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# ADDRESSING THE REPROGRAPHIC REVOLUTION: COMPENSATING COPYRIGHT OWNERS FOR MASS INFRINGEMENT

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Rosalind S. Kurz\*

We are in the midst of a reprographic revolution, with technologies capable of duplicating intellectual property becoming increasingly available to businesses, schools, and individual consumers. This proliferation of reprographic capabilities is a mixed blessing: while it promises enhanced public access to creative works, it threatens the rights of copyright holders.<sup>1</sup> Because unauthorized copying is so widespread and difficult to detect, existing copyright law offers little protection against this threat — a society of infringers cannot practicably be prosecuted. Thus arises the obvious danger that dilution of copyright protection will discourage creative endeavor.<sup>2</sup>

This Article addresses the unique problems created by the reprographic revolution. Part I discusses recent legislative attempts to relieve the strain placed on existing copyright law by developing reprographic technologies. Using the recent *Betamax* case as an example, part II criticizes judicial efforts to apply traditional copyright doctrine to issues involving reprographic technologies. Finally, part III proposes a framework for devising

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1. "[The] . . . ability to produce single copies economically is the major feature of the reprographic revolution. Its impact on copyright protection is clear: an individual who would have been forced to buy a copyrighted journal costing several dollars in order to have one ten-page article can now make a single copy of the article for a dollar." Project, *New Technology and the Law of Copyright: Reprography and Computers*, 15 U.C.L.A. L. REV. 939, 941-42 (1968) (emphasis deleted).

2. "The primary purpose of the Copyright Act is to stimulate creativity for the public welfare . . ." *Triangle Publications, Inc. v. Knight-Ridder Newspapers, Inc.*, 455 F. Supp. 875, 882 (S.D. Fla. 1978); see *Goldstein v. California*, 412 U.S. 546, 555 (1973); B. KAPLAN, AN UNHURRIED VIEW OF COPYRIGHT 74-75 (1967). This rationale, however, has been challenged on economic grounds. See Breyer, *The Uneasy Case for Copyright: A Study of Copyright in Books, Photocopies, and Computer Programs*, 84 HARV. L. REV. 281 (1970). But see Tyerman, *The Economic Rationale for Copyright Protection for Published Books: A Reply to Professor Breyer*, 18 U.C.L.A. L. REV. 110 (1971).

an enforcement scheme to protect copyright holders' rights without denying the public the many benefits offered by reprographic technologies. The Article outlines an approach tailored to meet the special problems associated with each of the three basic reprographic technologies: the audiorecorder, videocassette recorder ("VCR"), and photocopier. Drawing from the experiences of other industrialized countries, the Article recommends the adoption of varying excise tax schemes aimed at the apparent sources of infringement — reprographic equipment and associated software.

### I. LEGISLATIVE INITIATIVES

Since the passage of the first copyright law in 1790,<sup>3</sup> Congress has struggled to maintain the delicate balance between public access to creative works and the rights of those who produce them.<sup>4</sup> While the advent of new technologies has often precipitated sweeping revisions of the copyright law,<sup>5</sup> emerging reprographic technologies place particular strains upon this balance between competing interests.<sup>6</sup> Unfettered public access to equipment that can easily and economically reproduce a protected work in its entirety effectively vitiates the copyright holder's exclusive right "to reproduce the copyrighted work in copies or phonorecords."<sup>7</sup>

Recognizing the threat posed by burgeoning reprographic

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3. Act of May 31, 1790, ch. 15, 1 Stat. 124 (repealed 1802-1834).

4. See *Tennessee Fabricating Co. v. Moultrie Mfg. Co.*, 421 F.2d 279, 283-84 (5th Cir. 1970) (quoting Schulman, *Fair Use and the Revision of the Copyright Act*, 53 IOWA L. REV. 832, 832-33 (1968)). See generally L. PATTERSON, *COPYRIGHT IN HISTORICAL PERSPECTIVE* (1968).

5. The printing press made it possible to produce numerous copies of an individual's manuscript with amazing speed and accuracy. Accordingly, the Statute of Anne, 8 Anne ch. 19 (1709), was enacted to halt the immediate problem of unauthorized printing of books. Within the United States, the constitutional grant of power to confer copyright protection was buttressed by the first copyright statute, Act of May 31, 1790, ch. 15, 1 Stat. 124 (repealed 1802-1834), which borrowed the essentials of the Statute of Anne, while providing additional protection for maps and charts. Since then, copyright law has undergone many revisions, all designed to create and maintain the delicate balance between generation and free dissemination of expression. For a comprehensive study detailing the impact of new technologies upon the development of copyright law, see Crossland, *The Rise and Fall of Fair Use: The Protection of Literary Materials Against Copyright Infringement by New and Developing Media*, 20 S.C.L. REV. 153 (1968).

6. See H.R. REP. NO. 1476, 94th Cong., 2d Sess., reprinted in 1976 U.S. CODE CONG. & AD. NEWS 5659 [hereinafter cited as HOUSE REPORT]; see also Meagher, *Copyright Problems Presented by a New Art*, 30 N.Y.U. L. REV. 1081 (1955); Perle, *Copyright and New Technology*, 25 BULL. COPYRIGHT SOC'Y 250 (1978).

7. 17 U.S.C. § 106(1) (Supp. III 1979).

technologies,<sup>8</sup> Congress in 1977 established the National Commission on New Technological Works ("CONTU")<sup>9</sup> to study and compile data on problems created by new technological advances.<sup>10</sup> After three years, CONTU was to recommend changes in copyright law or procedure that would ensure public access to copyrighted works without diminishing the rights of copyright holders.<sup>11</sup> Drawing its membership from the ranks of copyright holders, copyright users, and the general public,<sup>12</sup> CONTU possessed the expertise necessary to offer meaningful and comprehensive recommendations.

Despite this seemingly great potential for meaningful revisions in the copyright law, however, CONTU failed even to approach the broad scope of the problems associated with reprographic technologies. In the important area of machine reproduction, CONTU limited its inquiry entirely to problems associated with library photocopying;<sup>13</sup> audiorecorders and VCR's were ignored. CONTU's guidelines addressed only section 108(g)(2) of the 1976 Copyright Act,<sup>14</sup> which governs photocopying adjunct to interlibrary loan arrangements. With this focus on institutional

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8. See NATIONAL COMM. ON NEW TECHNOLOGICAL USES OF COPYRIGHTED WORKS (CONTU), FINAL REPORT 1 (1978) [hereinafter cited as CONTU REPORT].

9. The Commission was to provide the President and Congress with information on "the reproduction and use of copyrighted works of authorship — (A) in conjunction with automatic systems capable of storing, processing, retrieving and transferring information, and (B) by various forms of machine reproduction." Pub. L. No. 93-573, § 201(b)(1) (1974).

Congress granted CONTU discretion to attach the problem of reconciling access to copyrighted works while providing continuing recognition to rights of copyright owners. In the words of Chairman Fuld:

The idea was to omit from the new Copyright Act some of the knotty problems created by the new technological advances, whose future development was difficult to predict, and have a Presidential Commission study them. Copyright revision thus would not be delayed by consideration of these technological matters, and Congress would receive expert recommendations for additional legislation from the Commission at the conclusion of its work.

NATIONAL COMM. ON NEW TECHNOLOGICAL USES OF COPYRIGHTED WORKS (CONTU), TRANSCRIPT OF MEETINGS 1 THROUGH 5, at 8 (1975) [hereinafter cited as CONTU TRANSCRIPTS 1-5].

10. Pub. L. No. 93-573, § 201(b) (1974).

11. CONTU TRANSCRIPTS 1-5, *supra* note 9, at 8-9.

12. See Pub. L. No. 93-573, § 202(a) (1974).

13. See CONTU REPORT, *supra* note 8, at 47-80. At the time CONTU convened, the only case dealing with the issue of consumer reprography was *William & Wilkins Co. v. United States*, 487 F.2d 1345 (Ct. Cl. 1973), *aff'd by an equally divided court*, 420 U.S. 376 (1976), a case dealing with library photocopying of periodicals. Not surprisingly, therefore, CONTU apparently grasped the most apparent reprographic problem much in the manner of a reviewing court, choosing to abstain from taking the broader approach of a legislative body.

14. Copyright Law Revision Act, Pub. L. No. 94-553, 90 Stat. 2541 (1976) (codified at 17 U.S.C. §§ 101-810 (Supp. III 1979)).

copying, CONTU thus ignored perhaps the most significant threat facing copyright holders: consumer reprography, involving coin-operated copiers and commercial photocopying services,<sup>15</sup> in addition to the increasing use of VCR's and audiorecorders.<sup>16</sup> By refusing to address these important issues, CONTU — and ultimately Congress — has entrusted the courts with the problematic task of addressing the unique threats posed to the rights of copyright holders by these varying consumer reprographic technologies. Part II of this Article argues, though, that existing copyright law and traditional copyright doctrine are incapable of resolving these novel questions.

## II. THE JUDICIAL APPROACH: APPLYING OLD LAW TO NEW PROBLEMS

Federal copyright law<sup>17</sup> endeavors to promote the development of science and the arts<sup>18</sup> by offering an economic incentive to authors and other producers of creative intellectual material.<sup>19</sup> Section 106 of the 1976 Copyright Act codifies this approach, granting copyright holders “the exclusive rights of reproduction, adaptation, publication, performance and display.”<sup>20</sup> Advancement of science and the arts, though, at times will best be served by permitting infringement upon the copyright holder's “monopoly.” Thus, where society's interest in promoting the development of science and the arts outweighs the copyright holder's economic interest in exclusive rights to the work, the fair use doctrine allows “others than the owner of a copyright to use copyrighted material in a reasonable manner without his consent.”<sup>21</sup> The 1976 Act codifies the fair use doctrine,<sup>22</sup> providing in section 107 that copying “for purposes such as criticism, comment, news reporting, teaching . . . scholarship, or re-

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15. CONTU REPORT, *supra* note 8, at 149.

16. See *infra* notes 59-61 and accompanying text.

17. See 17 U.S.C. §§ 101-810 (Supp. III 1979).

18. The Constitution grants Congress the authority “[t]o promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their Writings and Discoveries.” U.S. CONST. art. I, § 8, cl. 8.

19. *Mazer v. Stein*, 347 U.S. 201 (1954); see *supra* note 2.

20. 17 U.S.C. § 106 (Supp. III 1979).

21. H. BALL, COPYRIGHT AND LITERARY PROPERTY 260 (1944). This judicially created, equitable doctrine has been described as “so flexible as virtually to defy definition,” *Time Inc. v. Bernard Geis Assocs.*, 293 F. Supp. 130, 144 (S.D.N.Y. 1968), and “the most troublesome of the whole law of copyright,” *Dellar v. Samuel Goldwyn, Inc.*, 104 F.2d 661, 662 (2d Cir. 1939).

22. See HOUSE REPORT, *supra* note 6, at 66.

search, is not an infringement of copyright.<sup>23</sup>

In a recent case involving private videorecording of protected material, *Universal City Studios, Inc. v. Sony Corp. of America*,<sup>24</sup> this traditional copyright doctrine was put to a severe test — with predictably unsatisfactory results. In *Sony*, producer-distributors of regularly televised, copyrighted programs brought suit against the Sony Corporation, manufacturer of a popular videocassette recorder, the Betamax.<sup>25</sup> The case presented two central issues: whether home videorecording of copyrighted material for private, noncommercial use constitutes copyright infringement; and whether Sony could be held directly, contributorily, or vicariously liable for having manufactured and promoted the Betamax if such home videorecording were found to be an infringement. The district court, however, rejected plaintiffs' contentions, ruling that private use of a home videorecorder did not infringe their rights under the current copyright law. The court interpreted the legislative history of the 1976 Copyright Act as evincing congressional approval of home audiorecording, library photocopying, and cable television retransmission of protected works — thereby concluding that Congress would show a similar solicitude toward home use of the VCR, a similar reprographic device.<sup>26</sup> Moreover, the court held that home videorecording constituted a fair use of plaintiffs' copyrighted material because (1) they had not demonstrated any harm from home videorecording,<sup>27</sup> (2) public policy favored increased access to new sources of information,<sup>28</sup> and (3) to rule otherwise would create impossible enforcement problems.<sup>29</sup>

On appeal, the Ninth Circuit reversed. Reproving the lower court for resorting to legislative history in the face of an "unambiguous statute," the appellate court found no implied statutory

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23. 17 U.S.C. § 106 (Supp. III 1979).

24. 480 F. Supp. 429 (C.D. Cal. 1979), *rev'd*, 659 F.2d 963 (9th Cir. 1981), *petition for cert. filed*, 50 U.S.L.W. 3768 (U.S. Mar. 12, 1982) (No. 81-1687). See generally Marsh, *Betamax and Fair Use: A Shotgun Marriage*, 21 SANTA CLARA L. REV. 49 (1981); Note, *The Betamax Case: Accommodate Public Access and Economic Incentive in Copyright Law*, 31 STAN. L. REV. 243 (1979) [hereinafter cited as Note, *Accommodate Public Access*]; Note, *Universal Studios, Inc. v. Sony Corp.: "Fair Use" Looks Different on Videotape*, 66 VA. L. REV. 1005 (1980).

25. Although Sony was the principal defendant in the case, the plaintiffs also brought in the advertising firm that handled the Betamax account, four stores that sold Betamaxes, and one individual who used his Betamax to tape copyrighted works. 480 F. Supp. at 432.

26. *Id.* at 447.

27. *Id.* at 469.

28. *Id.* at 454.

29. *Id.*

exemption for home videorecording.<sup>30</sup> While recognizing an analogy between home videorecording and audiorecording, the court nonetheless rejected the parallel drawn by the district court between these two reprographic methods.<sup>31</sup> In an analysis that appears fatally flawed, the court identified aspects of the 1976 Act that it felt justified treating the VCR differently from other home reproduction devices. The court reasoned that home videorecording does not share the exemption from liability enjoyed by analogous audiorecording, because Congress has determined that the more valuable audiovisual media need greater protection.<sup>32</sup> But the relative value or vulnerability to economic harm of the protected work is relevant only to the measure of damages; it should have no bearing on the question of liability.<sup>33</sup> The court asserted also that Congress intended to exempt home audiorecording from liability based on the assumption that audiorecording is "common and unrestrained today," making enforcement of copyright protection impossible.<sup>34</sup> By the same token, however, videorecording has become increasingly common.<sup>35</sup> If exemption from liability hinges on the feasibility of enforcement, videorecording and audiorecording should be treated equally.

The Ninth Circuit's treatment of the fair use issue was similarly paradoxical, arriving ultimately at the right conclusion for the wrong reasons. As a threshold matter, the court rejected the reliance of the district court upon the plaintiffs' failure to prove specific harm from home videorecording, recognizing that infringement could be established even where the copyright holder could not demonstrate economic injury.<sup>36</sup> In fact, the 1976 Copyright Act acknowledges that proof of actual damages may be impossible in some cases, and thus provides for the awarding of statutory damages<sup>37</sup> or injunctive relief.<sup>38</sup> The court proceeded to hold that infringement arising from home videorecording for

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30. 659 F.2d at 967.

31. *See id.* at 966-68.

32. *Id.* at 967.

33. Goldstein, *The Private Consumption of Public Goods*, 21 BULL. COPYRIGHT SOC'Y 204, 205-06 (1974). *But see* William & Wilkins Co. v. United States, 487 F.2d 1345 (Ct. Cl. 1973) (holding that economic harm to the copyright holder is an important factor in determining whether a particular use constitutes infringement), *aff'd by an equally divided court*, 420 U.S. 376 (1976).

34. 659 F.2d at 967.

35. *See infra* notes 59-61 and accompanying text.

36. 659 F.2d at 973; *see* F. W. Woolworth Co. v. Contemporary Arts, Inc., 344 U.S. 228 (1952).

37. 17 U.S.C. § 504(c) (Supp. III 1979).

38. *Id.* § 502.

private, noncommercial uses could not be justified as a fair use of copyrighted programs. This conclusion derived from a determination that home videorecording is not a "productive use" of the recorded material, a concept the court inferred from section 107 of the 1976 Copyright Act.<sup>39</sup> Although declining to explicate the limits of this standard, the court clearly focused on the purpose behind the reproduction; under this test, the specific *means* of reproduction would seem irrelevant. Thus, the standard implicitly — and properly — recognizes that all reprographic technologies can be used for infringing and noninfringing purposes alike.

The court undoubtedly was correct in holding that home videorecording infringed the plaintiffs' copyright. The "productive use" standard adopted by the court is deficient, though, because it centers on inevitably undetectable individual activity, guaranteeing a self-defeating enforcement scheme.<sup>40</sup> The number of Betamax owners using their machines "productively" simply cannot be ascertained. Similarly, it would be impossible to determine how many Betamax owners were recording any particular copyrighted work. Arguably, these questions are relevant only to the issue of damages, and do not address the issue of liability. Ultimately, however, the issue of damages must be faced, necessitating reliance upon an indeterminate factual pattern: *some* number of consumers own Betamax; *some* have used their machines to record *some* of the plaintiffs' works; this has harmed the plaintiffs to *some* extent; and the manufacturer has contributed to this harm in *some* degree.

While recognizing the complexity of these problems, the Ninth Circuit observed that such difficulties cannot "dissuade the federal courts from affording appropriate relief to those whose rights have been infringed."<sup>41</sup> This sentiment has intuitive appeal, but seemingly begs the question as to what constitutes "appropriate" relief. When imposing statutory damages or a continuing royalty, the best a court can offer is an educated guess at an "appropriate" level of damages. The copyright owner

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39. 659 F.2d at 971-72.

40. The district court was understandably reluctant to sanction an enforcement scheme necessitating grave intrusions into the privacy of the home. 480 F. Supp. at 454. The Supreme Court has recognized the home as a realm imbued with fundamental rights of privacy. See *Griswold v. Connecticut*, 381 U.S. 479 (1965); see also Ely, *The Wages of Crying Wolf: A Comment on Roe v. Wade*, 92 YALE L.J. 920 (1973) (interpreting *Griswold* and its progeny as standing for a general right of privacy from governmental interference). The circuit court, however, did not share in this reluctance, despite the obvious enforcement problems.

41. 659 F.2d at 976.



receives compensation, as is proper, but in an amount that bears no relation to any quantifiable injury. This approach signifies a departure from traditional copyright doctrine and represents an attempt to design a method of reallocating social costs — a task which manifestly should be entrusted to the legislative branch as being beyond the competence of the courts.

### III. TAILORED SOLUTIONS TO COMPLEX PROBLEMS

#### A. *Determining the Correct Approach to Needed Reform*

Legislative reform must be prompted by the recognition that present copyright law is ineffective to enforce exclusive rights when the incidence of infringement rises to the level of a widespread consumer phenomenon. Because VCR's and audiorecorders are used primarily in private settings, an enforcement scheme that focuses on detection of individual infringers would necessitate grave intrusions into the privacy of the home. Furthermore, because the vast majority of infringers would go undetected, limiting the copyright owner's damages to recoveries from the few who are caught would provide inadequate redress. To be effective, legislative reform must turn away from the traditional copyright emphasis upon the activities of individual infringers, toward the more realistic goal of controlling the instrumentalities of infringement.

The most obvious solution to pervasive consumer infringement would involve divesting reprographic devices of the ability to infringe. For example, VCR models with tuners<sup>42</sup> could be taken off the market; television broadcasters could alter their transmissions so that VCR's could not record intelligible signals for later replay; and both video and audio tapes could be designed to erase automatically when replayed, making it impossible for individuals to maintain tape libraries.<sup>43</sup> But this approach goes too far — it is the equivalent of declaring that re-

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42. Several VCR models are sold that are limited in their capabilities to recording home movies with a video camera or playing back prerecorded cassettes. See Free, *Portable VCR's — new lightweights tape off the air or on the go*, POPULAR SCI., Nov. 1979, at 103. The VCR with a built-in tuner, however, is used to record television broadcasts. Only the VCR tuner model may affect the market for a copyrighted work, and only use of this particular model concerns copyright owners. See Appellant's Opening Brief at 10, *Universal City Studios, Inc. v. Sony Corp. of America*, 659 F.2d 963 (9th Cir. 1981).

43. See Marsh, *supra* note 24, at 83; see also *infra* note 84 and accompanying text (discussing similar proposals with regard to photocopiers).

production involving a VCR or audiorecorder can never be a fair use. In fact, both devices have noninfringing uses, making total denial of reprographic access too severe a penalty to impose upon the public. Furthermore, Congress has expressed a well-founded reluctance to curtail a practice such as home audiorecording once it has become widespread.<sup>44</sup>

Therefore, copyright law clearly cannot protect copyright owners by policing or preventing infringement.<sup>45</sup> A more constructive approach to reform assumes that infringement will remain prevalent, but recognizes that copyright owners will lose the incentive to create unless they are compensated for their losses. If the public wishes continued enjoyment of creative expression, it must be willing to pay the cost of preserving the economic incentive to create. Under this approach, a taxation scheme tied to the reprographic machinery and associated software is the most appropriate method of retaining public access while compensating creative endeavor. The following sections discuss factors relevant to the design and implementation of such a system.

### *B. A Framework for Designing an Equitable Taxation Scheme*

Under a perfect system, compensation paid to copyright owners would reflect accurately the precise amount of economic injury caused by infringement. Of course, such a system is unattainable. It is possible, though, to estimate the relative harms caused by the various reprographic devices, and then allocate liability equitably among those who manufacture and use those devices.

This section examines the three most common reprographic devices — the VCR, audiorecorder, and photocopier<sup>46</sup> — and

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44. See H.R. REP. No. 487, 92d Cong., 1st Sess. 7, reprinted in 1971 U.S. CODE CONG. & AD. NEWS 1566, 1572; see also Note, *Copyright: Gone With the Betamax?*, 8 N.Y.U. REV. L. & SOC. CHANGE 45, 48-51 (1978-1979).

45. See Working Group on the Legal Problems Arising from the Use of Videocassettes and Audiovisual Discs, *Report*, 11 COPYRIGHT BULLETIN No. 3, at 5, 8 (1977). Professor Nimmer has said: "It's part of the whole technological revolution. The old copyright system of control at the source is breaking down. It's impossible to turn back time — or smash the machines." *TIME*, Oct. 15, 1979, at 86.

46. This Article defines a reprographic technology as one which produces tangible copies capable of substituting with ease for "originals" marketed by copyright owners. Several commentators regard cable television as a reprographic technology because of its ability to retransmit electronic signals. See, e.g., Klauer, *Audiovisual Recording*, 11 LAW & COMPUTER TECH. 95, 97 (1978). Cable television, however, is more appropriately classified as one of the "satellite technologies," a category which includes earth stations, multipoint distribution systems, passive carriers, and direct broadcast satellites. Satellite

suggests guidelines for determining the probable economic injury caused by each. Several factors enter into this calculus. For example, it is important to consider the cost of producing the type of copyrighted work each device reproduces: VCR's copy enormously expensive motion pictures; audiorecorders duplicate less costly sound recordings; and photocopiers reproduce still less expensive printed matter. Related factors include the scope of the original work's market and the expected volume of unauthorized duplication.

1. *The VCR and the audiorecorder*— The reprographic devices most commonly employed by consumers are the VCR and the audiorecorder.<sup>47</sup> Both devices are used primarily in the home to make private, noncommercial duplicates of entire copyrighted works. The economic harm caused by the audiorecorder is readily apparent: copyright holders are compensated for each record sold, and every tape made from a borrowed record diminishes sales. The economic impact of the VCR, however, is somewhat more complex. Like the audiorecorder, the VCR causes harm by decreasing sales of copyrighted works — in this case, prepackaged videocassettes. But of equal concern to copyright owners is the harm caused by the "remote pause" capability of the VCR, which can be used to silently edit out commercials. A substantial portion of the copyright owner's revenue comes from broadcaster sale of commercial advertising time. Advertisers value commercial time solely because the massive audience reached by television provides a healthy market for their products.<sup>48</sup> If the size of the commercial-viewing audience were substantially diminished, advertisers would purchase less commercial time, reducing the revenues paid to copyright holders.<sup>49</sup> Furthermore,

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technologies present enforcement problems similar to those presented by reprographic technologies. Consumers are provided with heightened access not only to materials, but also to services in which others claim a property right. Furthermore, misappropriation of satellite signals, whether through backyard satellite dishes or cable retransmission, is widespread and undetectable. For a discussion of copyright law issues related to satellite technologies, see *Hearings on H.R. 3528, H.R. 3844, and H.R. 3560 Before the Subcomm. on Courts, Civil Liberties and the Administration of Justice of the House Comm. on the Judiciary, 97th Cong., 1st Sess. 3-6, 25-47 (1981)* (statement of David Ladd, Register of Copyrights; Assistant Librarian of Congress for Copyright Services). For general discussion of the satellite technologies, see Perle, *Is the Bird Pie in the Sky? — Communications Satellites and the Law*, 27 BULL. COPYRIGHT SOC'Y 325 (1980).

47. These two devices are discussed in tandem because they share common characteristics. Such comparison has frequently been made by a number of sources, including CONTU, the Copyright Office, and the *Sony* court, see *Sony*, 659 F.2d at 966.

48. See B. OWEN, J. BEEBE AND W. MANNING, *TELEVISION ECONOMICS*, 4-10 (1974).

49. A VCR manufacturer might argue, though, that use of the VCR actually enhances the value of commercial time. Several studies show that most consumers purchase a VCR to record for later viewing television programs their schedules would

an influx of large numbers of illegal copies into the viewer market may substantially diminish the value of syndication rights to the copyrighted works.<sup>50</sup> Every time a videocassette of a copyrighted work is replayed, the viewer becomes the free recipient of a performance for which cable and regular television broadcasters, theater owners, educational institutions, and many other organizations ordinarily would be required to pay the copyright holder a royalty.<sup>51</sup>

In terms of the cost involved in producing the original copyrighted work, the VCR has a far greater potential for causing economic harm than the audiorecorder. The investment in motion pictures is enormous. For example, Universal City Studios, Inc., and Walt Disney Productions spend between \$2,000,000 and \$25,000,000 to produce one feature-length television movie.<sup>52</sup> In comparison, it costs between \$400,000 and \$1,500,000 to produce a one-hour television series episode,<sup>53</sup> and only \$125,000 to produce a moderate-budget record.<sup>54</sup>

The copyright holder's economic loss from consumer infringement depends not only on the cost of producing the original, but

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have otherwise prevented them from viewing. See Note, *Accomodate Public Access*, *supra* note 24, at 255 nn.57 & 59. Because the remote pause cannot operate automatically, these unattended recordings are not commercial-free. Thus, the recorded material reaches a larger audience than it normally would.

As a policy matter, allowing the viewer to make the most advantageous use of the broadcast medium has received strong support. See, e.g., Cable Television Syndicated Program Exclusivity Rules, 79 F.C.C.2d 663 (1980) (eliminating rules limiting the programs and number of TV signals a cable system may pick up from distant cities).

50. See Note, *Accomodate Public Access*, *supra* note 24, at 245-48; see also NETWORK INQUIRY SPECIAL STAFF, FEDERAL COMMUNICATION COMM'N (Preliminary Report), AN ANALYSIS OF TELEVISION PROGRAM PRODUCTION, ACQUISITION AND DISTRIBUTION, 110-59, 237-40, 257-60 (preliminary rpt. June 1980).

51. See Appellant's Opening Brief, *supra* note 42, at 100-10.

52. Appellant's Opening Brief, *supra* note 42, at 2.

53. *Id.*

54. McLellan, *Tracking the Pirates of Song*, Wash. Post, Mar. 9, 1980, at H 1, col. 3.

Because motion pictures and other dramatic works cost more to produce than sound recordings, copyright law has consistently afforded greater protection to the former than the latter. Under the 1909 Copyright Act, for example, any authorized public performance of a drama, whether for commercial or noncommercial purposes, constituted an infringement. 17 U.S.C. § 1(d) (1976). And under the 1976 Copyright Act, motion pictures are exempted from the general license to make ephemeral recordings. 17 U.S.C. § 112(a) (Supp. III 1979). See HOUSE REPORT, *supra* note 6, at 101-03. In addition, owners of musical work copyrights must waive several exclusive rights. The 1976 Act allows unauthorized reproduction of sound recordings in educational broadcasts, provided they are not distributed commercially. 17 U.S.C. § 114(b) (Supp. III 1979); see 2 NIMMER ON COPYRIGHT § 8.05[B] (1981). Anyone wishing to reproduce a protected sound recording need only obtain a license to do so. 17 U.S.C. § 115 (Supp. III 1979). Furthermore, a conscious simulation of a sound recording may be done independently without violating the exclusive rights of the copyright owner. *Id.* § 114(b).

also on the scope of the market for the protected work. Movie producers recoup their initial investment through box office receipts, advertiser sales, licensing and royalty fees, and prepackaged tape sales. The VCR cuts deeply into all these sources of income — it decreases movie attendance, discourages advertising, provides for circumvention of licensing arrangements, and unfairly competes with prepackaged tape sales. In contrast, sound recordings and audiovisual works other than motion pictures, such as television programs,<sup>55</sup> are produced specifically for individual home viewing — infringement causes no decrease in box office receipts. The economic loss attributable to infringement of television programs is limited to decreased advertising sales, licensing and royalty fees, and syndication rights.<sup>56</sup> With respect to sound recordings, the economic loss due to infringement is limited solely to decreased record sales.<sup>57</sup>

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55. The 1976 Copyright Act does not distinguish between television programs and motion pictures. Audiovisual works are defined as consisting 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 (Supp. III 1979). Motion pictures, on the other hand, are defined as “audiovisual works consisting of a series of related images which, when shown in succession, impart an impression of motion, together with accompanying sounds, if any.” *Id.* Thus, “audiovisual works” constitutes a broad category encompassing motion pictures as well as television programs.

A subcommittee of the Japanese Copyright Council, investigating problems concerning videocassettes, discussed the possibility of distinguishing between motion pictures and television programs. Nomura, *Letter from Japan*, 10 COPYRIGHT 129, 132 (1974). Current Japanese copyright law makes no distinction between motion pictures and other audiovisual works, in much the same manner as American law. *Compare* Maksosai (Copyright Law) Law No. 48, May 6, 1970, art. 2, with 17 U.S.C. § 102(a)(6) (Supp. III 1979). A majority of the subcommittee decided that “there exist two kinds of video-programs, one constituting cinematographic works and the other constituting audio-visual works other than cinematographic works.” Nomura, *supra*, at 132. Consideration of the different ways in which videocassettes and motion picture film are used supports this distinction. *Id.* For example, motion pictures are most frequently broadcasted over television or projected before an audience gathered together in a public room — they are rarely projected within a private home. Videocassettes, on the other hand, are used privately through individual television receivers; consequently, their social function more closely resembles sound recordings.

56. See *supra* notes 48-51 and accompanying text.

57. Video piracy — the act of selling for profit unauthorized reproductions of a protected work — is of major concern to the sound recording industry. A study performed by the International Federation of Producers of Phonograms and Videograms shows the total retail sales of record pirates to be between 1 and 12 billion dollars per year, about 10% of the world markets. Thompson, *Piracy of Phonograms*, 16 COPYRIGHT 248 (1980). Piracy appeared as a worldwide economic problem beginning in the mid-1960's, when the cassette first began to be generally marketed; it has been fostered by links to organized crime in the United States and Southeast Asia. *Id.*

Video piracy is steadily on the rise, and has become a flourishing underground industry. For example, FBI agents seized \$17,000,000 worth of counterfeit videocassettes from

Although audiorecorders cause less economic harm than VCR's on a per-use basis, volume of use must also be taken into account. In the 1940's and early 1950's, audiorecording was seldom used outside professional settings. Since then, however, technological advances have made audiorecorders available to vast numbers of homes and educational institutions.<sup>58</sup> VCR's, while much less widespread, are becoming increasingly common. Competition and technological innovation continue to drive down the price of the VCR, changing it from a "rich man's toy" into a commodity well within the reach of the less wealthy.<sup>59</sup> It has been estimated, for example, that ten million VCR's will be in use by 1985.<sup>60</sup> As the VCR follows the trend of the audiorecorder, the cumulative effect of mass videorecording will soon eclipse that of audiorecording.

After determining the relative economic harm caused by the different reprographic devices, questions arise concerning how to allocate properly the costs of infringement. Undoubtedly, these costs should be shared by VCR and audiorecorder manufacturers,<sup>61</sup> whose products are commercially successful in large part

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a duplicating ring in San Jose, California, and Chicago, Illinois. Cases arising from video and record piracy and counterfeiting have become increasingly complex, often involving networks, international in scope. At present, the FBI often relies upon the Racketeer Influenced and Corrupt Organizations Act, 18 U.S.C. §§ 1961-1968 (Supp. III 1979), rather than copyright law, to ease enforcement and allow imposition of greater penalties. Interview with Rick Denton, Governmental Fraud Division, FBI, in Washington, D.C. (March 24, 1981). Legislation which would amend titles 17 and 18 of the United States Code to strengthen laws against record, tape, and film piracy and counterfeiting, through imposition of greater criminal penalties, *see* H.R. 3530, 97th Cong., 1st Sess. (1981), has received wide support from the Register of Copyrights, the Motion Picture Association of America, and the FBI, among others. *Id.*

58. COMMITTEE TO CONSIDER THE LAW ON COPYRIGHT AND DESIGNS, COPYRIGHT AND DESIGNS LAW REPORT CMND. No. 6732, at 75 (1977) [hereinafter cited as PARLIAMENTARY REPORT]. According to one 1975 British survey, 45% of the homes surveyed had access to an audiorecorder, and 20% of the persons over sixteen surveyed had made recordings from commercial records or tapes. *Id.* A similar survey showed that over half of those surveyed recorded from borrowed materials. *Id.*

59. A full-function home video recorder, no larger than a portable typewriter case and half the price of a VCR, has just been developed. The reduction in size and price is achieved by Longitudinal Video Recording ("LVR") technology. LVR, like the VCR, records off-the-air and plays back television programs. The nature of the LVR offers further promise of reducing the high cost of movies and other programs transferred to videotape. It now takes one hour to transfer a one-hour show to conventional tape. On the other hand, copying a one-hour LVR tape takes only 17 seconds, because 200 tracks are recorded simultaneously. Buckwater, *A Cut-Price Video Recorder*, MECHANIX ILLUSTRATED, Dec. 1979, at 100.

60. NEWSWEEK, Apr. 3, 1978, at 85. By 1990, it is projected that 50% of homes in the United States will possess VCR's or videodiscs, and sales of software will approach \$7.5 billion. BUREAU OF INDUSTRIAL ECONOMICS, U.S. DEP'T OF COMMERCE, 1981 U.S. INDUSTRIAL OUTLOOK 442 [hereinafter cited as 1981 INDUSTRIAL OUTLOOK].

61. *Cf.* Note, *supra* note 49, at 257-60 (proposing that manufacturers and sellers of

because a steady stream of copyrighted works makes home reprography attractive to consumers. This is especially true of VCR's equipped with built-in tuners for off-the-air recording;<sup>62</sup> the consumer who purchases such a VCR does so specifically to reproduce copyrighted works, because less expensive models without tuners are available. In contrast, the purchaser of an audiorecorder cannot choose a model incapable of infringement<sup>63</sup> even though he may never intend to reproduce protected works. An equitable compensatory scheme, therefore, should take these differences between devices into account when allocating costs between manufacturers and users.

A number of countries have passed copyright laws designed to combat consumer reprography which could suggest an approach for solving these cost allocation problems. Germany, for example, requires manufacturers of reprographic equipment to remunerate creators of musical works or broadcasts on an equitable basis out of proceeds from sales of the devices.<sup>64</sup> Total claims — processed and disbursed through a central collecting society — may not exceed five percent of the manufacturer's annual sales proceeds.<sup>65</sup> Austria has an essentially similar system,<sup>66</sup> and England is contemplating imposing a levy on VCR's and audiorecorders, supplemented by an annual licensing program.<sup>67</sup> Hungary is considering requiring producers and importers of reprographic equipment and software to pay royalties equivalent to eight percent of their profits to authors of works that can be copied privately.<sup>68</sup>

The logic and apparent success of the West German system commends it as a useful model for addressing consumer reprography.<sup>69</sup> A levy should be imposed on the sale of audiorecorders

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the Betamax be held liable for copyright infringement).

62. See *supra* note 42.

63. A tapeplayer, unlike an audiorecorder, can play sound recordings but is incapable of copying them. An audiorecorder capable of distinguishing between copyrighted and uncopied sounds is not presently available.

64. See Katzenberger, *Copyright and Reprography: Law in Force and Reform Endeavours in the Federal Republic of Germany*, 11 *LAW & COMPUTER TECH.* 30, 32 (1978).

65. *Id.* at 33.

66. See Copyright Amendment Law, No. 321, *Bundesgesetzblatt für die Republik Österreich*, No. 126 (1980), reprinted in 16 *COPYRIGHT* 335 (1980).

67. See *PARLIAMENTARY REPORT, supra* note 58, at 81-84.

68. See Fisor, *The Home Taping of Protected Works: An Acid Test for Copyright*, 17 *COPYRIGHT* 59, 64 (1981). Two exceptions to the royalty obligations are export items and software that are unlikely to be used to reproduce protected works, such as dictating machine cassettes. *Id.*

69. See Working Group on the Legal Problems Arising from the Use of Videocassettes and Audiovisual Discs, *Report*, 13 *COPYRIGHT* 87, 90-91 (1977) (citing the copyright law of the Federal Republic of Germany as a model system of compensation); see also

and VCR's with tuners, amounting to no more than five percent of the manufacturer's profit. The tax would operate most effectively if imposed as a percentage of the device's total cost, similar to a sales tax. In that way, greater sums would be collected from sales of the more expensive VCR than from sales of the less costly audiorecorder, thus reflecting the greater economic harm caused by the VCR.

None of the foreign countries mentioned levies a tax on the purchase of software associated with reprographic devices.<sup>70</sup> This may reflect the sentiment that tape sales do not accurately reflect the incidence of use; because tapes can be used many times — so that taxing tape sales would not adequately compensate the copyright holder.<sup>71</sup> Despite this objection, however, a tax on the sale of software could be beneficial. First, such a tax either would reflect accurately the number of permanent copies the purchaser maintains, or would encourage that person to erase and reuse tapes rather than building a permanent library — the copyright owner's greatest concern.<sup>72</sup> Second, requiring

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H.R. 5705, 97th Cong., 2d Sess. (1982). This bill, a proposed amendment to title 17 of the United States Code, is intended to establish a system of compensation somewhat similar to Germany's. The bill would require importers and manufacturers of reprographic equipment to pay licensing and royalty fees to copyright owners of motion pictures and musical works. Although the bill is an encouraging indication of Congress's awareness of the problem, it falls far short of providing a comprehensive solution. First, liability for infringement is placed wholly on the importer and manufacturer of the reprographic equipment; the consumer is relieved of all liability for recordings made in the home for private use. *Id.* §§ 119(a), 120(a). Second, the bill addresses only home audio and video recording; consumer photocopying is ignored. *Id.* §§ 119(d), 120(d). Finally, the compensation system, as described, bears an unfortunate resemblance to the existing cable television royalty system. The bill leaves to the discretion of the Copyright Royalty Tribunal both the amount of compensation, *id.* §§ 119(b)(1)(B), 120(b)(1)(B), and the means of distributing proceeds, *id.* §§ 119(b)(5), 120(b)(5). The difficulty the Tribunal has experienced in trying to distribute cable television royalties, *see infra* note 102, raises doubts as to the Tribunal's ability to administer a system of undoubtedly greater scope and complexity.

70. West Germany, however, may soon include reprographic software within the scope of its levy. *See* Dietz, *Letter from the Federal Republic of Germany, Report on the Development of Copyright Between 1972 and 1979*, 16 *COPYRIGHT* 85 (1980).

71. *PARLIAMENTARY REPORT*, *supra* note 58, at 78.

72. Marketing surveys performed by Sony before commencement of the *Betamax* suit indicate that between 69% and 75% of all *Betamax* owners maintain a library of off-the-air recordings, and approximately 5% already own over 100 cassettes. Only two and one half years after the introduction of the *Betamax*, the average owner had between 28 and 31 cassettes. The vast majority of programs recorded for videocassette libraries consists of theatrical and made-for-television motion pictures. Appellant's Opening Brief, *supra* note 42, app. A, at 10-11.

Organized swapping activity among private VCR owners is a growing phenomenon. *The Videophile Newsletter*, a bi-monthly magazine, had a circulation approaching 400 in early 1978. Included regularly in the *Newsletter* are requests to trade. Schmedel, *Recorders' Rise: Videotape Machines Become a Hot Product, May Affect TV Habits*, *Wall St.*



the consumer to pay a fee for what amounts to the right to reproduce a copyrighted work furthers the policy of providing compensation for infringements.<sup>73</sup> Software that is not used for infringing purposes, such as dictaphone microcassettes and commercial videotape suitable only for studio cameras, should be exempt from the levy.

2. *The photocopier*— The photocopier is the oldest and most widely used reprographic technology.<sup>74</sup> At present, infringing photocopying is concentrated primarily in libraries, schools, universities, and scientific research centers. As the technology continues to develop, however, it is likely to become a home reprographic technology as well.<sup>75</sup>

Studies show that the publishers of scientific and technical journals are those most affected by photocopying.<sup>76</sup> These journals have traditionally relied upon subscription sales to meet the cost of publication,<sup>77</sup> but widespread copying by large corporations doing scientific research has caused a drop in circulation severe enough to result in economic harm.<sup>78</sup> As a result, the government already subsidizes some journals.<sup>79</sup> If this trend continues, private publishers may become entirely displaced by government control.<sup>80</sup>

When the photocopier reaches the home, copyright owners will suffer additional harm. Individuals with access to free photocopying facilities would have the ability to copy entire books for their private use.<sup>81</sup> Moreover, using facsimile transmission, a photocopier can reproduce a copyrighted work carried by telephone line or satellite transmission<sup>82</sup> — a capability that would make facsimile transmission indistinguishable from a home data

J., Mar. 29, 1978 at 1, col. 1.

73. See *supra* notes 18-20 and accompanying text.

74. See W. NASRI, *CRISIS IN COPYRIGHT* 5 (1976).

75. Project, *supra* note 1, at 948-49.

76. *Id.* at 943-46. In 1976, it was estimated that 11 million articles or chapters were copied solely in response to requests for interlibrary loans. CONTU REPORT, *supra* note 8, at 133.

77. Project, *supra* note 1, at 945.

78. *Id.* at 946.

79. *Id.*

80. *Id.* Statistics show a slowdown, as compared to the book publishing industry, of the growth in gross revenues of the periodical publishing industry. According to government estimates, in 1979 the book publishing industry's gross revenues were \$5,820,000,000; in 1980, they were \$6,420,000,000; and for 1981 they were \$7,110,000,000. In 1979, the gross revenues of the periodical publishing industry were \$8,052,000,000; in 1980, they were \$8,937,000,000; and in 1981, they were \$9,920,000,000. 1981 INDUSTRIAL OUTLOOK, *supra* note 60, at 96, 99.

81. Project, *supra* note 1, at 948.

82. *Id.* at 946-47.

base.<sup>83</sup> The market for printed material could thus be destroyed by the capacity to receive a copy of any publication on demand.

Addressing these infringements arising from photocopying under the existing copyright laws presents difficulties similar to those involved with audiorecording and videorecording. Infringing behavior cannot be controlled effectively, because it is not easily detected. In addition, photocopying is so widespread that sanctions cannot practicably be imposed on all users. And although it is technically possible to render photocopiers incapable of copying protected works, that approach appears infeasible.<sup>84</sup>

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83. *Id.* at 949. Other technologies which can deliver a steady flow of printed matter directly to the home are viewdata and teletext. Viewdata and teletext are both systems designed to communicate textual and graphic information by wholly electronic means for display to users on modified television receivers. Viewdata utilizes the established (narrowband) telephone system to distribute data stored in computers. Because computer capacity for stored pages is almost infinitely expansible, and users may quickly display individual pages, viewdata has the potential for making available a vast fund of organized information. Teletext, by contrast, transmits data over broadcast television airwaves by means of the vertical blanking interval — that interval during the recurring period of the signal when no picture is transmitted. Given a television receiver modified to receive and display teletext, the viewer using an electronic keypad (much like a pocket calculator) can select from a continual stream of televised pages of information. The keypad control can direct the television receiver to “grab” the selected page from all those being rotated through the system. Because the entire bank of programmed information must be continually rotated, and no user will want to wait more than several seconds to get a particular page, the capacity of teletext is limited at any one time on any one television signal to a relatively small information base. Both viewdata and teletext (with variations) originated in Europe, principally the United Kingdom. They are now being introduced in Canada and the United States on an experimental basis. See J. GRUNDFEST & S. BROTMAN, *TELETEXT AND VIEWDATA: THE ISSUES OF POLICY, SERVICE AND TECHNOLOGY* 15-53 (Aspen Institute Workshop Report, M. Rice ed. 1979). In *WGN Continental Broadcasting Co. v. United Video, Inc.*, 523 F. Supp. 403 (N.D. Ill. 1981), WGN, a teletext broadcaster, brought an action against United Video for retransmitting WGN’s satellite broadcasts in altered form. United Video had been intercepting and retransmitting WGN’s programs, but had been substituting its own material in place of WGN’s teletext programming. Rejecting WGN’s claim of copyright infringement, the court stated, “[M]ere alteration of the signal which does not affect the retransmission of the broadcaster’s copyrighted work has no copyright significance.” *Id.* at 411.

84. Project, *supra* note 1, at 959-61. The Project’s authors suggest three methods of preventing machine copying of protected works. First, a special dye could be developed to take advantage of the color limitations of present machines; copyrighted works printed with such a dye could not be reproduced. Second, copyrighted works could be printed in one particular color; a special lens, placed over the light source of all photocopiers, would filter out that color. A third possibility involves printing copyrighted works in magnetic inks; a sensing mechanism would detect the ink and lock the photocopier’s carriage, thus preventing operation of the machine.

The Project’s authors, however, summarily rejected this approach:

We note just four . . . policy objections: First, absolute prohibition of copying precludes even the possibility of fair use. Second, a statutory scheme which prescribed special inks or magnetic coding for future copyrighted material would have no effect on all the works presently in print. Third, when the copyright

Rather than attempting to prevent infringement, therefore, the law should compensate copyright owners for the inevitable unauthorized photocopying of their works. Some have suggested incorporating into the photocopier a mechanism that would tally the number and type of copies made.<sup>85</sup> A digital computer, for example, could be built into the photocopier; each time a protected work was copied, an imprinter-counter attached to the photocopier would record the work's identification number.<sup>86</sup> Periodically, recorded use determinations would be collected, and the owner of the photocopier would be charged accordingly. To succeed, however, such a system would require attaching sophisticated machinery to every photocopier and setting up a clearinghouse operation to handle proceeds. The cost of implementing these services makes this approach infeasible.<sup>87</sup>

Again, the most appropriate solution appears to be a levy on the manufacture and sale of the reprographic equipment itself. France has already adopted this approach; revenues from taxes levied on reprographic equipment accrue to the Centre National des Lettres, which uses the funds to assist authors and promote the sale of books.<sup>88</sup> The Federal Republic of Germany is also considering extending the levy it imposes on VCR's and audiorecorders to include photocopiers.<sup>89</sup>

Taxing only the *sale* of photocopiers, however, may prove insufficient. Many organizations lease rather than buy photocopying equipment; others buy used machines. For example, the United States Government leases from manufacturers seventy to eighty percent of the photocopiers it uses, and at least some of the equipment it buys or leases is used.<sup>90</sup> Consequently, manu-

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expired on specially printed works, they could not be copied even though they were in the public domain. Finally, even if it were economically and administratively feasible to prevent copying mechanically, a statutory system designed to limit the beneficial capabilities of technology for dissemination of information would be a backward step.

*Id.* at 961.

85. *Id.* at 970.

86. *Id.* CONTU, in fact, considered a similar system, using magnetic tapes identical to the universal code bars appearing on packaged foods. CONTU TRANSCRIPTS 1-5, *supra* note 9, at 47-60.

87. *Cf.* Breyer, *supra* note 2, at 329 (photocopying clearinghouse likely to be too costly for libraries). See generally Finkelstein, *ASCAP as an Example of the Clearing House System in Operation*, 14 BULL. COPYRIGHT SOC'Y 2 (1966).

88. See A. DIETZ, *COPYRIGHT LAW IN THE EUROPEAN COMMUNITY* 124 (1978). Because this levy is not incorporated into France's copyright law, claims of foreign authors are effectively ignored. *Id.* at 125.

89. See Dietz, *supra* note 70, at 85.

90. Telephone interview with Ann Winchester, Copy Manager of the General Services Administration, in Washington, D.C. (July 28, 1980).

facturers' sales of photocopying equipment inaccurately reflects the extent of public use. The levy imposed on the sale of equipment, therefore, must be supplemented to compensate copyright owners for infringement occurring through machines not purchased from the manufacturer.

Denmark and the Netherlands have laws that may provide a solution to this problem. Those countries regulate photocopying by defining very specifically the limits of fair use. In Denmark, fair use extends only to the reproduction of individual articles from collective works, newspapers, journals, and fairly short selections of books and other published writing.<sup>91</sup> The Netherlands has adopted an even more precise demarcation: fair use embraces only the copying of short articles in newspapers and periodicals for strictly personal use; otherwise, the law requires a per-page fee for photocopying.<sup>92</sup>

The most appropriate method of compensating copyright owners for infringement would combine the best elements of the foregoing approaches. First, the West German system of levying a tax on manufacturer sales of VCR's and audiorecorders<sup>93</sup> should be adopted and extended to include photocopiers. Second, manufacturers should sacrifice a portion of leasing arrangement proceeds. Finally, high-volume copiers, such as technical libraries and research organizations, should pay a per-page charge for copying protected works, similar to that required by the Netherlands' copyright law. Of course, it would be impossible to exact a specific charge for each page copied from a protected work — collection of such data would be too cumbersome.<sup>94</sup> However, periodic surveys could be conducted at specific organizations to determine their volume of photocopier use and the percentage of that use involving reproduction of protected works. The organizations could then be charged a flat fee according to the amount of infringement taking place. This "modified" per-page levy, to some extent, would compensate copyright holders for the use of older machines neither leased nor purchased from the manufacturer.

### *C. Collecting and Dividing the Proceeds*

#### Collection of the taxes imposed on home reprographic devices

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91. A. DIETZ, *supra* note 88, at 127.

92. *Id.* at 131-32.

93. See *supra* notes 64-65 and accompanying text.

94. Project, *supra* note 1, at 967-71.

could be achieved through either of two methods. First, a per-use taxation scheme might be employed, which would entail recording and collecting payments for each copy of each individual copyrighted work, with the proceeds being distributed in a manner reflecting actual use of the protected work.<sup>95</sup> Alternatively, a system of flat fee payments could be adopted, involving the collection and distribution of a large sum of money that merely reflects a general estimate of use.<sup>96</sup>

The most effective taxation scheme combines aspects of both systems. Taxes levied on the manufacture of reprographic machinery and on the purchase of software are essentially flat-fee payments. On the other hand, those who routinely engage in extensive photocopying of protected works — medical school libraries and commercial photocopying establishments, for example — should be required to pay a “modified” per-page charge<sup>97</sup> to supplement the payment of a flat fee. This proposed system, tailored to compensate more accurately the injured copyright owner, would not require the expensive and overcomplex administration normally associated with per-use collection schemes.<sup>98</sup>

All revenues should be placed in common funds and distributed on a set-rate basis, even though a portion will have been collected on a per-use basis. While this may sever the linkage between infringement and reimbursement to some extent, the compromise seems necessary; the process of dividing proceeds to reflect actual use appears simply unworkable.<sup>99</sup> The proceeds thus collected should be distributed through private clearinghouses, modeled after the performing rights societies.<sup>100</sup> Disputes over the amounts these clearinghouses should pay to copyright holders seemingly would be inevitable. As a result, copyright owners might threaten to deny public access to their

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95. *Id.* at 963.

96. *Id.*

97. *See supra* text following note 94.

98. *See* Project, *supra* note 1, at 967-71.

99. *Id.*

100. The private performing rights clearinghouses — the American Society of Composers and Publishers (“ASCAP”) and Broadcast Music Incorporated (“BMI”) — engage in flat-fee distribution of royalties. They are voluntary associations appointed as agents of the copyright owner. In addition to distributing performance royalties, ASCAP and BMI compile an annual directory of their members, negotiate payments, and publish fee schedules. These organizations have been instrumental in accommodating the rights of copyright owners and the public’s access to musical compositions. *See* Broadcast Music, Inc. v. Columbia Broadcasting System, 444 U.S. 1, 20 (1979). *See generally* Finkelstein, *supra* note 87. *But see* Project *supra* note 1, at 964-65 (arguing that private association model is inappropriate vehicle for overseeing written works).

works until their demands are met.<sup>101</sup> The danger that such conflicts would arise, however, can be minimized through the imposition of a compulsory arbitration requirement.<sup>102</sup>

### CONCLUSION

The reprographic revolution presents a unique challenge to the structure of copyright law. Reprographic technology enables the consumer to duplicate protected works easily, economically, and anonymously — and thus engage in widespread, undetectable infringement that dampens the incentive to create. Congress has recognized the potential threat of pervasive consumer reprography to traditional notions of copyright, but has not undertaken the necessary reform. Moreover, the judicial response, relying on the fair use doctrine, has been too arbitrary and inconsistent to offer a meaningful solution.

One approach, however, adequately balances the interests of both copyright holder and consumer. Copyright law should be revised to impose a levy on reprographic equipment and software to compensate the copyright owner for the harm caused by specific reprographic technology. Under such a system, while adequate economic incentives to create would be maintained, few uses of copyrighted works would be prohibited, transforming from ideal to reality “[t]he general rule of law . . . that the noblest of human productions — knowledge, truth ascertained, conceptions and ideas — [should] become voluntary communication to others, free as the air to common use.”<sup>103</sup>

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101. This situation has arisen in West Germany, where the law places a ceiling on the amount copyright owners may demand annually from manufacturers of reprographic equipment. See Ulmer, *International Copyright After the Paris Revisions*, 19 BULL. COPYRIGHT Soc’y 263, 275-76 (1972); cf. Calabresi & Malamed, *Property Rules and Inalienability: One View of the Cathedral*, 85 HARV. L. REV. 1089, 1106-07 (1972) (discussing breakdowns that can occur in negotiations over property values).

102. Arbitrators should, of course, be persons of learning and experience in the field. See Copyright Council Order, Cabinet Order No. 342 (Japan Dec. 24, 1970), reprinted in 3 EHS L. BULL. SERIES, at EDA 1.

Arbitration decisions should be subject to review by the existing Copyright Royalty Tribunal (“CRT”). The CRT, however, would not be a good choice for the task of collecting and dividing royalty proceeds. As of August 1981, the CRT had collected more than \$20,000,000 in cable television royalties — and was still grappling with finalizing distribution. *House Hearings, supra* note 46, at 17-21. The Tribunal was only recently able to distribute the first \$15 million collected in 1978, when the District of Columbia Circuit Court of Appeals approved its award. *Nat’l Ass’n of Broadcasters v. Copyright Royalty Tribunal*, No. 80-2273 (D.C. Cir. Apr. 9, 1982); see Carlson, *Tribunal Holds Its Own TV Game Show*, L. Times Wash., Apr. 19, 1982, at 1, col. 1.

103. *International News Service v. Associated Press*, 248 U.S. 215, 250 (1918) (Bran-



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