In that case, the Court held that a hotel "performed" works of music broadcast by a radio station when the hotel picked up the signal with a central receiver and passed it along by wire to each of the rooms. The analogy nicely illustrates the common law method because the *Jewell* Court made its decision by comparing the wired radio system to the engagement of an orchestra for the entertainment of the hotel's guests. The parallel becomes even more striking when one notices a footnote in the *Jewell* opinion stating that "[a]t the present time there are renewed proposals for the revision of the Copyright Act in the light of new conditions." *Id.* at 201 n.10. Just as cable television was new to 1960's society, wired radio reception was new in the 1930's. Nevertheless, the legal questions involving the new technology were nothing more than determining how it fit within existing value choices—a matter of treating like cases alike. The majority in *Fortnightly*, however, ignored the parallel, limiting *Jewel* to its facts without a persuasive reason for doing so. 392 U.S. at 396 n.18.

In 1976, Congress made certain secondary transmissions of a primary transmission embodying a performance, such as the transmission involved in *Jewell*, exempt from copyright infringement liability. 17 U.S.C. § 111(a)(1) (1982). Without commenting on the merits of the policy, one is struck by the silliness of enacting a hotel radio reception law. If every medium had its own section of the Copyright Act, the statute would take on elephantine proportions, thus forcing Congress to amend it several times a year. A more useful approach would be to prescribe the policy choices in general terms and allow the courts to keep the act up to date with technology.

181. 392 U.S. at 408 (Fortas, J., dissenting).

182. Cable Television Report and Order, 36 F.C.C.2d 143 (1972).

183. Among the most important features were restrictions on the number of distant signals a cable system could import, 47 C.F.R. §§ 76.59(b)-(e), 76.61(b)-(f), & 76.63 (1980) (repealed), and the cablecasting of programs to which local television stations had secured exclusive exhibition rights, 47 C.F.R. §§ 76.151-.159 (1980) (repealed).

study the decision making process at its worst, when they look for examples of industry domination of government, when they look for Presidential interference in the operation of an agency responsible to Congress, they will look to the FCC handling of the never-ending saga of cable television as a classic case study.¹⁸⁴

According to Commissioner Johnson, the intransigence of the various interested parties during the post-*Fortnightly* period prevented Congress from resolving the problem of distant signal importation and copyright liability.¹⁸⁵ On August 5, 1971, after months of study and public hearings, the FCC sent a letter to Congress outlining its proposed rules for cable television. Dissatisfied with the compromise reached by the FCC and encouraged by the White House and the FCC Chairman, the broadcasters, copyright owners, and cable interests "carved up the cable pie in a manner more to their liking. [And] . . . the Commission puts its stamp of approval on the results of these closed door sessions by implementing the precise terms of the industry's agreement."¹⁸⁶

The concurring statement of Chairman Dean Burch, who participated in the OTP-sponsored negotiations, disputed Johnson's conclusions about the negative aspects of the process. Burch saw nothing wrong with having made another attempt at a negotiated compromise that would instigate legislation—a course of action that the Commission had previously urged. OTP was currently conducting a cable study, wherein all interested parties were asserting their viewpoints. The full Commission was not invited to participate in the negotiations due to practical difficulties.¹⁸⁷ Although no evidence of impropriety has been discovered, the process illustrates the inadequacy of the model legislative/administrative paradigm for conflict resolution. By 1974, when the question reached the Court once again, Congress still had not responded. Before Congress would respond, however, cable television would continue to challenge the resources of the FCC and the Court. In *Teleprompter Corp. v. Columbia Broadcasting System, Inc.*,¹⁸⁸ the plaintiff urged the Court to take notice of cable television's new endeavors—program origination, sale of commercials, distant signal importation, and interconnection with other cable systems.

184. 36 F.C.C.2d at 307 (Comm'r Johnson, concurring and dissenting).

185. *Id.* at 314.

186. *Id.* at 310.

187. *Id.* at 291 (Chairman Burch, concurring).

188. 415 U.S. 394 (1974).

These new operations, the plaintiff argued, made the cable operator much more like a broadcaster than the earlier community antenna operator that was involved in *Fortnightly*.¹⁸⁹

Again, Justice Stewart wrote the majority opinion, and again he held that within the meaning of the Copyright Act a cable system does not "perform" the programs it imports, no matter how far away the programs come from and no matter what else the system may do.¹⁹⁰ Detailed regulation of the commercial and business relationships of the communications industry, he said, was a job for Congress, but Congress, of course, still had not acted.¹⁹¹

In dissent, Justice Douglas exposed the paradox of the majority's deference: by refusing to update the Copyright Act itself, the Court was usurping the legislative function more than if it were to move forward. He reasoned that the majority "reads the Copyright Act out of existence for CATV. That may or may not be desirable public policy. But it is a legislative decision that not even a rampant judicial activism should entertain."¹⁹²

By the standards of expertise and independence from industry and the executive, the Commission's actions failed. By the standard of achieving compromise in the midst of competing interests, Congress failed. How difficult is it to conclude, then, that the courts were no less able to fashion a cable copyright royalty system? By design, federal courts have institutional independence. They could have considered the preferences indicated and the expert evidence presented by the parties. Federal courts could have used this information to reach a disinterested result—one that would have fulfilled the principles of the Copyright Act as well as the public interest goal of the Communications Act.¹⁹³

2. THE CONGRESSIONAL RESPONSE

Unfortunately, the story does not have a happy ending. Congress did in fact legislate as to cable television liability in the 1976 Copyright Revision Act. It enacted a compulsory license scheme that charged cable companies a percentage of their gross receipts for the number of distant signals they imported.¹⁹⁴ To administer

189. *Id.* at 403-04.

190. *Id.* at 405.

191. *Id.* at 414 n.16.

192. *Id.* at 419 (Douglas, J., dissenting).

193. 47 U.S.C. § 309(a) (1982).

194. 17 U.S.C. § 111(d) (1983). The Second Circuit has held that the compulsory license royalty scheme does not apply to the satellite companies that are the modern equivalents of

the licensing program, Congress created a commission, the Copyright Royalty Tribunal (CRT), to oversee the operation and to adjust the rates to reflect inflation or deflation.¹⁹⁵

Congress also authorized the CRT to determine new rates for any additional distant signals that the FCC might subsequently allow cable systems to import. At the time, the rules that emanated from the 1972 FCC Cable Television Report and Order remained in effect, limiting the number of distant signals a cable system could import. In 1980, however, the Commission finally eliminated those rules.¹⁹⁶ Thus, cable systems were free to import as many signals as they desired with only minimal copyright liability for additional signals.

This was the contingency Congress had anticipated. The intent was that the CRT would study the new market conditions created by deregulation and require reasonable royalties for importation of the new signals. Unfortunately, Congress failed to give the CRT the tools with which to do the job—it had a total budget of

community antennae. In *Eastern Microwave, Inc. v. Doubleday Sports, Inc.*, 691 F.2d 125 (2d Cir. 1982), *cert. denied*, 103 S. Ct. 1232 (1983), the satellite company that retransmitted the broadcast of Mets's games over WOR in New York to more than 600 cable systems sued the owner of the New York Mets for a declaratory judgment that it was exempt from copyright liability. The rationale of the decision harkens back to *Fortnightly* and *Teleprompter*. Although the holding is that the type of unedited retransmission of signal by Eastern Microwave is exempt from copyright liability under 17 U.S.C. § 111(a)(3), the court seems to say that a satellite is more like a viewer than a performer; thus, it does not incur copyright liability.

195. 17 U.S.C. §§ 801-810 (1982). Section 801(b)(2)(A) allows financial updating:

The rates established by section 111(d)(2)(B) may be adjusted to reflect (i) national monetary inflation or deflation or (ii) changes in the average rates charged cable subscribers for the basic service of providing secondary transmissions to maintain the real constant dollar level of the royalty fee per subscriber which existed as of the date of enactment of this Act: *Provided*, That if the average rates charged cable system subscribers for the basic service of providing secondary transmissions are changed so that the average rates exceed national monetary inflation, no change in the rates established by section 111(d)(2)(B) shall be permitted: *And provided further*, That no increase in the royalty fee shall be permitted based on any reduction in the average number of distant signal equivalents per subscriber. The Commission may consider all factors relating to the maintenance of such level of payments including, as an extenuating factor, whether the cable industry has been restrained by subscriber rate regulating authorities from increasing the rates for the basic service of providing secondary transmissions.

196. Report and Order in Docket Nos. 20988 & 21284, 79 F.C.C.2d 663 (1980), *aff'd*, *Malrite T.V. v. F.C.C.*, 652 F.2d 1140 (2d Cir. 1981), *cert. denied*, *National Ass'n of Broadcasters v. F.C.C.*, 454 U.S. 1143 (1982); see Zorn, *Cable Television: Toward an Improved Copyright and Communications Policy*, 7 COLUM. J. ART & L. 239 (1982); Simon, *The Collapse of Consensus: Effects of the Deregulation of Cable Television*, 7 COLUM. J. ART. & L. 19 (1982).

only \$487,000 and almost no staff.¹⁹⁷ Only one of the five commissioners had any experience in copyright law. The others had experience only in presidential campaigns.¹⁹⁸

Without an economist or the budget to hire one, the CRT was forced to rely on the testimony of economic experts retained by the interested parties. The CRT did not accept a single study in its entirety. Ultimately, it did set new rates, but without providing any explanation of the formula by which they were derived.¹⁹⁹ Cable systems and so-called "superstations" (independent stations that a large number of systems import) objected, claiming that the royalties are too high. A legal challenge to the rule's reasonableness proved unsuccessful.²⁰⁰ Regardless of court determinations of reasonableness, it is clear that the CRT needs more resources if it is to function effectively. Additionally, future decisions will reveal whether the CRT will be just another captive agency—in this case, a captive of copyright holders—or truly independent.²⁰¹

a. Teletext

The copyright questions involving cable television are far from over. One recent case involved the use of teletext. Teletext is the use of gaps in the pulse of the television picture to carry additional signals.²⁰² The primary image and the teletext are distinct and do not overlap on the screen. A special device (as in the case of captioning for the deaf) decodes the teletext for superimposition or for display on a separate channel of a cable system.

WGN television in Chicago, one of the superstations, transmits its signal via satellite to cable companies around the country that, in turn, send it to their customers. WGN decided to supplement its copyrighted news program by placing a program guide in

197. *A Small Tribunal and Its Big Decision*, N.Y. Times, Mar. 22, 1983, at B6, col. 4.
198. *Id.*

199. 37 C.F.R. § 308.1-.2 (1983).

200. *National Cable Television Ass'n v. Copyright Royalty Tribunal*, 724 F.2d 176 (D.C. Cir. 1983).

201. See Greenman & Deutsch, *The Copyright Royalty Tribunal and The Statutory Mechanical Royalty: History and Prospect*, 1 CARDOZO ARTS & ENT. L.J. 1, 86-90 (1982).

202. See generally Neustadt, Skall & Hammer, *The Regulation of Electronic Publishing*, 33 FED. COM. L.J. 331 (1981) (describing teletext and its cousin videotex); P. LYMAN, CANADA'S VIDEO REVOLUTION 128-39 (1983). Canada and Great Britain have assumed a leadership position in the development of this technology. A recent decision of the United States Federal Communications Commission authorizing the broadcasting of teletext services promises to expand the American market. See *Teletext Authorized by F.C.C.*, N.Y. Times, Apr. 1, 1983, at D1, col. 1. CBS, NBC, and PBS plan to make use of the vertical blanking interval. *Id.*; *PBS Project With Merrill*, N.Y. Times, Apr. 4, 1983, at D8, col. 5.

the vertical blanking interval during the news program, thereby implementing teletext. United Video, a satellite company, chose not to transmit WGN's teletext; instead, it substituted the Dow Jones business news teletext. WGN sued, claiming that the alteration of the teletext was an unauthorized editing of the copyrighted broadcast and, as such, constituted an infringement.

In *WGN Continental Broadcasting Co. v. United Video, Inc.*,²⁰³ Judge Posner of the Seventh Circuit held that WGN was correct. For copyright purposes, the news broadcast and the teletext were one audiovisual work. United Video could choose to transmit or not to transmit the work, but it could not choose to transmit only part of it. Posner concluded that teletext is not a separate program but rather part of a single audiovisual work, even if the teletext images are not designed to be perceived simultaneously, as in the manner of captioning for the deaf.

In reaching his decision, Posner employed the common law technique of comparing this new invention with an older one, as to which the law was settled. He wrote:

[T]hough WGN chooses not to use the vertical blanking interval to overlay additional images on those in the nine o'clock news, it is clear that United Video may not use it for that purpose without WGN's permission, any more than if the publisher of a book leaves the inside covers blank the book seller (or book wholesaler, to make the analogy more precise) may inscribe the Lord's Prayer on them in order to broaden the book's appeal.²⁰⁴

WGN's use of teletext, the court said, had many analogues in older technology. A dictionary, for example, could be copyrighted even though its entries were not intended to be read sequentially. Similarly, a history book may include a fold-out map. "In short," Posner wrote, "we cannot see that the difference between a one- and a two-channel program is much more profound than that between a silent movie and a talkie."²⁰⁵ If television technology required two channels, one for the picture and one for the sound, Posner said, the copyright of the program certainly would include both.²⁰⁶

Having engaged in creative judging, Posner decided to justify it as exercising power delegated by Congress rather than power in-

203. 693 F.2d 622 (7th Cir. 1982).

204. *Id.* at 626.

205. *Id.* at 627.

206. *Id.* In fact, the audio component of a television program is an FM signal.

trinsic to the court. The judge read the broad definition of "audiovisual work"²⁰⁷ and the legislative history of the 1976 Act²⁰⁸ as indications that Congress "wanted the courts to interpret the definitional provisions of the new act flexibly, so that it would cover new technologies as they appeared, rather than to interpret those provisions narrowly and so force Congress periodically to update the act."²⁰⁹

Perhaps Posner's apologia justifies his opinion to those who view judicial competence more narrowly. Perhaps he himself thought it necessary to link his opinion to some legislative authorization. Whatever the case, the delegatory language should not obscure the fact that the court was engaged more in updating the statute than in interpreting the legislative intent. The common law method proved adequate to the task.

b. Home Satellite Dishes

Another new issue, related to the cable importation of distant signals, arises out of the proliferation of home satellite receivers.²¹⁰ Most cable programming now is distributed via satellite, just as United Video relayed WGN's signal to cable systems across the country. For less than \$5,000, an individual can buy a receiving dish. The dishes can directly intercept signals for television reception. The legal difficulty, of course, is that the cable compulsory license royalty system is bypassed. The viewer gets the program without paying a royalty, either directly or indirectly through a cable company, to the copyright holder.

In many cases, the home satellite dish owner gets more than

207. "Audiovisual works" are works that consist of a series of related images which are intrinsically intended to be shown by the use of machines, or devices such as projectors, viewers, or electronic equipment, together with accompanying sounds, if any, regardless of the nature of the material objects, such as films or tapes, in which the works are embodied.

17 U.S.C. § 101 (1982).

208. In a Delphic passage, the House report states that "[t]he bill does not intend either to freeze the scope of copyrightable technology or to allow unlimited expansion to areas completely outside the present congressional intent." 693 F.2d at 628 (quoting H.R. REP. NO. 1476, 94th Cong., 2d Sess. 51 (1976)). Posner took this passage as a warrant to treat new forms of technology by analogizing to the old. The judge, however, spoke of this as a mode of interpretation, not as a delegation of authority. 693 F.2d at 628.

209. *Id.* at 627. The judge limited the scope of his opinion by stating that the outcome would be different if the teletext were completely unrelated—a cartoon show for preschoolers in the midst of the news. *Id.* at 628. In that case, he said, the teletext and the main signal could not be considered related images within the meaning of § 101 of the Copyright Act. *Id.*

210. See generally A. EASTON, THE HOME SATELLITE TV BOOK (1982).

the basic cable programs. He also can receive pay cable services such as Home Box Office (HBO), for which subscribers pay a premium. To thwart interception by home satellite dishes, HBO began scrambling its signal.²¹¹ Where scrambling occurs, however, unscrambling cannot be far behind. Home-built decoders undoubtedly will become available. One group has proposed a compulsory license system for dish owners, with royalties coming out of the price of the equipment. So far, however, copyright holders have rejected the suggestion.²¹²

The legal issue harkens back to *Fortnightly*. If the satellite dish is like an antenna that only increases the range of signals that can be received, then—following the *Fortnightly* logic—it creates no copyright liability. Nothing is being “performed.” Since the Supreme Court decided *Fortnightly* and *Teleprompter*, Congress has imposed the cable compulsory licensing system. Thus, any court that considers this home satellite dish issue also must consider the effect of that statute on the legal terrain.²¹³ Congress has altered the balance, and the question is now whether a home satellite dish is analogous to a cable system that must pay royalties for importing distant signals.

If that is the case, though, either Congress or the courts will have to devise a different royalty scheme. Cable systems can be monitored for the signals they import. Homes cannot be monitored, at least not without a serious intrusion of privacy. As a result, a court that finds the analogy between home dish and cable importation appropriate will have two choices: 1) it can devise a royalty system, or 2) it can attempt to force Congress to act by refusing to impose such a system on its own.

211. *HBO to Scramble Its Signal*, Wash. Post, Jan. 19, 1983, at B2, col. 1. Section 5 of the Cable Communications Policy Act of 1984, Pub. L. No. 98-549, 98 Stat. 2802, which does not address copyright liability, amended the Communications Act of 1934, 47 U.S.C. § 605, to allow home reception of unscrambled signals for which a marketing system has not been established. H.R. 4103, 98th Cong., 2d Sess., 130 CONG. REC. H10,427, 10,446 (daily ed. Oct. 1, 1984) (statement of Rep. Rose).

212. See *TV ‘Dish’ Makers Fight Their Own ‘Star Wars’*, N.Y. Times, Feb. 18, 1983, at A22, col. 4; Note, *Satellite/Dish Antenna Technology: A Copyright Owners’ Dilemma*, 59 IND. L.J. 417, 441 (1984).

213. When statutes supplanted the common law in the early twentieth century, the relationship of those statutes to the common law was called into question. By the 1930’s, James Landis argued that the common law should not be a closed system but that it should be open to the influence of statutes. Landis, *Statutes and the Sources of Law*, in HARVARD LEGAL ESSAYS 213 (1934); see also Traynor, *Statutes Revolving in Common Law Orbits*, 17 CATH. U.L. REV. 401 (1968) (recognizing the value of legislative action but only so long as the common law framework remains the predominant scheme).

Of course, a home satellite receiver may not be like a community television antenna at all. The signals it receives were never intended for direct acquisition by the public, especially when scrambled. It does not simply boost the range of reception; it creates an entirely new range. Home satellite dish manufacturers argue that programmers, by sending their signals through the public airways, invite the public to intercept their signals. In contrast, one might compare the situation to the *DuPont* case in which the court restrained the aerial photographer from making use of photographs he took while flying over a plant.²¹⁴ He was in a place he had a right to be, but the court ruled that did not give him the right to take the plaintiff's property—its trade secret.

The trade secret aspect of the case, however, creates a flaw in the analogy. *DuPont* was taking steps to keep its process out of the public domain. The court said that it therefore should not be required to take the additional unreasonable step of erecting a roof over its plant while it was under construction. Satellite signals, however, are not secrets. They are widely disclosed to subscribers of cable systems. Nor are they special methods of conducting business. Rather, they are the business themselves. Perhaps the more accurate cause of action would be misappropriation,²¹⁵ but the status of misappropriation is uncertain in light of the copyright preemption section.²¹⁶ At best, it would be a risky theory on which to rely. Courts undoubtedly will have a difficult time deciding whether this common law cause of action is still available and, if not, determining whether the Copyright Act again must be updated to accommodate the new technology.

III. HOME VIDEOTAPING—FAIR USE OR INFRINGEMENT?

The controversy over home videotaping provides a recent case study of the problem of technology evolving faster than the law of copyright. Manufacturers introduced home videotape equipment around 1975, the year before Congress passed the Copyright Revision Act. The Act, however, is silent on this particular subject. Now, millions of viewers are equipped to tape programs off the air.

Despite all the disagreements on policy among program producers, broadcasters, manufacturers, retailers, and users, the legal issues involved can be reduced to three questions: 1) is home vide-

214. See *supra* notes 72-76 and accompanying text.

215. See, e.g., *International News Serv. v. Associated Press*, 248 U.S. 215 (1918).

216. See *supra* notes 45-51 and accompanying text.

otaping off the air fair use; 2) is such taping analogous to home audio taping off the air, which Congress arguably has allowed; and 3) if home videotaping is an infringement of copyright, what is the proper remedy? Insofar as judicial competence is concerned, the most difficult of the three questions is the last one—the remedy.

The fair use provision of the Copyright Act²¹⁷ explicitly directs the courts to balance the public and private interests. Although fair use was judicially created, Congress eventually codified the doctrine in an open-ended fashion. Consequently, the courts certainly are competent to undertake a fair use analysis. Congress intended them to do so, saying in its House committee report that “especially during a period of rapid technological change . . . the courts must be free to adapt the doctrine to particular situations on a case-by-case basis.”²¹⁸

A California district court, analyzing the fair use factors, in *Universal City Studios, Inc. v. Sony Corp. of America*²¹⁹ held that home taping was indeed fair use. The Ninth Circuit Court of Appeals disagreed,²²⁰ finding the fact that the copying occurs at home to be relevant to but not determinative of the first factor—“the purpose and character of the use.”²²¹ If a court deems home use to constitute fair use, then the same argument could be made for any home copying, be it of records, tapes, books, or magazines. Such extensive application of the fair use doctrine would substantially alter the balance between authors’ rights and the public’s rights.

The “nature of the copyrighted work”²²² also provides little comfort for the pro-copying position. The legislative history and case law with respect to this fair use factor indicate that when a work is of an informational rather than creative type, the work is more likely to fall within the scope of fair use.²²³ The Ninth Circuit again disagreed with the finding of the district court, saying that the mode of delivery—via public airwaves—is irrelevant to the

217. See *supra* notes 52-55 and accompanying text.

218. H.R. REP. No. 1476, 94th Cong., 2d Sess. 66, reprinted in 1976 U.S. CODE CONG. & AD. NEWS 5659, 5680.

219. 480 F. Supp. 429, 456 (C.D. Cal. 1979), *rev'd*, 659 F.2d 963 (9th Cir. 1981), *rev'd*, 104 S. Ct. 774 (1984).

220. 659 F.2d at 971, 974. For a fuller discussion of both lower courts’ fair use holdings, see Haft, *Universal City Studios v. Sony Corporation of America: The Case Against Fair Use*, 7 COLUM. J. ART. & L. 85 (1982).

221. 659 F.2d at 972 (quoting 17 U.S.C. § 107(1) (1976)).

222. The “nature of the copyrighted work” is the second factor enumerated in § 107 as determinative of whether the alleged infringing use falls within the fair use exception.

223. 659 F.2d at 972.

analysis of this fair use factor.²²⁴ The chosen mode of distribution does not create a license to copy the programs, only to view them. The third factor listed in the statute—the amount of the work copied²²⁵—weighs heavily against home copying because the entire work usually is being copied.²²⁶

Courts consider the fourth factor—harm to the market for the copyrighted work²²⁷—to be the most important. The district court found the harm to be speculative and minimal.²²⁸ It viewed time-shifting as no threat to the audience for other programs. It doubted that many people would create video archives; if they did, they would purchase video discs or authorized videotapes rather than keep off-the-air tapes that include commercials and are edited for television.²²⁹ The district court considered the time period during which the case arose and expressed doubt that many people would spend \$875 for a recorder and \$20 per tape.²³⁰

In contrast, the appellate court focused on the future. Concerned with the cumulative effect of mass home videotaping of copyrighted works,²³¹ the Ninth Circuit attempted to fashion a ruling that would be adaptable to new technology. Rather than forcing the plaintiff to prove actual damages—a difficult task when dealing with individual home users—the Ninth Circuit determined that the proper standard was proof of a tendency to diminish the potential market. That, the court said, the plaintiffs had proven.²³²

The Supreme Court undertook its analysis with a paradox. The majority stated that “[s]ound policy, as well as history, supports our consistent deference to Congress when major technological innovations alter the market for copyrighted materials.”²³³ Then, it went on to acknowledge that section 107—fair use—“identifies various factors that enable a Court to apply an ‘equitable rule of reason’ analysis to particular claims of infringement.”²³⁴ Looking for something it could not possibly find in the

224. *Id.*

225. 17 U.S.C. § 107(3) (1982).

226. 659 F.2d at 973.

227. 17 U.S.C. § 107(4) (1982).

228. 480 F. Supp. at 451, 467.

229. *Id.* at 467.

230. *Id.* at 451.

231. 659 F.2d at 974. The court compared home videotaping to photocopying, siding with the dissenters in *Williams & Wilkins*, who viewed the future of unrestricted photocopying with alarm. *Id.*; see *supra* notes 56-69 and accompanying text.

232. 659 F.2d at 974.

233. 104 S. Ct. at 783.

234. *Id.* at 792. The “equitable rule of reason” language comes from the House Report

fair use section—specific legislation on home videotaping—the majority held that such taping of broadcast television programs for time-shifting was fair use and therefore legal.

Absent from the majority opinion is anything but the most cursory discussion of what is clear in the statute: section 106(1) prohibits the making of a copy of a copyrighted work.²³⁵ Such a preliminary finding must be assumed; for otherwise, fair use would not be an issue. It arises only upon a claim that copyright infringement is excused in a particular situation. The fact that section 106 has been violated should be important to any court that claims to be deferring to Congress, because statutory language is the clearest evidence of congressional intent. Fair use may provide an excuse, but the burden should be on the infringing party to show why the usual rule should not apply.²³⁶ In a speculative case such as *Sony*, where the section 107 factors do not clearly mandate a finding of fair use, the deferential approach would be to hold the use infringing. Congress, if it wished, could alter the balance.

As Justice Blackmun noted in his dissent, the majority discussed only two of the four factors contained in the fair use sec-

on the 1976 Act. The majority's reliance on this language is curious, as it purports to be bound by congressional intent. In fact, that report makes clear Congress's intent was to allow the courts to resolve fair use problems involving new technology. *Id.* at 792 n.31. The Report stated:

The bill endorses the purpose and general scope of the judicial doctrine of fair use, but there is no disposition to freeze the doctrine in the statute, especially during a period of rapid technological change. Beyond a very broad statutory explanation of what fair use is and some of the criteria applicable to it, the courts must be free to adapt the doctrine to particular situations on a case-by-case basis.

H.R. REP. No. 1476, 94th Cong., 2d Sess. 66, reprinted in 1976 U.S. CODE CONG. & AD. NEWS 5659, 5680.

235. 17 U.S.C. § 106 (1982) provides:

Subject to sections 107 [fair use] through 118, the owner of copyright under this title has the exclusive rights to do and to authorize any of the following:

- (1) to reproduce the copyrighted work in copies or phonorecords;
- (2) to prepare derivative works based upon the copyrighted work;
- (3) to distribute copies or phonorecords of the copyrighted work to the public by sale or other transfer of ownership, or by rental, lease, or lending;
- (4) in the case of literary, musical, dramatic, and choreographic works, pantomimes, and motion pictures and other audiovisual works, to perform the copyrighted work publicly; and
- (5) in the case of literary, musical, dramatic, and choreographic works, pantomimes, and pictorial, graphic, or sculptural works, including the individual images of a motion picture or other audiovisual work, to display the copyrighted work publicly.

236. *But cf.* 104 S. Ct. at 793 (a claim of infringement by noncommercial use of a copyrighted work requires plaintiff to prove harm from such use).

tion.²³⁷ Moreover, it mischaracterized the first factor. Section 107(1) directs a court to consider "the purpose and character of the use, including whether such use is of a commercial nature or is for nonprofit educational purposes."²³⁸ The majority, however, omitted the word "educational" from its discussion. It accepted the district court's conclusion that home time-shifting is noncommercial and nonprofit, never bothering to inquire whether it was "educational."²³⁹

Justice Blackmun more closely adhered to congressional intent. He observed that section 107 itself enumerates examples of fair use—"criticism, comment, news reporting, teaching, . . . scholarship, or research."²⁴⁰ The Senate and House reports underscore this "productive" requirement of the fair use doctrine.²⁴¹ Such use is helpful to society and, thus, in harmony with the precepts of the

237. 104 S. Ct. at 817 (Blackmun, J., dissenting).

238. 17 U.S.C. § 107(1) (1982).

239. 104 S. Ct. at 792-93. Justice Blackmun criticized the majority's analysis: "There is no indication that the fair use doctrine has any application for purely personal consumption on the scale involved in this case, and the Court's application of it here deprives fair use of the major cohesive force that has guided evolution of the doctrine in the past." *Id.* at 816 (footnote omitted).

240. *Id.* at 807 (Blackmun, J., dissenting).

241. *Id.* Examples of fair use cited in the congressional reports included the following:

[Q]uotation of excerpts in a review or criticism for purposes of illustration or comment; quotation of short passages in a scholarly or technical work, for illustration or clarification of the author's observations; use in a parody of some of the content of the work parodied; summary of an address or article, with brief quotations, in a news report; reproduction by a library of a portion of a work to replace part of a damaged copy; reproduction by a teacher or student of a small part of a work to illustrate a lesson; reproduction of a work in legislative or judicial proceedings or reports; incidental and fortuitous reproduction, in a newsreel or broadcast, of a work located in the scene of an event being reported.

H.R. REP. NO. 1476, 94th Cong., 2d Sess. 65, *reprinted in* 1976 U.S. CODE CONG. & AD. NEWS 5659, 5678-79.

The majority admits that "copying to promote a scholarly endeavor certainly has a stronger claim to fair use than copying to avoid interrupting a poker game." 104 S. Ct. at 795 n.40. Nevertheless, it concludes that the productive/nonproductive distinction is not determinative of a fair use question. It then goes on to compare home time-shifting to copying a work for the convenience of a blind person—a use identified as fair by the House committee—and using a videotape recorder to allow a hospital patient to see programs he otherwise would miss. *Id.* at 795-96 n.40. The majority concludes that "[v]irtually any time-shifting that increases viewer access to television programming may result in a comparable benefit." *Id.* at 796 n.40. Thus, despite the earlier disclaimer, the poker player is given a greater claim than the scholar, because the scholar is not free to make complete copies of often-checked-out books for himself or his students. To the contrary, educational organizations, authors, and publishers have agreed to restrictive teacher photocopying guidelines that the House Report described as a "reasonable interpretation of the minimum standards of fair use." H.R. REP. NO. 1476 at 72, *reprinted in* 1976 U.S. CODE CONG. & AD. NEWS at 5685-86; *see supra* note 62.

copyright clause. "But," as Blackmun wrote, "when a user reproduces an entire work and uses it for its original purpose, with no added benefit to the public, the doctrine of fair use usually does not apply. There is then no need whatsoever to provide the ordinary user with a fair use subsidy at the author's expense."²⁴²

Not only did the majority omit discussion of the productivity concept of fair use, but it also introduced a radical new concept into copyright and fair use analysis—that the nature of the delivery system is relevant to the question of unauthorized reproduction. The Court observed that time-shifting simply allows a viewer to see a program he had been invited to see—via commercial television airwaves—free of charge. Thus, the Court concluded, the recording of that program for viewing at a later time qualified as noncommercial.²⁴³

In so stating, the Court missed the putative purpose of copyright. What is important is not the nature of the delivery system but rather the rights that the author retains in the work that is delivered. By granting a license to a television station, the copyright holder authorizes a one-time performance of his film. The fact that the television station does not charge a fee for watching the film is irrelevant to the relationship between the viewer and the copyright holder. The effect of the Court's holding is to convert a one-time license into a multiple-showing license.²⁴⁴

In mentioning the free nature of the performance, the majority *sub silentio* raises a considerable number of questions about other forms of home taping. For example, is the taping of a movie from a subscription or cable television service fair use? Does the fact that the customer has paid for one viewing entitle him to copy the program and view it at any time? If so, how can a copyright holder ever license his material for television delivery and retain his rights? If not, how can pay television taping be prevented while free television taping is allowed?²⁴⁵

242. 104 S. Ct. at 808 (Blackmun, J., dissenting).

243. *Id.* at 792.

244. Blackmun gives as an example a book borrowed from the public library that may not be copied any more freely than a book that is bought. *Id.* at 808 (Blackmun, J., dissenting). A closer example is a free public showing of a movie. The sponsor may have paid for a one-performance license, but his decision not to charge admission in no way allows a viewer to set up a video camera and record the film off the screen.

245. The day of the *Sony* decision, Sid Sheinberg, president of MCA Inc., the parent company of Universal Pictures, indicated that MCA might initiate a lawsuit attacking the taping of programs off cable and pay television. "Our original suit very pointedly did not address cable," Sheinberg said. "Cable is a contractual matter in no way similar to taping off the public airwaves." *An Unhappy Hollywood Weighs the Next Move*, N.Y. Times, Jan.

The consequence of unbridled taping is that the value of the work for subsequent license decreases. A film company may license a movie for several television showings, knowing that those who were not able to see the first performance may tune in for a later one. Similarly, the broadcasters are willing to pay for an additional license with the knowledge that a significant audience will remain. If one can tape the first performance and view it at his leisure, however, he is less likely to watch the movie the second time it airs. Accordingly, the broadcaster is less willing to pay for multiple showings. Ultimately, the copyright holder is deprived of the value of his product.

Moreover, by allowing *laissez-faire* home copying, the Court has depreciated the secondary market for videocassettes of feature films. These authorized cassettes, produced by the studios themselves, are less attractive at thirty dollars or so when one can tape the same movie off the air for the cost of a blank cassette and retain it for viewing at his leisure. Assuming *arguendo* that the number of persons wishing to keep copies of movies is small, the ability of potential customers to obtain the same product for the price of a blank videotape seriously affects that market—whatever its size. Although the Court may have premised its decision on the finding that most taping is for time-shifting purposes, its edict has made it impossible to prevent librarying.

These are some of the arguments that the petitioners presented in arguing that the fourth factor of section 107—"the effect of the use upon the potential market for or value of the copyrighted work"²⁴⁶—pointed against a finding of fair use. Viewing the evidence presented to the district court in 1979, when home videotaping was in its infancy, the Court concluded that no likelihood of harm existed.²⁴⁷

By making such a determination, the Court ignored the express language of the statute requiring consideration of the impact on the "potential" market for or value of the work. Justice Blackmun observed in dissent that "[t]he Studios have demonstrated a potential for harm, which has not been, and could not be, refuted at this early stage of technological development."²⁴⁸ Once the

18, 1984, at D21, col. 4.

246. 17 U.S.C. § 107(4) (1982).

247. 104 S. Ct. at 794-95.

248. *Id.* at 810 (Blackmun, J., dissenting). In 1980, after the district court decision, sales of video cassette recorders still totalled less than one million units a year. Annual sales of blank tapes amounted to 15 million. By 1983, dealers sold more than four million video-

plaintiffs established a violation of section 106, the burden should have been on the defendants to prove that no damage to the potential market would occur. Instead, the Court required the plaintiffs to establish that it would occur. Given a reasonable showing of potential harm, the Court should have resolved the issue in favor of the aggrieved party—the copyright holder. Lack of any immediate damage has never been a basis for precluding a copyright holder from preventing unauthorized copying of his work.

Justice Blackmun points out that the majority all but ignores the second and third factors of the fair use statute: the nature of the copyrighted work and the quantitative portion of the work used by the alleged infringer. Both of these considerations weigh heavily against a finding of fair use in this case.²⁴⁹ Thus, it is the dissent, rather than the majority, that adheres more closely to the intent of Congress. What the majority mistakes for deference is, in fact, a broad usurping of the balance struck in the Copyright Act.

Unless one believes that the Copyright Act must explicitly address every possible form of reproduction, the inquiry in *Sony* certainly is of the type that courts are competent to conduct. No further congressional action is necessary unless Congress wants to alter the balance. It could have done so at any time but was never compelled to consider the issue until it came before the courts.²⁵⁰ By holding that home copying is fair use, the Court has made meaningful legislation addressing a remedy for mass video copying next to impossible. What congressman will want to be known as the one who fought for a tax on tapes?²⁵¹

The second major question in the home videotaping case is whether a court ought to treat home videotaping off the air like

tape recorders (VTRs) each year, along with 57 million blank tapes. See *The Home Video Decision: Some Unresolved Issues Remain*, N.Y. Times, Jan. 18, 1984, at D21, cols. 3, 6.

249. *Id.* at 817 (Blackmun, J., dissenting). Blackmun observed that Sony's own survey indicated that entertainment programs, as opposed to informational or productive programs, accounted for 80% of the programs recorded, a fact cutting against a finding of fair use under factor two—the nature of the copyrighted work. *Id.* Factor three, the amount of the work copied, is even more devastating to the majority's analysis, according to Blackmun, as it is undisputed that virtually all VTR users record entire works. *Id.*

250. See generally Rapson, *Legislative Relief and the Betamax Problem*, 7 COLUM. J. ART. & L. 125, 132 (1982) (discussing the implications of *Sony*).

251. In the wake of the *Sony* decision, Rep. Robert Kastenmeier, chairman of the Judiciary Committee's Subcommittee on Courts, Civil Liberties, and the Administration of Justice, which has jurisdiction over copyright, said "it would seem to me that Congress will not be disposed in light of the Court's decision to act on legislation calling for imposition of royalties on home taping." *Entertainment Industry Vows Fight in Congress*, N.Y. Times, Jan. 18, 1984, at D20, col. 5.

home audio taping off the air. In passing the 1971 Record Piracy Amendment to the Copyright Act, Congress arguably exempted home recording of broadcasts of sound recordings from copyright infringement liability.²⁵² The district court cited testimony from the then-Assistant Register of Copyrights that banning home taping would not control commercial bootlegging of video tapes.²⁵³ The court also cited legislative debate, in which the chairman of the House subcommittee responsible for the bill said that a home audio recording of a television program would not be considered an offense.²⁵⁴ Thus, while Congress danced around this future issue, it did not resolve it.

The Ninth Circuit considered the purported audio taping exemption and concluded that it should not be extended to videotaping. Its reasoning was based on other sections of the Copyright Act, in which Congress displayed special solicitude for audiovisual works.²⁵⁵ Thus, this was not a question of treating like cases alike. The cases are different. Accordingly, the appeals court determined that they ought to be treated differently.

Having concluded that the Copyright Act in general did not prohibit home taping, the Supreme Court found it unnecessary to reach this issue. The dissent addressed the question and determined that, regardless whether audio taping is allowed, videotaping is not a case of the same type. Prior to the Sound Recording Amendment of 1971, home recording was thought to be "common and unrestrained,"²⁵⁶ but that was because until the passage of that legislation, Congress had not afforded copyright protection to phonograph records. In contrast, television broadcasts and motion pictures were within the purview of the 1909 Act. They enjoyed full protection. At most, Congress designed the 1971 Amendment to address the problem of commercial record piracy.²⁵⁷ In a perfectly congruent world, audiotaping and videotaping would be treated alike. Indeed, Congress considered legislation that would

252. H.R. REP. NO. 487, 92d Cong., 1st Sess. 7, reprinted in 1971 U.S. CODE CONG. & AD. NEWS 1566, 1572.

253. 480 F. Supp. at 445.

254. *Id.* at 446.

255. 659 F.2d at 966-67. The court cited specific sections of the 1976 Act: § 108(h), which excludes most audiovisual works from library reproduction rights; § 110(1), which excludes unauthorized copies of audiovisual works from classroom teaching rights; and § 112(a), which excludes audiovisual works from broadcast archive rights. 17 U.S.C. §§ 108(h), 110(i), 112(a) (1982).

256. 104 S. Ct. at 805 (Blackmun, J., dissenting).

257. *Id.*

have provided a royalty-collecting remedy for both forms of taping.²⁵⁸ Nonetheless, given the special background of sound recordings, it would be a mistake to extend application of the 1971 Amendment to other kinds of taping.

The remedy for home videotaping, however, presents a more difficult problem for a court. The district court refused to issue an injunction against the sale and manufacture of home videotape machines and video tapes. The court also declined to order the manufacturers to modify their machines so that they would be unable to tape off the air. This was not an appropriate action, the judge said, when actual infringement is doubtful. Additionally, he was concerned about depriving the public of new technology capable of noninfringing uses.²⁵⁹ Beyond that, he spoke of the tremendous threat to individual privacy posed by a system of enforcement. The machines, after all, are used in private homes.²⁶⁰

The court of appeals, although no more sanguine about the complexity of a remedy, wrote that "[t]he difficulty of fashioning relief cannot . . . dissuade the federal courts from affording appropriate relief to those whose rights have been infringed."²⁶¹ As a result, it remanded to the district court for the purpose of creating a remedy. In so doing, the court of appeals hinted that where an injunction might involve significant social costs, the better alternative might be damages or a continuing royalty.²⁶²

Justice Blackmun's dissent suggests that the Supreme Court majority shied away from a correct decision on liability because of the difficulty of fashioning relief.²⁶³ The majority worried about how to restrain infringing copying without preventing authorized taping.²⁶⁴ The Court fretted over the possibility of banning produc-

258. See *infra* note 268 and accompanying text.

259. 480 F. Supp. at 463-64, 468.

260. *Id.* at 468.

261. 659 F.2d at 976.

262. *Id.*

263. 104 S. Ct. at 818 (Blackmun, J., dissenting).

264. *Id.* at 789. The record included one movie that was uncopyrighted as well as testimony from various professional sports league commissioners that they would allow time-shifting copying. *Id.* at 789 n.23, 789-90. The Court also pointed to various religious and educational programs as free for home taping. *Id.* at 790. Additionally, the Court cited the testimony of Fred Rogers, who produces a children's program called *Mr. Rogers' Neighborhood*. *Id.* Rogers said he welcomed home taping of his program. *Id.* at 790 n.27. Of course, *Mr. Rogers' Neighborhood* is both a nonprofit and educational program. The § 107 factors may well support a finding of fair use for taping of such a show, but that in no way justifies taping of major motion pictures. Similarly, the fact that some commercial program suppliers choose to countenance home taping does not justify stripping the reproduction right from those copyright holders who do not. If that logic were applied to analogous situations, any

tion of an item that could be used for noninfringing purposes.²⁶⁵ Despite the fact that the manufacturers promoted the machines with the prospect of taping programs off the air, it hesitated to extend liability to them for copyright infringement, because the manufacturers' products can be used to make both authorized and unauthorized uses of copyrighted material and the manufacturers have no control over the use made of their products.²⁶⁶

The spectre of a court devising a remedy for this complex problem troubles some commentators.²⁶⁷ One alternative form of relief is the fashioning of a compulsory license system in the form of a tax on the sale of tapes and equipment. Indeed, this is the solution suggested in Senator Mathias's proposal, which was stalled in Congress once the Supreme Court granted certiorari in *Sony*.²⁶⁸ It may well be preferable for Congress to enact such a system, but it is not so complex that it is beyond a court's competence in the absence of such legislation. An institution that can manage the desegregation of school districts and the reapportionment of legislatures certainly is capable of fashioning a form of relief for copyright owners whose programs are illegally taped.²⁶⁹

About the only alternative the Supreme Court did not consider was to find infringement, thereby forcing Congress to wrestle with the issue and fashion a remedy. This is the approach the D.C. Circuit used in *American Bankers Association v. Connell*.²⁷⁰ The court declared that a banking statute governing fund transfers was outdated in light of new technology and techniques used by financial institutions, but it delayed implementation of its ruling for eight months. This stay gave Congress the opportunity to update the law. Similarly, in *Sony*, the Court could have found that home videotaping is an infringement and allowed Congress several

book in the library would be subject to complete copying because the publishers of some of the books encouraged reproduction.

265. 104 S. Ct. at 788.

266. *Id.* at 786.

267. See, e.g., Kurz, *supra* note 144; Rapson, *supra* note 250.

268. Amendment No. 1333 to S. 1758, 97th Cong., 2d Sess. (1982). Germany and Austria both use this type of approach to compensate creators of music and broadcasts for reproduction of their works. See Kurz, *supra* note 144, at 274; Seamann, *Sound and Video-Recording and the Copyright Law: The German Approach*, 2 CARDOZO ARTS & ENT. L.J. 225 (1983).

269. See, e.g., *Keyes v. School Dist. No. 1*, 413 U.S. 189 (1973); *Swann v. Charlotte-Mecklenburg Bd. of Educ.*, 402 U.S. 1 (1971); *Reynolds v. Sims*, 377 U.S. 533 (1964).

270. [1978-1979 Transfer Binder] FED. BANKING L. REP. (CCH) D 97,785 (D.C. Cir.), *vacated without opinion*, 595 F.2d 887 (D.C. Cir. 1979). The case is discussed in G. CALABRESI, *supra* note 1, at 159-61 and accompanying notes.

months to respond. This dialogue would have allowed the Court to resolve the legal issue in the case and also afforded Congress the opportunity to provide the means of redress.

The consequences of the Court's determination that home taping does not constitute an infringement of copyright holders' rights are enormous. The conclusion that home noncommercial copying is acceptable creates a precedent that will radically alter the balance of authors' and the public's rights. As home computers proliferate, users will argue that any noncommercial home copying of material from a data base is fair use.²⁷¹ This is wrong.

In *Sony*, the Supreme Court once again demonstrated its importance in the area of evolving technology. The Court appears so befuddled by any new machine that it cannot see that the machine does the same thing an older machine does, just in a different way. Thus, it persists in fruitless searches for specific mention of a new technology in the statute instead of looking to the type of acts the statute prohibits. Copying, be it by a printing press, a videotape recorder, or a computer, is copying. If the photocopying of a library book for home use is not fair use, then one is hard pressed to find a principled reason for treating the taping of a television program any differently. Like cases should be treated alike. Any decision that does not heed this admonition is the antithesis of deference to Congress.

Justice Blackmun described the situation accurately:

It is no answer, of course, to say and stress, as the Court does, this Court's "consistent deference to Congress" whenever "major technological innovations" appear. . . . Perhaps a better and more accurate description is that the Court has tended to evade the hard issues when they arise in the area of copyright law. I see no reason for the Court to be particularly pleased with this tradition or to continue it.²⁷²

IV. CONCLUSION

An inability to keep up with technology plagues American intellectual property law. The more courts rely on Congress to provide answers to all questions, the more serious the problem becomes. What is needed is a legal institution with the vitality to determine how new forms of technology fit into existing policy choices.

271. See *supra* notes 143-51 and accompanying text.

272. 104 S. Ct. at 797 (Blackmun, J., dissenting).

Of the alternative decisionmaking institutions currently available—the courts, Congress, administrative agencies, and the executive branch—the courts are the most capable of ongoing updating. The questions first appear in the courts as parties seek declarations of their rights with respect to new technology, in the context of existing technology and related policies and rules, and determinations of whether these rules should govern. This is nothing more than treating like cases alike, the common law function that courts are well-suited to perform.

If they are to fulfill this mission in intellectual property cases, though, courts must go beyond updating the common law. They must move toward a system such as that proposed by Calabresi, in which they bring statutes up-to-date as well. Critics may contend that such a shift will usurp important policy choices that the representative branch of government ought to make. The criticism falls short of the mark for two reasons. First, the representative branch already has spoken. The courts will not be imposing their own value choices. Rather, they will be fitting new technology into the choices already reflected in the statutes. Secondly, if Congress does not like a decision, it always can change it.

Occasionally, courts have been willing to take a few tentative steps toward assuming such a function. Usually, though, they justify their actions in terms of interpretation rather than updating. Indeed, in a few instances such as fair use, Congress clearly did intend the courts to act expansively. These outposts, however, are hard-pressed to accommodate all of the questions new technology creates. Thus, they are useful as far as they go, but they do not go far enough.

In a system in which Congress responded quickly and completely to all intellectual property questions arising out of new technology, judicial activism might not be necessary. That is not the system in the United States, however. The fact that the Copyright Act went sixty-seven years without a major overhaul is indicative of congressional insensitivity to these issues.

Common law courts not only can function effectively in the ages of intellectual property, they also can ensure that the law is as dynamic as the subject it governs. The choice is not between judicial or congressional action. It is between judicial action and, often, no congressional action at all. That being the case, the right choice is clear.