University of Michigan Journal of Law Reform

Volume 35

2002

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PARADIGM SHIFTS AND ACCESS CONTROLS: AN ECONOMIC ANALYSIS OF THE ANTICIRCUMVENTION PROVISIONS OF THE DIGITAL MILLENNIUM COPYRIGHT ACT

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This Note addresses the broadened scope of protection granted to copyright holders under the anticircumvention provisions of the Digital Millenium Copyright Act of 1998 (DMCA). This broadened scope extends to copyright holders the right to control access to their works, diminishing the consumer's "fair use" of those works that previously served as a defense to alleged copyright infringements. While access controls are supported by economists who believe they are useful in correcting market inefficiencies and excluding free riders, this Note suggests that access controls cannot correct all market inefficiencies. Furthermore, such access controls deny access and use of copyrighted material that would otherwise be legal as fair use. Additionally, access controls can be used to lock up uncopyrighted public domain material. The Note thus argues that the DMCA should be reformed so that access controls are not applied to noninfringing uses. Part I of this Note discusses the origins of the DMCA and its anticircumvention provisions. Part II discusses how United States copyright doctrine has evolved away from a balancing approach and toward one where copyrights are treated more like private property. Part III discusses the economic arguments in favor of access control provisions and why they are not completely effective in achieving optimal levels of production and utilization of copyrighted works. Finally, Part IV suggests how the DMCA should be modified.

INTRODUCTION

Consider the following four scenarios:

SCENARIO 1: Suppose I legally purchase a DVD. I return home to find out that the copyright holder has inserted fifteen minutes of commercials before the movie. Unbeknownst to me when I purchased the DVD, the DVD includes technology that will not allow me to skip through the commercials to the beginning of the movie. In order to avoid being bombarded with the ill-timed commercial messages in the future, I use my superior programming skills to bypass this technology so that I may watch, without unnecessary

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delay, my legally purchased DVD on my legally purchased DVD player.

SCENARIO 2: Suppose I am developing a critical comparison of the music of Skittle (an abrasive musician with offensive lyrics but catchy melodies) with Litany Javelins (a provocatively attired teenage singing sensation with inane lyrics but catchy melodies). My thesis is that Javelins' music is, like Skittle's music, degrading to women. Not surprisingly, Javelins doesn't like my idea for a critical comparison and refuses to let me use excerpts of her songs for my analysis. I circumvent the technology that prohibits me from making digital copies (off of my legally purchased and downloaded copy) and incorporate samples of her music into my critical analysis without her permission. MTV plays my critique and pays me handsomely for the rights to it (*i.e.* I have financially profited from my work).

SCENARIO 3: Suppose I am an ace reporter covering the city-beat in the city of Hutchins. A confidential source informs me that Company Y is hiding a major environmental catastrophe. He hands me a computer disk with copies of Company Y's reports and photos detailing the specifics of the disaster. Company Y, realizing the sensitive nature of the information contained in the reports, has protected them with access controls. I break the access controls and also break the story in the local newspaper.[1]

SCENARIO 4: I am a renowned author of self-help books. My latest offering, *Only You Can Help Yourself—Why Self-Help Books are a Waste of Money*, is currently near the top of the best seller lists (behind *The Rules* but in front of the latest *Women are from Venus* offering by John Gray). I suspect that large portions of my book are being distributed over the Internet self-help site www.selfhelpforeveryone.com. Only members have access to the material on the web site. I circumvent the technology keeping me from perusing the material on the web site and discover that I was wrong: instead of excerpting pieces of my book, my entire book is online.

Under all of these scenarios, by circumventing a "technological measure that effectively controls access to a work," I have committed a federal crime under the anticircumvention provisions of the Digital Millennium Copyright Act of 1998 (DMCA).[2] If I am convicted under the DMCA and am found to have violated the provisions "willfully and for purposes of commercial advantage or

1. This scenario was adapted from Pamela Samuelson, *Intellectual Property and the Digital Economy: Why the Anti-Circumvention Regulations Need to Be Revised*, 14 BERKELEY TECH. L.J. 519, 545 (1999).

2. 17 U.S.C. § 1201(a) (1999).

private financial gain," then I can be sent to prison for five years and fined $500,000 for my first offense.[3] If I am a repeat offender, then the fine increases to $1,000,000 with up to ten years in federal prison.[4]

The protection granted to copyright holders under the DMCA is far more extensive than protection granted previously under the Copyright Act.[5] In *Harper & Row Publishers v. Nation Enterprises*, the Supreme Court declared that

> copyright does not prevent subsequent users from copying from a prior author's work those constituent elements that are not original—for example, quotations borrowed under the rubric of fair use from other copyrighted works, facts, or materials in the public domain—as long as such use does not unfairly appropriate the author's original contributions.[6]

After implementation of the DMCA, this statement is no longer true. Unlike a cause of action for copyright infringement, fair use[7] is not a defense to a cause of action for violating the DMCA's anticircumvention provisions. Under the DMCA, copyright holders have been granted a new right: to control consumer *access* to the contents of their works.[8] Unfortunately, access controls do not discriminate between protectable and nonprotectable works.[9] Consequently, there is no way to guarantee that access controls will not prevent consumers from either (1) making legal use of copyrighted material; or (2) making use of uncopyrightable material contained in a work locked up by access controls.[10]

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3. 17 U.S.C. § 1204(a)(1) (1999).

4. 17 U.S.C. § 1204(a)(2) (1999).

5. Neil Weinstock Netanel, *From the Dead Sea Scrolls to the Digital Millennium; Recent Developments in Copyright Law*, 9 TEX. INTELL. PROP. L. J. 19, 20 (2000).

6. Harper & Row, Publishers, Inc. v. Nation Enterprises, 471 U.S. 539, 548 (1985).

7. 17 U.S.C. § 107 (1994). For a discussion of fair use *see infra* Part II.C.

8. 17 U.S.C. § 1201 (1999); JESSICA LITMAN, DIGITAL COPYRIGHT 83 (2001).

9. Access controls are technical measures employed by copyright holders to prevent unauthorized access to a given work. When such technical measures are in place, access to a work requires "application of information, or a process or a treatment, with the authority of the copyright owner." 17 U.S.C. § 1201(a)(3)(B). Without authority of the copyright holder, the measures can be circumvented by descrambling a scrambled work, decrypting an encrypted work, or otherwise avoiding, bypassing, removing, deactivating or impairing a technological measure. 17 U.S.C. § 1201(a)(3)(A). Consequently, access controls will not prevent access to copyrighted works published in traditional mediums like books and newspapers. However, to the extent a work is published exclusively in a format to which access controls can be applied (*e.g.*, digitally), access controls can effectively prevent unauthorized access to a work.

10. LITMAN, *supra* note 8, at 83.

The constitutional Framers envisioned a balancing approach to copyright law. In recent years, copyright law has evolved away from the balancing approach envisioned by the constitutional Framers towards a market-based approach—grounded in economic analysis of the law.[11] Under the market-based approach, intellectual property is treated like private property and control resides with the copyright holder.[12] Access controls assist copyright owners by controlling access to their intellectual property, in much the same way a fence keeps intruders from trespassing on real property. Thus, access controls enable copyright holders to keep potentially unwanted and/or nonpaying users from using their copyrighted works.

Economists argue that access controls can be justified theoretically because they correct market inefficiencies.[13] From an economic perspective, access controls are justified because they allow producers to exclude "free riders."[14] Free riders, precluded from obtaining free access to a copyrighted work, must now pay for it or go without. By forcing free riders to pay, producer's profits are brought in line with the actual social benefits conferred by their products.

Access controls, however, cannot cure all market inefficiencies. The economic argument for access controls is predicated on the following three assumptions: (1) information is perfect; (2) transaction costs are zero; and (3) parties act rationally.[15] In the market for copyrighted works each of these assumptions fails. Consequently, market inefficiencies will still exist.

Under a market-based system utilizing access controls certain users will be denied access to, and thereby use of, copyrighted material that would otherwise be legal to use. Additionally, access controls could lock up public domain material not subject to copyright. Consequently, the access control provisions of the DMCA require modification so that they are not applied to bar noninfringing uses.

In Part I, this Note will discuss the origins of the DMCA and its anticircumvention provisions. In Part II, it will discuss how United States copyright doctrine has evolved away from a balancing approach and toward one where copyrights are treated more like private property. Part III will discuss the economic arguments in favor of access control provisions and why they are not completely

11. *Harper & Row*, 471 U.S. at 568.
12. *See* discussion *infra* Part III.D.
13. *Id.*
14. *Id.*
15. *Id.*

effective in achieving optimal levels of production and utilization of copyrighted works. Finally, Part IV will suggest how the DMCA should be modified.

I. DIGITAL MILLENNIUM COPYRIGHT ACT

The DMCA was precipitated by an international treaty. On December 20, 1996, the World Intellectual Property Organization (WIPO) Diplomatic Conference on Certain Copyright and Neighboring Rights Questions adopted the WIPO Copyright Treaty (WCT).[16] The United States ratified the WCT in September 1999.

The WCT addresses some of the problems copyright owners confronted once digitization made copying quick, easy, and cost-free. To address these problems, the WCT establishes several requirements that must be met by each signatory country's copyright law.[17] Signatory countries are free to construct their own laws to comply with the treaty requirements as the WCT combines supranational substantive rules with the principal of national treatment. Supranational substantive rules cover both rights afforded and subject matter protected. National treatment means that a foreign work will receive the same protection as would a local work.

Under the WCT, authors of literary and artistic works are given the exclusive right to communicate their works to the public.[18] Additionally, authors are given the exclusive right to control the making and distribution of copies in digital format.[19] Significantly, signatory countries can

> continue to apply existing exceptions and limitations, such as fair use, as appropriate in the digital environment, and can even create new exceptions and limitations appropriate to the digital environment.[20]

Most importantly for this discussion, countries adopting the WCT must

16. WIPO Copyright Treaty, Dec. 20, 1996, WIPO Doc. CRNR/DC/94 (Dec. 23, 1996) [hereinafter WIPO WCT].

17. *See generally* WIPO WCT.

18. WIPO WCT, art. 6.

19. WIPO WCT, art. 8.

20. Samuelson, *supra* note 1, at 528 (interpreting WIPO WCT, art. 10).

> provide *adequate legal protection and effective legal remedies against the circumvention* of effective technological measures that are used by authors in connection with the exercise of their rights [under the treaty].[21]

Legal scholars have debated whether or not existing U.S. copyright law provided all of the protections for copyright owners required by the WCT. For instance, Pamela Samuelson has argued that copyright cases already recognized rights of authors to control both digital reproductions and digital transmissions of their works.[22] Similarly, Jessica Litman has argued that "the availability of infringement actions against circumventers who succeeded in violating copyright owners' rights, together with the possibility of suing makers of devices that had no legitimate use, met the standard set by the [WIPO Copyright] treaty."[23]

In fact, both the U.S. Department of Commerce and the Clinton Administration initially considered sending the treaty "clean" to the U.S. Senate for ratification without implementing legislation.[24] Copyright holders objected and insisted that the "effective legal remedies" requirement meant that they should have the legal ability to prevent *all* circumvention of technical protection measures—despite language in the WCT allowing signatory countries to maintain existing exceptions such as fair use.[25] According to copyright owners, under the WCT, the reason for the circumvention was irrelevant. Additionally, they argued that the treaty required prohibition of *all* devices capable of facilitating illegal circumven-

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21. WIPO WCT, art. 11.

22. Samuelson, *supra* note 1, at 530.

23. LITMAN, *supra* note 8, at 131. Litman maintained that no additional legislation was necessary since copyright infringement accomplished by circumvention of technical measures was already actionable under U.S. law as copyright infringement. *Id.* Additionally, producers of devices that had no substantial noninfringing uses who knowingly facilitated copyright infringement would be subject to copyright infringement liability. *Id.* (citing A&M Records v. Abdalla, 948 F. Supp. 1449 (C.D. Cal. 1996)). However, in *Sony Corp. of America v. Universal City Studios, Inc.*, 464 U.S. 417, 434–42 (1984), the Supreme Court refused to hold the video tape recorder (VTR) manufacturers liable. Even though the VTR could be used to make illegal copies of copyrighted material, it was also capable of substantial noninfringing uses. *Id.*

24. LITMAN, *supra* note 8, at 130; Samuelson, *supra* note 1, at 530 n.61 (citing *Clinton Administration Is Undecided On Implementing Steps For WIPO Treaties*, 53 BNA PAT., TRADEMARK & COPYRIGHT J. 241 (1997)).

25. WIPO WCT, art. 10 provides:

> Contracting Parties may, in their national legislation, provide for limitations of or exceptions to the rights granted to authors of literary and artistic works under this Treaty in certain special cases that do not conflict with a normal exploitation of the work and do not unreasonably prejudice the legitimate interests of the author.

tion—regardless of whether or not the devices were capable of being used for other legitimate purposes.[26]

In the end, copyright holders appear to have prevailed. Congress enacted the DMCA on October 28, 1998 in fulfillment of its treaty obligations. Title I of the DMCA prohibits circumvention of access control technologies used by copyright owners to protect their works. Specifically, subsection 1201(a)(1)(A) provides, that "[n]o person shall circumvent a technological measure that effectively controls access to a work protected under this title."[27] Violation of subsection 1201(a)(1)(A) is both a federal crime[28] and the basis for a civil cause of action.[29]

The DMCA was not without exceptions. Seven exceptions to the anticircumvention provisions were expressly enumerated:

1. Security testing;[30]
2. Exemption for nonprofit libraries, archives, and educational institutions;[31]
3. Exemption for law enforcement, intelligence, and other governmental activities;[32]

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26. LITMAN, *supra* note 8, at 131.

27. 17 U.S.C. § 1201(a)(1)(A).

28. 17 U.S.C. § 1204 (1999). Any person who willfully violates the anticircumvention provisions found in § 1201 "for the purposes of commercial advantage or private financial gain" can be fined up to $500,000 or imprisoned up to five years for a first offense. *Id.* Second time offenders face up to a $1,000,000 fine and imprisonment up to ten years. *Id.* The risk of substantial imprisonment time for violation the statute should deter many people from challenging the constitutionality of the statute. In 1999, the United States Department of Justice declared prosecution of IP crimes to be a "major law enforcement priority." David Goldstone, *Deciding Whether to Prosecute an Intellectual Property Case*, U.S. DEP'T. OF JUSTICE, 49 U.S. ATTORNEYS' USA BULLETIN 2 (Mar. 2001), *available at* http://www.usdoj.gov/criminal/cybercrime/usamarch2001_1.htm. According to a recent DOJ publication:

> IP crime always has a direct victim (the IP holder) and undermines the IP system as a whole (like counterfeiting money).... Because IP crime can be perpetrated without any direct contact with the victim IP holder ..., the direct victim of IP crime is basically defenseless against IP theft.... IP rights, such as ... copyright, are in part created by federal law and ... are thus of special federal interest.... Effective enforcement of IP laws is essential to the foundation of the growing information economy.

Id.

29. 17 U.S.C. § 1203 (1999). Courts are entitled to grant temporary or permanent injunctions, may order impounding of allegedly infringing devices or products, award damages, and order destruction of devices or products found in violation of § 1201. *Id.*

30. 17 U.S.C. § 1201(j).

31. 17 U.S.C. § 1201(d).

32. 17 U.S.C. § 1201(e).

4. Reverse engineering;[33]
5. Encryption research;[34]
6. Exceptions regarding minors;[35] and
7. Protection of personally identifying information.[36]

While at first glance these exceptions appear to be quite broad, they are in fact extremely narrow. For example, the security testing exception is limited to "good faith testing, investigating, or correcting, a security flaw or vulnerability."[37] This exemption is further limited by the requirement that the circumventer first obtain *permission of the owner* of the computer system or software.[38]

Similarly narrow is the exemption titled "Exemption for nonprofit libraries, archives, and educational institutions."[39] This exemption permits circumvention for the sole purpose of making a good faith determination as to whether a library should acquire a copy of that work.[40] Towards that end, a copy obtained by a library may only be retained long enough to make a good faith determination of whether or not to acquire permanent access and may not be used for any other purpose.[41] However, circumvention is altogether prohibited if another copy is reasonably available.

In addition to the expressly enumerated exceptions in the DMCA, lawmakers also provided for additional, changing exceptions through use of a fail-safe mechanism. This mechanism was designed to

> monitor developments in the marketplace for copyrighted materials, and allow the enforceability of the prohibition against the act of circumvention to be selectively waived, for limited time periods, if necessary to prevent a diminution in

33. 17 U.S.C. § 1201(f).
34. 17 U.S.C. § 1201(g).
35. 17 U.S.C. § 1201(h).
36. 17 U.S.C. § 1201(i).
37. 17 U.S.C. § 1201(j).
38. *Id.* The original draft of the DMCA contained an exemption only for law enforcement purposes, because drafters realized that many common law enforcement activities would be outlawed by the DMCA. Samuelson, *supra* note 1, at 535. Congress carved out the security testing exemption when it figured out that under the DMCA many companies would be unable to security test their own software without violating the anticircumvention provisions of the DMCA. *Id.* at 535–36.
39. 17 U.S.C. § 1201(d).
40. 17 U.S.C. § 1201(d).
41. 17 U.S.C. § 1201(d)(A), (B).

> the availability to individual users of a particular category of copyrighted materials.[42]

The fail-safe mechanism was implemented in section 1201(a)(1)(B) and provides that the prohibition against circumvention

> shall not apply to persons who are users of a copyrighted work which is in a particular class of works, if such persons *are, or are likely to be in the succeeding 3-year period, adversely affected* by virtue of such prohibition in their ability to make noninfringing uses of that particular class of works under this title.[43]

During the two years prior to October 28, 2000, the Librarian of Congress conducted a rulemaking proceeding to determine

> whether persons who are users of a copyrighted work are, or are likely to be in the succeeding 3-year period, adversely affected by the prohibition in [1201(a)(1)(A)] in their ability to make noninfringing uses under this particular class of copyrighted works.[44]

The Librarian was instructed to carve out exemptions to the provisions of 1201(a)(1)(A) that would last for a three-year period beginning October 28, 2000.[45] After three years these exemptions will be reviewed *de novo.*[46]

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42. Exemption to Prohibition on Circumvention of Copyright Protection Systems for Access Control Technologies; Final Rule, 65 Fed. Reg. 64,556, 64,558 (Copyright Office, Library of Congress, Oct. 27, 2000) [hereinafter Exemption to Circumvention].

43. 17 U.S.C. § 1201 (emphasis added). The fail-safe exemption was the result of legislative compromise between the Judiciary Committee and Commerce Committee. Despite the WCT's instruction that signatory countries could "in their national legislation, provide for limitations of or exceptions to the rights granted to authors of literary and artistic works," WIPO WCT art. 8, *supra* note 16. The original DMCA that came out of the Judiciary Committee had no provision for fair use. Although the Judiciary Committee usually dealt with copyright matters, the Commerce Committee became involved when it realized the DMCA went far beyond copyright since it contained prohibitions against the manufacture and sale of devices. Additionally, the Commerce Committee had in recent years had jurisdiction over issues of Internet and electronic commerce. Only after the Commerce Committee became involved was the fail-safe exemption provision added to the final version of the DMCA. For a detailed discussion of the DMCA's progress through Congress, see LITMAN, *supra* note 8, at 122–45.

44. 17 U.S.C. § 1201(a)(1)(C).

45. 17 U.S.C. § 1201(a).

46. 17 U.S.C. § 1201(a)(1)(D).

On October 27, 2000, the Librarian of Congress issued its Final Rule, Exemption to Prohibition on Circumvention of Copyright Protection Systems for Access Control Technologies.[47] In this final rulemaking, the Librarian of Congress adopted two narrow exemptions to section 1201:

1. Compilations consisting of lists of websites blocked by filtering software applications;[48] and
2. Literary works, including computer programs and databases, protected by access control mechanisms that fail to permit access because of malfunction, damage or obsoleteness.[49]

In adopting these two exemptions, the Librarian rejected several proposed exemptions including those for:

1. "thin copyright" works;[50]
2. sole source works;[51]
3. audiovisual works on digital versatile discs (DVDs);[52]
4. video games in formats playable only on dedicated platforms;[53]
5. computer programs or other digital works for purposes of reverse engineering;[54]
6. encryption research purposes;[55]
7. "fair use" works;[56]

47. Exemption to Circumvention, 65 Fed. Reg. at 64,556.

48. *Id.* at 64,564.

49. *Id.*

50. *Id.* at 64,566. Thin copyright works "are works consisting primarily (but not entirely) of matter unprotected by copyright such as U.S. government works or works whose term of copyright protection has expired, or works for which copyright protection is 'thin,' such as factual works." *Id.*

51. *Id.* at 64,567. Sole source works are copyrighted works available only from a single source making them available only in a form protected by access controls. *Id.*

52. *Id.*

53. *Id.* at 64,570.

54. *Id.*

55. *Id.* at 64,571.

56. *Id.* at 64,570. For a discussion of fair use *see* Parts II.C and II.D *infra.*

8. material that cannot be archived or preserved;[57]
9. works embodied in copies which have been lawfully acquired by users who subsequently seek to make noninfringing uses thereof;[58]
10. exemption for public broadcasting entities.[59]

The most common reasons for rejecting these proposed exemptions were: (1) failure of the proposed exception to meet the "class of works" requirement; and (2) failure to show actual harm.[60] The "class of works" requirement emanated from the language in 17 U.S.C. § 1201(a)(1)(C), which required the Librarian to base exemptions on a "particular class of copyrighted works."[61] The Librarian interpreted that language to mean that "a class must be defined primarily by reference to attributes of the works themselves, typically based upon categories set forth in section 102(a) or some subset thereof. . . ."[62] Accordingly, exemptions should begin with a section 102(a) category or subset of a section 102(a) category.[63]

Once a section 102(a) category had been identified, it could be limited by (1) attributes of the works themselves; (2) reference to a medium; or (3) the access control measures applied.[64] For example, according to the Librarian the following exemption would meet the class of works requirement: Motion Pictures (a subset of the § 102 (a) category Literary Works) distributed on DVDs (reference to a distribution medium) using content scrambling system of access control (access control measures applied).[65]

Regardless of whether or not the user's ability to access works were adversely impacted, those exemptions that failed were (1) referenced solely by the medium in which the work appears, (2) based solely on the type of access control measure applied to

57. *Id.* at 64,572.

58. *Id.*

59. *Id.* at 64,573.

60. The DMCA's anticircumvention provisions did not go into effect until October 28, 2000—two years after its enactment. 17 U.S.C. 1201(a)(1)(A). Since the anticircumvention provisions had not yet become effective at the time the Final Rule was issued, it is not surprising that the Librarian had trouble finding actual harm warranting a three-year exception.

61. Exemption to Circumvention, 65 Fed. Reg. at 64,559–62.

62. *Id.* at 64,562.

63. Section 102(a) categories include: (1) literary works; (2) musical works, (3) dramatic works; (4) pantomimes and choreographic works; (5) pictorial, graphic, and sculptural works; (6) motion pictures and other audiovisual works; (7) sound recordings; and (8) architectural works. 17 U.S.C. § 102(a).

64. Exemption to Circumvention, 65 Fed. Reg. at 64,559–61.

65. *Id.*

a work, or (3) determined by type of use or user.[66] Consequently, the following proposed exemptions failed the class of works requirement as interpreted by the Librarian:

- "thin copyright" works, sole source works,
- "fair use" works,
- material that cannot be archived or preserved,
- works embodied in copies which have been lawfully acquired by users who subsequently seek to make noninfringing uses thereof, and
- exemption for public broadcasting.

Proposed exemptions that could surmount the class of works requirement were rejected for failure to show "adverse effects on noninfringing uses that such an exemption would remedy."[67] According to the Librarian, pay-per-use business models facilitated by the DMCA may even be use-facilitating:[68]

> For example, if consumers are given a choice between paying $100 for permanent access to a work or $2 for each individual occasion on which they access the work, many will probably find it advantageous to elect the "pay-per-use" option, which may make access to the work much more widely available than it would be in the absence of such an option.[69]

66. *Id.* at 64,566–73.

67. *Id.* at 64,562. It is interesting to note that the Librarian seemed to require a showing of *actual* harm. By contrast, the statute merely requires a showing that persons would be "*likely* to be in the succeeding 3-year period, adversely affected. . . ." 17 U.S.C. § 1201(a)(1)(B) (emphasis added). For example, when rejecting the proposed exemption for "fair use works," the Librarian stated that "[a]lthough the proponents of this exemption allege that if they are prevented from circumventing these particular classes of works, they . . . will not be able to exercise fair use as to this class of works, *they have not demonstrated that they have been unable to engage in such uses because of access control measures.*" *Id.* at 64,571–72 (emphasis added).

68. *Id.* at 64,564.

69. *Id.* The Librarian's statement will be true when

$$N*(T+C) < S$$

where N = number of uses by a copyright user; T = transaction/search costs associated with each use; C = cost of use for each occasion access is desired; and S = cost for permanent access. The introduction of a pay-per-use business model adds transaction and search costs to each occasion a use or access is desired.

Therefore, the Librarian concluded that "the flexibility offered by such 'persistent' access controls [could] actually enhance use."[70]

In such rationale, the market-based approach to copyright is apparent. Exemptions will be granted only if the market has not adequately addressed the needs of copyright users. However, if a market could adequately support consumer's uses of copyrighted works, no exemption will be allowed.

As to the exemptions rejected for failure to show actual or likely harm, the Librarian noted that it was no surprise that so few exemptions were found since "adverse effect on users of copyrighted works" required to get an exemption was merely speculative since circumvention was not even unlawful until October 28, 2000.[71]

A market-based approach was expressly used by the Librarian for the two exemptions carved out under the fail-safe exemptions. The Librarian explained that the two exemptions approved were warranted because the market had not adequately addressed consumer's noninfringing uses "either because companies go out of business or because they have insufficient incentive to support access controls on their products at some point after the initial sale or license."[72]

II. THE TREND TOWARDS A MARKET-BASED APPROACH TO COPYRIGHT

The enactment of the DMCA has continued a trend of expanding the rights of copyright owners at the expense of copyright users. United States copyright law has evolved from a *balancing approach*, where copyright holders and copyright users each had substantial rights, to a *market-based approach*—grounded in economic analysis—under which copyright holders are awarded almost complete control over their intellectual property. In doing so, intellectual property has come to be treated more like private property.

This section will discuss how copyright law has evolved so that copyrighted works are treated like private property. First, it will

70. *Id.* at 64,564.

71. *Id.* at 64,563. The next rulemaking is scheduled for October 28, 2003. After three years of anticircumvention technology being enforced, it may be easier to prove that users are adversely effected by the DMCA. Legislation would seem to be required to overcome the hurdle imposed by the Librarian's interpretation of the "class of works requirement."

72. *Id.* at 64,565.

discuss copyright law generally, then it will discuss how market-based approaches have been applied in fair use analysis, specifically in terms of the fourth fair use factor. Finally, it will discuss how the DMCA, by excluding fair use, has further facilitated a market-based approach to copyright law.

A. Copyright Law Generally

The Constitution provides that Congress shall have power "[t]o promote the Progress of Science and useful Arts, by securing for limited Time to Authors and Inventors the exclusive Right to their respective Writings and Discoveries."[73] The Framers believed that a balance should be struck between authors and the public. The object was to foster development and access; creation of the monopoly right was merely the means to that end.[74] Consequently, instead of granting intellectual property rights to authors similar to those granted to real property owners (which last forever), the Framers granted authors fixed "exclusive rights" that would last only for a "limited time."[75]

As envisioned by the Framers, the purpose of copyright was not to "reward the author, but [was] rather to secure 'the general benefits derived by the public from the labors of authors.'"[76] The authorization to grant limited monopolies to authors is based on the beliefs that (1) the public will benefit from the creative activities of authors; and (2) a copyright monopoly is necessary in order for the benefits of such creative activities to be fully realized.[77] "The

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73. U.S. CONST., art. I, § 8, cl. 8.

74. "[T]he Framers intended copyright itself to be the engine of free expression. By establishing a marketable right to the use of one's expression, copyright supplies the economic incentive to create and disseminate ideas." Harper & Row, Publishers, Inc. v. Nation Enters., 471 U.S. 539, 548 (1985).

75. Lawrence Lessig, *The Limits of Copyright*, THE STANDARD, June 19, 2000, *at* www.thestandard.com. Unlike rights in real property which last forever, copyright lasts only for "limited times" before being dedicated to the public domain. Unlike the law of eminent domain which requires homeowners to be compensated if their property is seized, the Constitution requires that copyrights pass into the public domain after limited times without compensation. *Id.*

76. MELVILLE B. NIMMER & DAVID NIMMER, 1 NIMMER ON COPYRIGHT § 1.03[A] (2001) (quoting Fox Film Corp. v. Doyal, 286 U.S. 123, 127 (1932)).

77. 1 NIMMER ON COPYRIGHT, *supra* note 76, § 1.03[A]. The Supreme Court stated the purpose as follows:

> The economic philosophy behind the clause empowering Congress to grant patents and copyrights is the conviction that encouragement of individual effort by personal

monopoly created by copyright thus rewards the individual author in order to benefit the public."[78] Consequently, without such public benefits, the granting of private copyright monopolies to individuals would be unjustified.[79]

The "limited times" provision was an attempt by the Framers to balance two competing interests: (1) the author's interest in reaping the fruits of his labor; and (2) the public's interest in "ultimately claiming free access to the materials essential to the development of society."[80] The Supreme Court explained that the constitutional grant for "limited times" works as follows:

> This limited grant is a means by which an important public interest may be achieved. It is intended to motivate the creative activity of authors and inventors by provision of a special reward, and to allow the public access to the products of their genius after the limited period of exclusive control had expired.[81]

The First Congress enacted the first copyright protection in 1790.[82] In the Copyright Act of 1790 (1790 Act), like the Framers, Congress was concerned with striking an appropriate balance between the public and authors. Accordingly, the 1790 Act gave authors exclusive rights to publish and sell "maps, charts or books" for fourteen years.[83] Such protection was only granted if the author complied with strict registration requirements.[84] The author was entitled to a fourteen-year renewal period if he survived the first term and complied with more administrative procedures.

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gain is the best way to advance public welfare through the talents of authors and inventors in "Science and useful Arts."

Id. (quoting Mazer v. Stein, 347 U.S. 201, 219 (1954)).

78. *Harper & Row*, 471 U.S. at 546 (quoting Sony Corp. of America v. Universal City Studios, Inc., 464 U.S. 417, 429 (1984)).

79. *Id.*

80. 1 NIMMER ON COPYRIGHT, *supra* note 76, § 1.05[D].

81. *Harper & Row*, 471 U.S. at 546 (quoting Sony Corp. of America v. Universal City Studios, Inc., 464 U.S. 417, 429 (1984)).

82. Copyright Act of May 31, 1790, ch. 15, 1 Stat. 124 (repealed).

83. Lessig, *supra* note 75. The 1790 Act did not regulate other kinds of writings. Importantly, uses of writings that it did regulate were not restricted. *Id.* Besides limiting competition, the 1790 Act gave the author no real control over his work once published. *Id.*

84. The author was protected if: (1) prior to publication, he recorded the title at the district court where he resided; (2) published a copy of the record in a newspaper for four weeks; and (3) deposited a copy of the work at the office of the Secretary of State within six months after publication. Copyright Act of May 31, 1790, ch. 15, §§ 3–4, 1 Stat. 124, 125 (repealed).

Importantly, the 1790 Act did not give copyright holders rights to control how their writings were used by copyright users.[85] Besides limiting competition, the 1790 Act gave the author no real control over his work once published. Therefore, one was free to create derivative works and copy works protected without permission of the author.[86]

In between 1790 and the first major revision of the copyright laws in 1909, Congress amended the 1790 Act several times. Amendments had given copyright protection to more subject matter[87] and had lengthened the term of copyright to an initial period of twenty-eight years with a fourteen-year renewal period. The 1909 Copyright Act continued to expand statutory copyright rights. The fourteen-year renewal period was extended by fourteen years, resulting in a maximum possible term of fifty-six years.[88] In return for these exclusive rights, the public was guaranteed immediate public dissemination of the work and eventual dedication of the work in its entirety to the "public domain."[89]

Until the 1970s,[90] "[c]opyright was seen as designed to be full of holes."[91] The public and copyright holder shared the benefits. Each was entitled to retain the portion that would maximize the creation of new works of authorship.[92] Since then, the idea of a bargain between copyright holders and users has gradually been replaced with a model based on an economic analysis of the law.[93] Under an economic model, authors' rights are treated like property rights instead of a bargain between owners and users.[94] Copyright is characterized as a series of incentives for the purpose of creating more works of authorship.[95] Accordingly, "[c]opyright has been transformed into the right of a property owner to protect what is

85. *Id.*

86. Lessig, *supra* note 75.

87. Much of the new subject matter had been already added to the 1790 Act via amendment. New subject matter included: (1) prints; (2) musical compositions (excluding the public performance right); (3) photographs; (4) drawings, sculpture, and models or designs for works of the fine arts. Copyright Act of 1870, 16 Stat. 212, Rev. Stat. §§ 4948–71.

88. Copyright Act of 1909, ch. 320, § 23, 35 Stat. 1075, 1080.

89. LITMAN, *supra* note 8, at 78 (referring to London v. Biograph, 231 F. 696 (1916)).

90. In 1976, Congress enacted a comprehensive revision to the copyright act. Again the term of copyright was extended, this time a copyright was to be measured by the life of the author plus fifty years. Authors were granted rights to terminate any transfer after thirty-five years. Notice was still required, but the requirement was somewhat relaxed. *See* 17 U.S.C. § 101, 203, 302 (1994).

91. LITMAN, *supra* note 8, at 79.

92. *Id.*

93. *Id.*

94. *Id.* at 81.

95. *Id.* at 80.

rightfully hers."[96] While this approach is consistent with John Locke's "natural right" theory that is fundamental to the theory of private property,[97] it is not at all clear that this approach was intended by the Constitution's Framers.

For a variety of reasons, including international treaty obligations,[98] the United States eventually relaxed the stringent prerequisites that had to be fulfilled in order to get copyright protection.[99] Subsequently, its focus has shifted away from a model based on balancing competing interests to a compensation-based model. Under the compensation model, copyright became a way to ensure that authors made enough money from their creative works so that they would make them available to the public and create more works. The public enticed authors to create works by giving them limited exclusive rights over their works.[100] Copyright did not remove from the public access to any material it might want to use to create new works of authorship.[101]

B. The DMCA

The economic model of copyright and the idea of copyright as private property has continued to take hold.[102] Consequently, Congress has continued to expand the rights accorded to copyright holders.[103] By the time of the DMCA's enactment, a United States copyright conferred the right to:

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96. *Id.* at 81. By focusing on how to protect what is rightfully theirs, copyright holders have successfully avoided the question of what ought to be rightfully theirs. *Id.*

97. 1 NIMMER ON COPYRIGHT, *supra* note 76, § 1.03[A].

98. Berne Convention for the Protection of Literary and Artistic Works, 1971, art. 5, para. 2 (requiring that the "enjoyment and exercise of [the rights conferred under the convention] shall not be subject to any formality."). The Berne Convention was implemented by the Berne Convention Implementation Act of 1988. Pub. L. No. 100-568, 102 Stat. 2853 (Oct. 31, 1988).

99. *Id.*

100. Copyright owner could control only particular uses, in particular, duplication, publication, and public performance. LITMAN, *supra* note 8, at 78–79. Importantly, authors did not have control over: reading, private performance, resale. *Id.* at 79.

101. *Id.*

102. In 1992, a Senate report explicitly rejected as contrary to the purpose of copyright protect the idea that the real purpose of copyright was to benefit the public by increasing the number of works in the public domain. 1 NIMMER ON COPYRIGHT, *supra* note 76, § 1.03[A] n. 4.1 (discussing S. REP. No. 102-194, 102d Cong., 1st Sess. 6 (1991)).

103. In 1999, the term of copyright was extended to life plus seventy years. Sonny Bono Copyright Term Extension Act, Pub. L. 105-298, § 102(b), 112 Stat. 2827 (Oct. 27, 1998), codified at 17 U.S.C. §§ 302, 303, 304.

1) reproduce copyrighted works;
2) prepare derivative works;
3) distribute copies;
4) perform literary, musical, dramatic, and choreographic works, pantomimes and other audiovisual works publicly;
5) display publicly; and
6) perform sound recordings publicly.[104]

With the enactment of the DMCA, Congress carved out even more significant rights for copyright holders. For the first time, a copyright holder can now control *access* to a work in which he or she holds the copyright.[105] The anticircumvention provisions contained in 17 U.S.C. 1201(a), allow a copyright owner to prohibit the *circumvention* of protection measures—even if the measures are not designed to protect exclusive rights of copyright, but are designed simply to prevent acts that copyright owners do not want to permit.[106]

Thus, the anticircumvention provisions act to expand the rights of copyright holders at the expense of copyright users. While this expansion of copyright holder's rights is clearly consistent with the trend to treat copyright owner's rights like property, this expansion of rights is arguably inconsistent with the historical purposes of copyright law.

C. Fair Use

Like the entire body of copyright law, the fair use doctrine has also evolved from an equitable, fairness-based doctrine to a doctrine based on economic analysis of the law. The fair use doctrine initially developed as an "equitable rule of reason, [where] no generally applicable definition is possible, and each case raising the question must be decided on its own facts."[107] The common law doctrine of fair use was defined as "a privilege in others than the owner of the

104. 17 U.S.C. § 106.

105. In addition, access to noncopyrighted public domain materials can be restricted to the extent these works can be locked up using access controls.

106. Section 1201(a)(1)(A) provides that "no person shall circumvent a technological measure that effectively controls access to a work protected under this title." Traditional exceptions allowed under the Copyright Act such as fair use are not exempted under this language. *See* discussion *infra* notes 145–46 and accompanying text.

107. H.R. REP. No. 94-1476, 94th Cong., 2d Sess. 65–55.

copyright to use the copyrighted material in a reasonable manner without his consent."[108] Fair use "permit[ted] courts to avoid rigid application of the copyright statute, when on occasion, it would stifle the very creativity which the law is designed to foster."[109]

The doctrine of fair use was first recognized as a judicial doctrine.[110] The common law doctrine was codified for the first time in section 107 of the Copyright Act of 1976.[111] Section 107 was "intended to restate the [pre-existing] judicial doctrine of fair use, not to change, narrow, or enlarge it in any way."[112] To determine whether a particular use is fair under section 107, a case-by-case analysis is required. Four nonexclusive factors listed in section 107 are to be considered in the fair use analysis.[113]

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108. Harper & Row, Publishers, Inc. v. Nation Enters., 471 U.S. 539, 549 (1985) (quoting H. BALL, LAW OF COPYRIGHT AND LITERARY PROPERTY 260 (1944)).

109. Ia. State Univ. Research Found., Inc. v. Am. Broad. Cos., 621 F.2d 57, 60 (2d Cir. 1980). The Supreme Court quoted this language in *Campbell v. Acuff-Rose Music, Inc.*, 510 U.S. 569, 577 (1994).

110. Justice Story gave the following description:

> [A] reviewer may fairly cite largely from the original work, if his design be really and truly to use the passages for the purposes of fair and reasonable criticism. On the other hand, it is as clear, that if he thus cites the most important parts of the work, with a view, not to criticise, but to supersede the use of the original work, and substitute the review for it, such use will be deemed in law a piracy.

Folsom v. Marsh, 9 F. Cas. 342, 344–45 (D. Mass. 1841).

111. 17 U.S.C. § 107. Section 107 provides:

> Notwithstanding the provisions of sections 106 and 106A, 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. The fact that a work is unpublished shall not itself bar a finding of fair use if such finding is made upon consideration of all the above factors.

112. *Harper & Row*, 471 U.S. at 549 (quoting H.R. REP. No. 94-1476, p. 66).

113. 17 U.S.C. § 107(1)–(4); *see* Sony Corp. of Am. v. Universal City Studios, 464 U.S. 417, 448 (1984) ("Section 107 identifies various factors that enable a Court to apply an 'equitable rule of reason' analysis to particular claims of infringement.").

The original approach to fair use analysis was consistent with the balancing approach the Framers intended for copyright law. Reasonable appropriations that advanced the public interest were likely to be found to be fair use.[114] Fair use was likely to be found in two situations: "implied assent" and "enforced consent."[115] In "implied assent" situations the author would likely authorize use of his work, but it would take a great deal of time and to ask permission. For example, an author would likely consent to quotes being excerpted from his book for a favorable book review. Additionally, fair use would likely be found when an individual user makes a photocopy of a portion of a book for personal use. Implied assent was seen as a

> necessary incident of the constitutional policy of promoting the progress of science and the useful arts, since a prohibition of such use would inhibit subsequent writers from attempting to improve upon prior works and thus . . . frustrate the very ends sought to be attained.[116]

In addition to "implied assent" situations, fair use was also likely to be found in situations where the copyright holder would likely deny, or actually did deny,[117] permission to use a work. Application in those cases would result in judicial enforcement of the copyright holder's consent. For example, an author would be unlikely to allow a parody critical of his work.[118] In such cases, the courts would in effect enforce the author's consent.[119]

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114. LITMAN, *supra* note 8, at 84.

115. *See, e.g.*, cases cited *infra* note 118 (enforced consent) and note 116 (implied assent).

116. *Harper & Row*, 471 U.S. at 549 (quoting H. BALL, *supra* note 108, at 260).

117. *See, e.g.*, Time, Inc. v. Bernard Geis Assoc., 293 F. Supp. 130, 146 (S.D.N.Y. 1968) (holding that defendant's unauthorized publication of certain Zapruder film frames in his book critical of the Warren Commission report was fair use).

118. *See, e.g.*, Campbell v. Acuff-Rose Music, Inc., 510 U.S. 569 (1994). In *Acuff-Rose*, the rap music group, 2-Live Crew wrote a song entitled "Pretty Woman" which was intended to parody the original song performed by Roy Orbison by showing how "bland and banal the Orbison song" was. *Id.* at 573. An offer to pay a fee for the use of it was refused by the copyright holder, Acuff-Rose. The Court held that "parody, like other comment or criticism, may claim fair use under § 107." *Id.* at 579. The Court stated that:

> Parody's humor, or in any event its comment, necessarily springs from a recognizable allusion to its object through distorted imitation. . . . When parody takes aim at a particular original work, the parody must be able to "conjure up" at least enough of that original to make the object of its critical wit recognizable.

Id. at 588. In doing so, the Court rejected Acuff-Rose's argument that 2-Live Crew's request for permission to use the lyrics should be weighed against fair use.

119. 4 NIMMER ON COPYRIGHT, *supra* note 76, § 13.05 (declaring the suggestion that fair use is based on the "implied or tacit consent of the author" to be "manifestly a fiction").

Today, the trend is away from an "equitable rule of reason" approach and towards a market-based inquiry. In *Harper & Row Publishers, Inc. v. Nation Enterprises*,[120] the Supreme Court first expressly suggested that the purpose of fair use doctrine was to correct a systematic market failure. In that case, *The Nation* magazine published an article on President Ford's pardon of former President Richard Nixon. *The Nation*'s article contained quotes it knew to be from a purloined manuscript of President Ford's memoirs. *Time Magazine* had contracted with Harper & Row (the publisher of the memoirs) for the right to prepublish excerpts in its magazine and had agreed to pay money in advance plus an additional $12,500 after publication. After their publication in *The Nation*, *Time* canceled its scheduled publication of the excerpts and refused to pay the remaining $12,500. Harper & Row sued Nation Enterprises for copyright infringement. Nation Enterprises argued its publication was fair use.

After an extensive analysis of common law doctrine, legislative history, and section 107, the Supreme Court rejected Nation Enterprises' fair use arguments and held that *The Nation* had infringed Harper & Row's copyright when it printed excerpts from the purloined manuscript. Of particular relevance to this paper was the Court's discussion and analysis of the fourth fair use factor: "the effect of the use on the potential market for or value of the copyrighted work."[121] The Supreme Court found Harper & Row had established a prima facie case of actual effect on the market which The Nation was unable to rebut.[122] *Time's* cancellation of the contract and refusal to pay $12,500 were the direct result of The Nation's copyright infringement. Thus, Harper & Row had presented "clear-cut evidence of actual damage."[123]

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120. 471 U.S. 539, 566 n.9 (1985).

121. The Court declared the fourth factor to be "undoubtedly the single most important element of fair use." *Harper & Row*, 471 U.S. at 566. *But see* WILLIAM F. PATRY, THE FAIR USE PRIVILEGE IN COPYRIGHT LAW 561–65 (2d ed. 1995) (disputing the veracity of this statement).

The Court apparently recognized their error and abandoned this idea in *Acuff-Rose*, by stating that

> "the task is not to be simplified with bright-line rules. . . . [T]he statute, like the doctrine it recognizes, calls for case-by-case analysis . . . . Nor may the four statutory factors be treated in isolation, one from another. All are to be explored, and the results weighed together, in light of the purposes of copyright."

Id. at 564 (quoting *Acuff-Rose*, 510 U.S. at 577–78).

122. PATRY, *supra* note 121, at 567.

123. *Id.*

In stating its findings that *Harper & Row* had proven actual damages, the Court, in dicta, discussed the fair use doctrine in economic terms:

> Economists who have addressed the issue believe the fair use exception should come into play only in those situations in which the *market fails or the price the copyright holder would ask is near zero.* As the facts here demonstrate, there is a fully functioning market that encourages the creation and dissemination of memoirs of public figures. In the economists view, permitting "fair use" to displace normal copyright channels disrupts the copyright market without a commensurate public benefit.[124]

Thus, the Court recognized that fair use might be eliminated if a functioning market were in place so that the potential copyright user could pay for the user of the material. To this end, the copyright holder would be more likely to defeat a claim of fair use and succeed in a copyright infringement action if he could prove that a mechanism existed for the user to pay for the desired use. Therefore, it was to the benefit of the copyright owner to set up markets.

The Supreme Court's analysis is flawed in that it requires a circular analysis. Under the approach suggested in dicta, one must assume that the copyright holder is entitled to fees and measure their potential loss by reference to those lost fees. The assumption that one is entitled to fees is problematic, however, since whether one is entitled to those fees is the very question that the Court is supposed to be answering. It overlooks the point that if a use is fair, then no market should exist at all. By measuring the potential damages when a market exists, the question of whether or not the market should exist at all is precluded.

Despite the flawed reasoning, copyright holders took heed of the Supreme Court's words. Copyright holders understood they could more readily defeat a claim of fair use if they could prove the existence of a working market. The market-based rationale was found persuasive in two subsequent cases. In *American Geophysical Union v. Texaco, Inc.*,[125] American Geophysical Union and eighty-two other publishers of scientific and technical journals brought an action for copyright infringement against Texaco. Texaco's scientists who were interested in certain research areas could subscribe

124. *Harper & Row*, 471 U.S. at 566 n.9 (emphasis added) (citing Wendy J. Gordon, *Fair Use as Market Failure: A Structural and Economic Analysis of the Betamax Case and its Predecessors*, 82 COLUM. L. REV. 1600, 1615 (1982)).

125. 60 F.3d 913 (2d Cir. 1994).

to certain "routing lists." Texaco's library then circulated current issues of relevant journals to names on routing lists. If a researcher, who had been routed a journal by the library, believed a particular article would facilitate his current or future research, it was common practice for him to make photocopies for his files so that they would be available for reference when needed. The plaintiff publishers claimed that Texaco's unauthorized photocopying of articles from their journals constituted copyright infringement. Texaco claimed that its copying was protected by fair use.

The court rejected defendant's fair use argument. In considering the fourth fair use factor, the court adopted a market-based approach. The court recognized that publishers have traditionally produced and marketed author's individual articles in journal format and that publishers have "not traditionally provided a simple or efficient means to obtain single copies of individual articles."[126] The effect that photocopying has on the traditional market for journal subscriptions is of less significance when a market exists for sale of individual copies or articles.[127] Therefore, the court focused the analysis of the fair use factor on the "effect of Texaco's photocopying 'upon the potential market for or value' of the individual articles."[128]

Texaco argued that it was incorrect to determine the value of the publisher's affected copyrights by assuming that publishers were allowed to demand and received licensing royalties and fees. Texaco argued that "whether the publishers can demand a fee for permission to make photocopies is the very question that the fair use trial is supposed to answer."[129] The court agreed with Texaco—but only in part. Texaco's allegation was true for uses in which the creators of creative works were unlikely to license their works:

> "[T]he law recognizes no derivative market for critical works." . . . Only an impact on potential licensing revenues for traditional, reasonable, or likely to be developed markets should be legally cognizable when evaluating a secondary use's "effect

126. *Id.* at 927. The court noted that reprints were available from publishers only in large quantities and with delay.

127. *Id.* at 928. On the other hand, were publishers able to prove that Texaco's photocopying, if widespread, would impair overall marketability of journals, plaintiff's could present a strong claim under the fourth fair use factor. *Id.*

128. *Id.* at 927.

129. *Id.* at 929.

> upon the potential market for or value of the copyrighted work."[130]

Here, even though publishers had not established a "conventional market for the sale and distribution of individual articles,"[131] the Copyright Clearance Center (CCC) was a workable market for institutional users, like Texaco, to obtain licenses for the right to produce their own copies of individual articles. The court responded to Texaco's circularity argument as follows:

> [I]t is sensible that a particular *unauthorized* use should be considered "more fair" when there is no ready market or means to pay for the use, while such an *unauthorized* use should be considered "less fair" when there is a ready market or means to pay for the use. The vice of circular reasoning arises only if the availability of payment is conclusive against fair use. . . . [I]t is now appropriate to consider the loss of licensing revenues in evaluating "the effect of the use upon the potential market for or value of" journal articles.[132]

In *Princeton University Press v. Michigan Document Services, Inc.*,[133] an Ann Arbor, Michigan, copy shop reproduced "coursepacks" containing copyrighted works for professors without permission of the copyright holders. The copy shop owner, who believed this copying to be covered by the fair use doctrine, advertised that his service was able to provide quicker service as he did not take the time to get permission from the publishers. In this case, plaintiff had setup workable markets.[134]

In rejecting the defendant's fair use arguments, the court adopted pro-market analysis used in *American Geophysical* and *Harper & Row*. The defendant argued that the fourth fair use factor should be measured by lost book sales instead of lost permission fees since it was "circular to assume that a copyright holder is entitled to permission fees and then to measure market loss by

130. *Id.* at 930 (quoting Campbell v. Acuff-Rose Music, Inc., 510 U.S. 592 (1994)).

131. *Id.* at 930.

132. *Id.* at 931 (emphasis added).

133. 99 F.3d 1381 (6th Cir. 1996) (en banc).

134. Plaintiff's publishers had set up departments that processed requests for permission to reproduce portions of copyrighted works. Additionally, a national clearinghouse existed, the (CCC), through which copy shops could request and obtain permission to make reproductions upon payment of licensing fees. The three plaintiffs were able to show that they had been collecting permission fees at a rate approaching $500,000 per year. *Id.* at 1387.

reference to the lost fees."[135] The court rejected this argument citing *Texaco*:

> Where . . . the copyright holder clearly does have an interest in exploiting a licensing market—and especially where the copyright holder has actually succeeded in doing so—"it is appropriate that potential licensing revenues for photocopying be considered in a fair use analysis."[136]

Thus, the courts have begun to embrace a market-based approach to fair use. The implication is that as viable markets develop, fair use will constrict. However, in a recent case, the court rejected the market-based argument because of its circularity. In *Hofheinz v. AMC Productions Inc.*,[137] the court rejected a claim of harm based on the licensing value of a work. Instead, the court insisted that the relevant harm should be the effect the use would have on the demand for the infringed works themselves, not the ability to license. In that case, the defendant had used movie clips and reproduction photographs and posters in a documentary about a producer of "B" movies.

The court rejected plaintiff's market harm argument stating that "if carried to its logical conclusion, [it] would eviscerate the affirmative defense of fair use since every copyright infringer seeking the protection of the fair use doctrine could have potentially sought a license from the owner of the infringed work."[138] The court elaborated:

> The very point of fair use is that, in certain circumstances, . . . the law will not require an infringer of a copyrighted work to obtain such a license if it advances the overall goal of copyright—to create more works. . . . [P]laintiff's argument fails to acknowledge that a finding of fair use here does not translate to a finding of fair use in each instance where plaintiff's copyrighted works have been infringed. Thus, potential infringers of plaintiff's copyrighted works, to the extent that they exist, are likely to seek a license to avoid entering into the murky realm of fair use law during the course of litigation.[139]

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135. *Id.*
136. *Id.* (quoting *American Geophysical*, 60 F.3d at 930).
137. 147 F. Supp. 2d 127 (E.D.N.Y. 2001).
138. *Id.* at 140.
139. *Id.* at 140–41 (citations omitted).

In summary, like the rest of copyright law, the fair use doctrine has begun to move from a fairness-based inquiry to a market-based one. Under the fourth fair use factor, courts have begun to accept the proof of lost licensing revenues as proof of market harm regardless of whether fair use would in fact preclude the revenues in the first place. If the recent *Hofheniz* case is any indication, courts may start to swing back from market-centered analysis towards an inquiry based on fairness and equitable factors.

D. Fair Use and the DMCA

In addition to further limiting the exclusive rights of copyright users, the DMCA's anticircumvention prohibition excludes fair use as a defense to actions brought under section 1201(a). The exclusion of fair use necessarily has First Amendment implications.[140] Congress debated the issue of fair use (as applied to the anticircumvention prohibition) at a Congressional hearing on the DMCA.[141] Representatives of copyright industries used a "breaking and entering" metaphor to describe circumvention activities and argued against allowing fair use. According to this line of reasoning, fair use is not an acceptable reason to "break" a protection system used to protect copyright owner's works. Allan Adler, testifying on behalf of the Association of American Publishers stated that:

> the fair use doctrine has never given anyone a right to break other laws for the stated purpose of exercising the fair use privilege. Fair use doesn't allow you to break into a locked library in order to make "fair use" copies of the books in it, or steal newspapers from a vending machine in order to copy articles and share them with a friend.[142]

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140. Traditionally, with regard to copyright infringement actions brought under 17 U.S.C. § 501, First Amendment doctrine has been incorporated into copyright by (1) the idea/expression dichotomy; and (2) fair use. 17 U.S.C. § 107 (2000); Harper & Row, Publishers, Inc. v. Nation Enters., 471 U.S. 539, 560 (1985).

141. *WIPO Copyright Treaties Implementation Act, and Online Copyright Liability Limitation Act; Hearing on H.R. 2281 and H.R. 2280 Before the Subcomm. on Courts and Intellectual Property of the House Comm. on the Judiciary*, 105th Cong. 208 (1997).

142. *WIPO Copyright Treaties Implementation Act, and Online Copyright Liability Limitation Act: Hearing on H.R. 2281 and H.R. 2280 Before the Subcomm. on Courts and Intellectual Property of the House Comm. on the Judiciary*, 105th Cong. 208 (1997) (statement of Allan Adler, Association of American Publishers).

Although in the end it was extremely persuasive, the "breaking and entering metaphor" is misleading. Proponents of the "breaking and entering metaphor" neglected to mention that it is the real property laws that give the locked doors their legitimacy.[143] Under the DMCA, unlike real property, one can apparently build a copyright fence around property one does not own. Without real property rights, the metaphor fails.[144]

In the final statute, advocates for fair use protection seem to have lost. Although fair use, as codified in 17 U.S.C. 107, is a defense to an action for *copyright infringement* brought under 17 U.S.C. 501, fair use, as codified in section 107 is *not* a defense to the cause of action created by the *anticircumvention prohibition* of section 1201.[145] Instead, the drafters of the DMCA merely reiterated that nothing in the DMCA limits "defenses to *copyright infringement, including fair use.*"[146]

Although the "fail safe" provisions of the DMCA were developed as a compromise between advocates of fair use and the industry opposed to it,[147] if the Librarian of Congress's first rulemaking is any indication of the future, fair use will not find its way into the DMCA's provisions any time soon. Consequently, speech thought to be protected under the fair use doctrine may be restricted under the DMCA. If copyright owners can "lock up" their works digitally, then they may be able to prevent what would otherwise be fair uses of copyrighted works by either bringing a civil cause of action under section 1203 or threatening to bring one. Copyright users, faced with potential or actual litigation, may be unwilling to risk the financial loss.[148] Consequently, copyright users may modify

143. LITMAN, *supra* note 8, at 133.

144. Litman argues that the breaking and entering metaphor allowed advocates of unconditional circumvention protection to "skip right past the question of whether what was inside that lock was something they were entitled to prevent people from seeing." *Id.*

145. Exemption to Circumvention, 65 Fed. Reg. at 64,561 (2000). *Cf.* Universal Studios v. Reimerdes, 111 F. Supp. 2d 294, 323 (S.D.N.Y. 2000) (holding *Sony* does not apply to the DMCA violations since *Sony* "involved a construction of the Copyright Act that has been overruled by the later enactment of the DMCA to the extent of any inconsistency between Sony and the new statute"); RealNetworks, Inc. v. Streambox, Inc., 2000 U.S. Dist. LEXIS 1889, *22–24 (W.D. Wash. 2000) (holding that the standard set in by the Supreme Court in *Sony*, which held that the sale of VCR's to the public did not constitute contributory infringement, does not apply to the DMCA's anti-trafficking provisions).

146. 17 U.S.C. § 1201(c) (2000) (emphasis added).

147. LITMAN, *supra* note 8, at 138–39.

148. *Cf.* John Markoff, *Scientists Drop Plan to Present Music-Copying Study that Record Industry Opposed*, N.Y. TIMES, April 27, 2001, at C5. A group of computer scientists who had successfully defeated an industry copy-protection system abruptly withdrew the academic paper based on their research. *Id.* The record industry claimed that disclosure of the research violated the section of the DMCA [17 U.S.C. 1201(b)] which restricts disclosure of

their behavior to prevent copyright owners from acting upon their threat to bring litigation. As a result, users may modify their behavior in ways that should not be necessary, further tipping the scales in favor of copyright owner.

In summary, the fair use doctrine has been excluded from the DMCA, further enabling the market-based approach to copyright law. Since fair use is not a defense to an action brought under the DMCA, users will be completely prohibited from using works to the extent that copyright holders can lock-up their works with access controls. Consequently, creation of new works will be impeded.[149]

III. ECONOMIC ANALYSIS OF ANTICIRCUMVENTION PROVISIONS

Works of intellectual property have characteristics of "public goods." From an economist's standpoint, the public goods aspect of intellectual property results in market inefficiencies.[150] Because of market inefficiencies, creative works are under-produced.

Copyright protection allows copyright holders to prevent others from making unlawful uses of copyrighted works.[151] Economists believe that copyright promotes optimal production, and thus economic efficiency, of copyrighted works by

> trad[ing] off the costs of limiting access to a work against the benefits of providing incentives to create the work in the first place. Striking the correct balance between access and incentives is the central problem in copyright law. For copyright law to promote economic efficiency, its principal legal doctrines must, at least approximately, maximize the benefits from creating additional works minus both the losses from limiting access and the costs of administering copyright protection.[152]

Consequently, in order to achieve economic efficiency, copyright law should maximize the difference between the benefits from

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method used to break copy-protection systems. The decision to withdraw publication was made because "[l]itigation is costly, time-consuming, and uncertain regardless of the merits of the other side's case." *Id.*

149. Authors necessarily build on what came before them. Therefore, efficient creation of new works requires access to and use of old ones. Mark A. Lemley, *The Economics of Improvement in Intellectual Property Law*, 75 TEX. L. REV. 989 (1997).

150. *See* discussion *infra* in Part III.C.

151. William M. Landes and Richard A. Posner, *An Economic Analysis of Copyright Law*, 18 J. LEGAL STUD. 325, 326 (1989).

152. *Id.* at 326 (emphasis added).

creating additional copyrighted works minus the expenses of limiting access and administering copyright protection.[153]

With regard to fair use, economists believe that the fair use exception should only come into play in situations where the market fails or the price that the copyright holder would ask is near zero.[154]

Access controls are intended to cure some of the problems presented by public goods and thus correct market inefficiencies. In situations where access controls fail to correct market failure, fair use, or some similar provision, must be incorporated into the DMCA's anticircumvention prohibitions to assure continued access to, and thus ensure optimal levels of creation of new works.

A. The Market for Copyrighted Works

In order to understand the economic analysis of access control provisions of the DMCA, some basic microeconomic principles must be understood. Goods, in this case copyrighted works, are sold in markets. Marketplaces are places where buyers (copyright users) and sellers (copyright holders) interact, resulting in the possibility of exchange.

1. Demand—The quantity of a copyrighted material buyers are willing to purchase for each price per unit is illustrated by the demand curve.[155] In general, buyers will buy more of a good the lower its price. Therefore, the demand curve will generally slope downward.[156]

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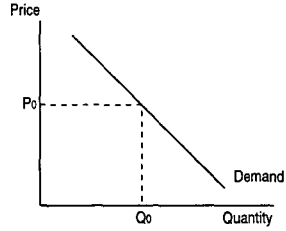
153. *Id.*

154. Gordon, *supra* note 124, at 1615.

155.



When the price equals P_0, consumers will buy quantity equal to Q_0.

156. Demand curve will likely be negatively sloped because although there will be substitutes, there will not likely be perfect substitutes for a copyrighted work. Landes & Posner, *supra* note 151, at 326. The slope of a particular demand curve is dependent on the price elasticity of demand. *See* discussion *infra* note 170.

Consumers will consume copyrighted works until the marginal benefit of consuming the next unit change is equal to the marginal cost of the change. If marginal benefit of consumption exceeds the marginal cost of consumption, it is to the consumer's advantage to consume the next unit.[157]

2. Supply—The quantity of goods suppliers, authors of creative works, are willing to sell for each price per unit is illustrated by the supply curve. In general, the higher price, the more works authors will be willing to create and sell. The supply curve will generally slope upward.[158]

The cost of producing a copyrighted work consists of (1) the cost of initially creating the work;[159] and (2) the cost of producing the work.[160] An author will earn profits equal to the difference between his total revenue and total costs.[161] Consequently, an author will not create a new work unless his expected return is expected to exceed his expected costs.[162]

Profit is maximized when the difference between total costs and total revenue is maximized. Total costs consist of fixed costs plus cost associated with producing each unit.[163] This occurs when an author produces a quantity of output whose marginal cost equals its marginal revenue.[164]

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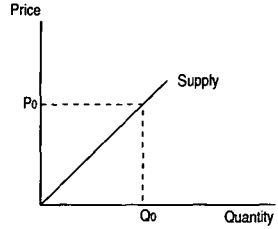
157. Note that consumer's benefit maximization is constrained by their disposable income. ROBERT COOTER & THOMAS ULEN, LAW AND ECONOMICS 21 (2d ed. 1997).

158.



Supply curves are upward sloping. The higher price consumers are willing to pay, the more copyrighted works producers will supply. When price equals P_0, suppliers will supply quantity equal to Q_0.

159. Landes & Posner *supra* note 151, at 326–27.

160. *Id.* at 327.

161. COOTER AND ULEN, *supra* note 157, at 25.

162. Landes & Posner, *supra* note 151, at 327. Although authors may receive nonmonetary benefits from producing copyrighted works, for the purposes of this analysis it is assumed that benefits exclusively come from sale of copyrighted works.

163. ROBERT S. PINDYCK & DANIEL L. RUBINFELD, MICROECONOMICS 242 (3d ed. 1995).

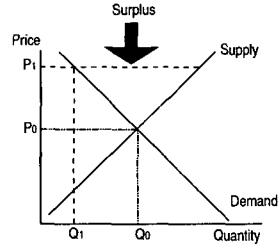
164. COOTER AND ULEN, *supra* note 157, at 25–26. For a general discussion of firm profit maximization in competitive markets see PINDYCK AND RUBENFELD, *supra* note 163, at 240–43. For a discussion of firm profit maximization in monopoly markets *see id.* at 320–23. The formula makes sense. If a firm can achieve more revenue from producing one more item than it occurs costs, it will benefit by producing more. Conversely, if the cost of producing one more unit exceeds the revenues of producing it, a firm should not produce that unit.

3. Market Clearing—In competitive markets, the two curves intersect at the market equilibrium price. If a price is set above the market price, a surplus of creative works will result as authors are willing to create more works than buyers are willing to purchase.[165] Similarly, if the price is set below the market equilibrium price, a shortage of creative works will result. Buyers will be willing to purchase more creative works than authors are willing to supply. The "market mechanism" is the tendency for the price to change until the quantity demanded and quantity supplied are equal (i.e. the market clears).

B. Do Copyrights Confer Monopoly Power?

An argument can be made that copyright provides owners a monopoly because, in general, a copyright gives an owner the ability to limit use of a creative work protected by it.[166] The ability to enforce the monopoly would seem to be enhanced by the ability to lock up a digital work using access controls. Therefore, one could conclude that copyrights would result in market inefficiencies producing higher prices than would be supported in a perfectly competitive market.[167]

165.



Optimal price is P_0. If price is set at P_1, consumers will demand less, Q_1, than producers are willing to supply. In the short-run, an inventory surplus will be created.

166. Lemley, *supra* note 149, at 1066. In a monopoly market, there is only one seller but many buyers. PINDYCK AND RUBINFELD, *supra* note 163, at 320. If a monopolist raises prices, there is no worry that competitors will steal customers by charging lower prices. Monopolists maximize profits by cutting output and raising prices. For a general discussion of monopolies and the market inefficiencies created by them see PINDYCK AND RUBINFELD, *supra* note 163, at 319–401. When profits are maximized consumer and social welfare will be reduced. Lemley, *supra* note 149, at 1065–66.

167. *Id.* at 1066. Firms selling goods in a perfectly competitive market will sell goods at the same price. Consequently, no one seller nor buyer can alone have a significant impact on price. In competitive markets, a single price, the market price will prevail.

While in some instances, a copyright may confer market power, in others it will not. On one hand are "copyrighted works that consumers consider irreplaceable."[168] If a copyright holder raises prices, the quantity purchased will not fall very much if at all. Examples could include the private letters of J.D. Salinger and photographs of the assassination of President Kennedy.[169] Since there are no close substitutes for these works, the demand for such goods would be considered price inelastic.[170]

On the other hand, there are "works for which (in the eyes of consumers) there are readily available, nearly perfect substitutes."[171] If a copyright holder raises prices, the quantity purchased will fall dramatically as consumers purchase substitutable copyrighted works instead. Works meeting this description could include B-grade movies.[172]

Most types of copyrighted material fall somewhere in the middle.[173] When many substitutes are available, the demand for such goods would be considered price elastic.[174] An example of a copyrighted work that falls somewhere in the middle is a law school textbook. Even though a buyer may prefer a certain textbook, if the copyright holder raises the price too much the buyer will seek out an appropriate substitute.

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168. William W. Fisher III, *Reconstructing the Fair Use Doctrine*, 101 HARV. L. REV. 1659, 1703 (1988).

169. *Id.* at 1703 n.207.

170. PINDYCK & RUBINFELD, *supra* note 163, at 29. The measure of the sensitivity of one variable to another is called elasticity. Specifically, it is the percentage change that will occur in one variable in response to a one percent change in another. The price elasticity of demand is

$$Ep = (\%\bullet Q)/(\%\bullet P)$$

where %•Q equals the percentage change in quantity and %•P is the percentage change in price. *Id.*

Usually, when price increases demand will fall. Therefore, price elasticity of demand will normally be a negative number. If percentage change in quantity drops faster than the percentage change in price, the price elasticity will be greater than one. When the price elasticity is greater than one, demand is said to be price elastic. When demand is price elastic, many substitutes exist. *Id.*

By contrast, when no close substitutes exist, demand will be price inelastic. An increase in price will result in a smaller change in quantity demanded resulting in a demand price elasticity of less than one. A completely inelastic demand curve exists when the price elasticity of demand is zero. When price elasticity of demand equals zero, the consumer demand curve is vertical. By contrast, when the demand curve is infinitely elastic, or horizontal, a tiny increase in price leads to an enormous change in demand. *Id.* at 29–31.

171. Fisher, *supra* note 168, at 1703.

172. *Id.* at 1703 n. 207.

173. *Id.* Copyright holder has some market power and thus some ability to raise prices. At a certain point, however, buyer will seek out substitutable goods.

174. *See* discussion *supra* note 170.

For the purpose of the economic analysis in this Note, it will be assumed that the type of copyrighted material falls somewhere in the middle. In other words, the monopoly power conferred by copyright, if any, is limited. Substitutes are available for each copyrighted work. Consequently, the marketplace will be assumed to be competitive. Consumers are willing to seek out substitute goods. If a supplier of copyrighted work raises his price too much, consumers will look elsewhere. Other potential suppliers of copyrighted works will see an opportunity and enter the marketplace. The competition will force the initial supplier to either lower prices or lose business.

C. Copyrighted Works as Public Goods and Market Failure

From the standpoint of an economist, copyrighted works are a problem because they are like public goods.[175] Most public goods can be characterized as nonrival and nonexclusive.[176] Goods are nonrival when one person's use of that good does not stop others from using it.[177] Goods are nonexclusive when people cannot be excluded from consuming them.[178] Therefore, once a copy of a work protected by copyright is made available to others, it is oftentimes inexpensive for a noncopyright holder to make additional copies.[179] Consequently, payment is difficult or impossible to charge people for using nonexclusive gods.

Copyrighted works are like public goods since they can be consumed by many people without depletion and it is difficult to identify those who will not pay and prevent them from using them.[180] People who do not pay for their consumption of a public good, in this case copyrighted works, are known as free riders.[181]

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175. Fisher, *supra* note 168, at 1700. For a discussion of public goods and the issues surrounding them, see PINDYCK & RUBINFELD, *supra* note 163, at 648–58.

176. Non-intellectual property examples of public goods include national defense and air pollution abatement. All consumers benefit from air pollution abatement regardless of whether they pay for their share of it.

177. COOTER & ULEN, *supra* note 157, at 100. An example of a rival good is an apple. Once the apple is consumed, others cannot eat it. *Id.* Goods are nonrival when for any given level of production, the marginal cost, the cost associated with the consumption of one additional unit, is zero. PINDYCK & RUBINFELD, *supra* note 163, at 648.

178. An apple is also an example of an exclusive good. Once it is purchased, I can keep the general public from eating it.

179. Landes & Posner, *supra* note 151, at 326.

180. Lemley, *supra* note 149, at 994–95.

181. COOTER & ULEN, *supra* note 157, at 101.

The nature of copyrighted works and the mediums used to distribute them make them particularly susceptible to free riders. Copyrighted works are costly to produce initially.[182] Yet, once the work is produced, they are very inexpensive to transmit.[183] The digitization of copyrighted works has further reduced transmission costs bringing it close to zero. Consumers who desire to pay no more than the cost of transmission of a copyrighted work will become free riders.[184]

In the market for copyrighted works, free-riders take several forms. Perhaps, the most egregious form of free-ridership is piracy. Piracy is defined as the "unauthorized and illegal reproduction or distribution of materials protected by copyright."[185] The definition of piracy has evolved over time. While the definition used to be about people who made and sold large numbers of counterfeit copies,[186] today the term seems to have been expanded to "to describe *any* unlicensed activity."[187] Proponents of this expanded term of piracy, mainly copyright holders, often ignore the fact that not all unlicensed reproductions and distributions are illegal.[188] For the purposes of this analysis, the term piracy will be used to refer to the former type of piracy—that is, the creation and distribution of illegal copies en masse, usually for profit. People who buy counterfeit copies as opposed to actual copies of copyrighted works are free-riders.

At the other extreme are free riders who make individual uses of copyrighted materials without express permission of the copyright holder. Under the fair use doctrine these people would often times be granted permission under the (1) implied assent theory, or (2) enforced consent theory.[189]

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182. Landes & Posner, *supra* note 151, at 326.

183. COOTER & ULEN, *supra* note 157, at 103.

184. *Id.* Without access controls, each time a producer of a copyrighted work sells to a consumer, he runs the risk that the particular consumer will become his competitor. Lemley, *supra* note 148, at 994–95. Buyers can compete by (1) loaning out works, (2) selling in secondary market (e.g. used book stores), (3) creating a legal copy for single distribution, or (4) creating illegal copies for purpose of mass distribution. When buyers decide to resell their works, producers, who must bear the cost of producing the work and transmission of the work, are undercut by resellers who only bear the cost of the transmission. COOTER & ULEN, *supra* note 157, at 117.

185. BLACKS LAW DICTIONARY 1169 (7th ed. 1999).

186. LITMAN, *supra* note 8, at 85.

187. *Id.*

188. For example, under the Audio Home Recording Act of 1992, people are allowed to make copies of CDs purchased or borrowed. 17 U.S.C. § 1008 (2000); LITMAN, *supra* note 8, at 85.

189. In the public debate over the public's right to access digital materials, most notoriously Napster, the content providers have framed the issue in terms of a "red-herring question of whether music should be free. (It shouldn't.)" Thomas E. Weber, *Why Gutting*

Consumers who purchase copyrighted works in secondary markets, for example used book stores, or who borrow copyrighted works from libraries are also free riders in that the copyright owner is unable to collect money from these users of their copyrighted works.[190] This type of free ridership has been expressly sanctioned by copyright law's first-sale doctrine.[191]

Free riders understate the total benefits produced by a copyrighted work, thereby resulting in market inefficiency. Each consumer's demand curve for copyrighted works shows the marginal private benefits enjoyed by that consumer.[192] Because copyrighted works are like public goods, free riders are able to benefit from them also. To calculate the marginal benefits for all people who enjoy copyrighted works, demand curves for all consumers (paying and non-paying) must be added up vertically.[193] The sum represents the marginal benefit to society (MSB) of a copyrighted work. The difference between the marginal society benefits and the marginal benefits enjoyed by paying copyright users represents benefits of a work enjoyed by free riders. This is sometimes called the marginal external benefit (MEB). The marginal social benefits are higher than the marginal benefits to the individual consumer, resulting in underproduction of copyrighted works.[194]

Napster Won't Cure the Blues of the Music Industry, WALL ST. J., Mar. 26, 2001, at B1. What has gotten lost in the debate is that people really like to get their music online. *Id.*

190. The public debate on the merits of access controls has largely focused on copyrighted works from the entertainment industry. What has largely been missing in this debate, however, is the effect that laws like the DMCA could have on institutions like public libraries and secondary markets. *See* Thomas E. Weber, *To Librarian in Queens, 'Fair Use,' 'First Sale' Are Keys to Knowledge*, WALL ST. J., April 9, 2001, at B1.

191. 17 U.S.C. § 109. Section 109(a) provides:

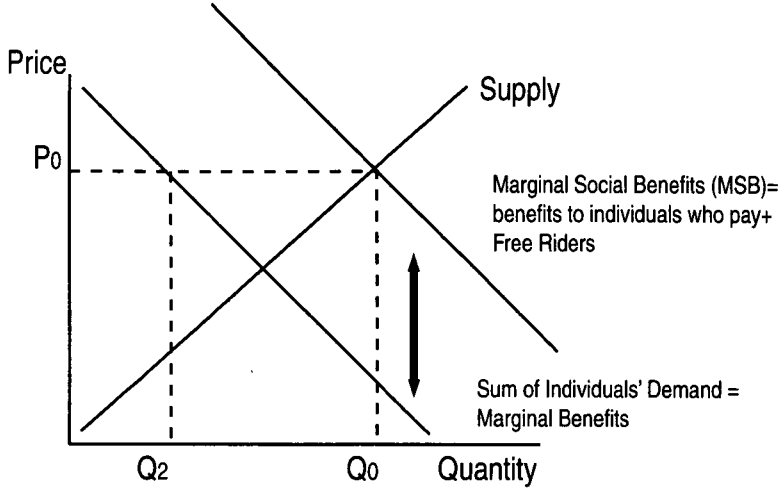
> Notwithstanding the provisions of section 106(3) [(the exclusive right to distribute copies of a copyrighted work)], the owner of a particular copy or phonorecord lawfully made under this title, or any person authorized by such owner, is entitled, without the authority of the copyright owner, to sell or otherwise dispose of the possession of that copy or phonorecord. . . .

192. *See* PINDYCK & RUBINFELD, *supra* note 163, at 626.

193. *Id.* at 650. "When a good is nonrival, the social marginal benefit of consumption, . . . is determined by vertically summing the individual demand curves for the good . . ." *Id.* at 651.

194. In Figure 1, Q_o is the optimal level of copyrighted works that should be produced and P_o is the optimal price. That price is too high for people who pay for copyrighted works. The optimal price to people who pay is P_2. At price P_o, the quantity demanded will be equal to Q_2 which is less than the optimal level.

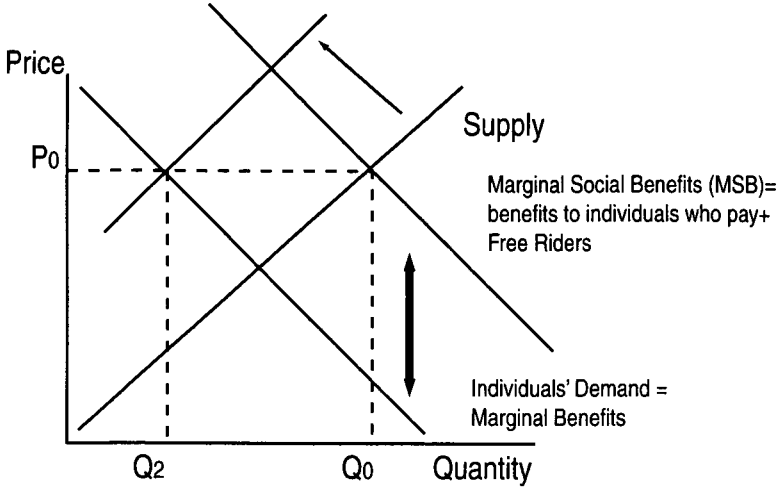
FIGURE 1



The demand curve (representing Marginal Social Benefits) intersects the marginal cost curve at the efficient level of output (Q_0) and price (P_0).[195] At the efficient price the quantity that will be consumed will be less than the optimal level (Q_2). At the efficient price, the supply will exceed demand for copyrighted works, resulting in a surplus. In the short-run, sellers will be unable to sell all of their works at the optimal price creating a short-term surplus of unsold works.

195. *Id.*

FIGURE 2



In the long run suppliers of copyrighted works who are unable to sell the optimal number of works at the optimal price will leave the marketplace. Suppliers will leave the market, shifting the supply curve to left, resulting in fewer creative works being produced and higher prices.[196] Creative works are subsequently undersupplied by would-be authors.[197]

In summary, the character of public goods prevents the use of bargaining to achieve efficiency.[198] Market inefficiency occurs because the purchaser of a copyrighted work does not realize all of the benefits by her purchase of the copyrighted work. Consequently, the price is too high to encourage copyright purchaser to buy the optimal level of copyrighted works.[199] Suppliers will eventually leave the marketplace resulting in fewer copyrighted works and higher prices.

196. Each producer will choose to consume at a level where the marginal benefit of consuming is equal to his marginal costs (*i.e.* intersection of marginal cost and marginal benefit curves.).

197. COOTER & ULEN, *supra* note 157, at 101.

198. *Id.*

199. *See* PINDYCK & RUBINFELD, *supra* note 163, at 626.

D. Access Controls and Market Inefficiency

Access controls alter the "public good" nature of copyrighted works, transforming copyrighted works into private property.[200] This transformation promotes the efficient consumption of copyrighted works. While some free riders will be able to acquire access to a copyrighted work from a copyright holder, others will not. Thus, although access controls will correct some market inefficiencies, others will remain. Without a fair-use-like exception, certain users will be completely excluded from using a copyrighted work. With regard to the free riders who cannot successfully negotiate the right to use a copyrighted work, the market will still fail.

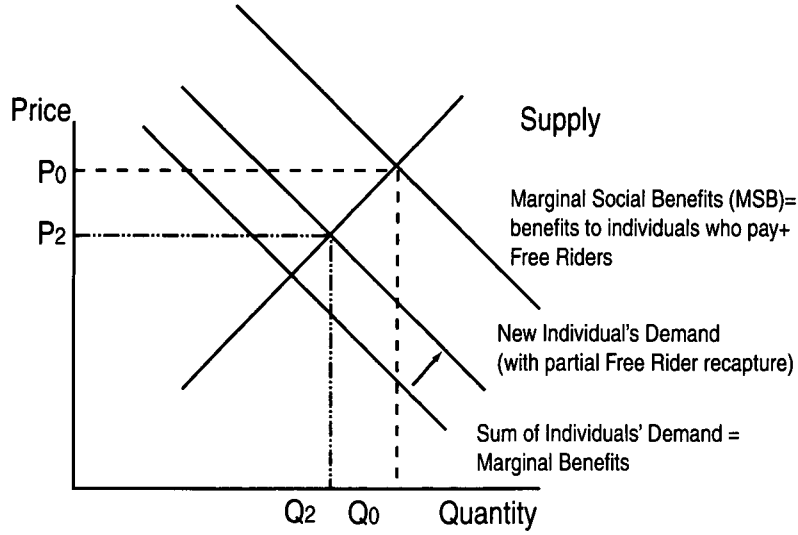
1. How Access Controls Help Correct Inefficiencies—Under access controls, copyrighted works that were once nonrival and nonexclusive, now become exclusive. Consequently, free riders must either buy from the copyright holder or else not use the work at all.[201] The difference between the sum total of individual demand curves and the marginal social benefit derived from production of a copyrighted work will decrease, resulting in consumption closer to the efficient level. Thus, the power to exclude others fosters efficient use or consumption of those goods.[202]

200. Access controls foster pay-per-use business model discussed *supra* Part II.

201. To the extent copyright holder's can "lock up" copyrighted works electronically, secondary markets will eventually disappear.

202. COOTER & ULEN, *supra* note 157, at 101. In economic terms this is called "lubricating bargaining." *Id.*

FIGURE 3



2. Coase's Theorem How Access Controls Fail to Correct Inefficiencies—Access controls are consistent with the trend of treating copyrighted works like private property. When an owner can exclude users from his property, people who want to use or consume the goods are forced to bargain with the primary property owner.[203] Consequently, free riders will be forced to bargain with the primary property owner or risk doing without a copyrighted work.

This proposition is recognized in its own economic principle known as the Coase theorem.[204] Under Coase's theorem, giving one party, here the copyright holder, the power to control and orchestrate all subsequent use of a copyrighted work should result in efficient licensing, both to end-users and people who want to use a copyrighted work to produce new copyrighted works.[205]

Three assumptions are made in order for this theory to hold true. These assumptions are that (1) information is perfect, (2) transaction costs are zero (*i.e.* licensing is costless), and (3) parties are rational.[206] In the world of access controls, each of these assumptions is problematic.

First, information is imperfect. In most instances, consumers of copyrighted works will be unsure of the utility they will receive

203. *Id.*
204. For a discussion of this theorem, *see id.* at 79–83.
205. Lemley, *supra* note 149, at 1046.
206. *Id.*

from a copyrighted work until after they have it.[207] With works protected by access controls, the problem is exacerbated because consumers cannot have the work, and therefore assess the value of it, until after they pay for it.[208] Thus, the demand for information presents a fundamental paradox: "its value for the purchaser is not known until he has the information, but then he has in effect acquired it without cost."[209]

The assumption regarding transaction costs is also problematic. Transaction costs are the costs of exchange.[210] The Coase theorem suggests that assignment of private property rights will eliminate transaction costs, thereby encouraging bargaining. Costs of exchange fall into three categories: (1) search costs; (2) negotiation costs; and (3) enforcement costs.[211]

In the context of copyrighted works protected by access controls, transaction costs would likely take the following forms. Search costs would include the cost to users of identifying the proper system from which to obtain a copyrighted work. Negotiation costs would include the costs associated with following procedures necessary to obtain a license. Enforcement costs would be the costs associated with setting up and operating mechanisms to control access and facilitate licensing of copyrighted works.[212]

Under the Coase theorem, when transaction costs are zero, there is no need to specify legal rules in order to achieve efficiency as private bargaining will take care of issues of what private owners may and may not do with their property.[213] Therefore, assigning property rights can reduce transaction costs by defining clear, simple property rights in places where rights were formerly complex and uncertain.[214] For instance, if copyrighted works are locked up via access controls, fair use arguably becomes irrelevant. Accordingly, time and money would not be spent arguing whether the use of a copyrighted work is excused by the doctrine of fair use. Negotiation costs and/or enforcement costs would be reduced.

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207. COOTER & ULEN, *supra* note 157, at 102–03.

208. *Id.* Under the DMCA a small exception exists for nonprofit libraries, archives, and educational institutions since they are entitled to circumvent access controls "in order to make a good faith determination of whether to acquire a copy of that work for the sole purpose of engaging in conduct permitted [under Title 17]." 17 U.S.C. § 1201(d).

209. Kenneth J. Arrow, *Economic Welfare and the Allocation of Resources, in* THE RATE AND DIRECTION OF INVENTIVE ACTIVITY: ECONOMIC AND SOCIAL FACTORS, 609, 615 (1962). This famous paradox, first articulated by Kenneth Arrow, has become known as Arrow's information paradox.

210. COOTER & ULEN, *supra* note 157, at 84.

211. *Id.*

212. In some instances these systems already exist in the form of CCC, ASCAP, and BMI.

213. COOTER & ULEN, *supra* note 157, at 79, 82.

214. *Id.* at 89–90.

Even though the use of access controls in some instances may reduce costs of enforcing copyright law (or licensing agreements) resulting in lower transaction costs, the assumption that transaction costs will be completely eliminated is problematic. First, to the extent a pay-per-use business model is facilitated by the access controls, search costs will likely be increased. If a consumer must seek out and purchase access to a work each time he desires the use of it, it is likely that his overall search costs will be increased. Second, copyright law, with its relaxed notice and registration requirements, does not facilitate costless identification of copyright holders. For instance, copyright notice is not mandatory but merely permissive.[215] Even if copyright notice is provided, it can be misleading.[216] Further, registration of a copyrighted work with the U.S. Copyright Office is not required.[217] Therefore, consumers who want to take advantage of copyrighted works protected by access controls face significant search costs.

Once a copyright owner is located, the copyright user negotiates acceptable terms with him.[218] While, as discussed above, negotiation costs can be reduced by the certainty provided by access controls, other costs are unlikely to be completely eliminated. Negotiations cost time and money. They may involve complex assignments of partial legal rights and may involve lawyers and drafting fees.[219] Negotiation costs can be reduced by shrink-wrap licensing agreements,[220] however, those agreements are subject to overreaching. In addition, shrink-wrapping licensing agreements are more effective for licensing standard end-users of a copyrighted work than for licensing the use of a copyrighted work to create a derivative work.[221]

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215. 17 U.S.C. § 401(a). Although copyright notice is not mandatory, it is strongly encouraged since absence of copyright notice may give rise to a defense of innocent infringement. 17 U.S.C. § 401(d).

216. For example, a single copyright notice on a collective work is sufficient to invoke notice of copyright. 17 U.S.C. § 404(a). However, it may not be sufficient to tell a copyright user who the holder of that copyright is.

217. 17 U.S.C. § 408. Although copyright registration is permissive, a copyrighted work must be registered with the Copyright Office before an infringement action is brought. 17 U.S.C. § 411. However, this provision comes too late to assist a potential user of a copyrighted work try to find the owner of a copyrighted work for the purpose of negotiating a license.

218. Lemley, *supra* note 149, at 1050–54.

219. *Id.* at 1053.

220. *Id.* at 1054.

221. *Id.*

A successful negotiation results in the creation of an ongoing relationship between the parties that requires monitoring.[222] Here, access controls can significantly reduce the copyright *holder's* transaction costs associated with enforcement. Without access controls, monitoring is difficult. Once a violation is discovered, a copyright holder is forced to resort to the courts to enforce use agreements. Access controls will lower enforcement costs for copyright holders by preventing the very use requiring enforcement. Conversely, access controls will increase enforcement costs for copyright *users*. In the event that a copyright user is wrongly excluded from using a work he has negotiated for the right to use, his transaction costs will be increased as he seeks to enforce the negotiated agreement. In short, while certain transaction costs may be reduced by access controls, other transaction costs may increase thus rendering invalid Coase's required assumption that transaction costs are zero.

Finally, the most problematic of Coase's required assumptions is the assumption that copyright holders will act rationally. It is a fundamental principal of economic analysis that decision-makers act rationally—that is for each alternative available, a decision maker will calculate the costs and choose the alternative that offers the greatest net benefit.[223] Copyright owners can't be counted on to act rationally—at least in a strict economic sense. Copyright owners may make strategic decisions that result in unavailability of access-controlled work. For example, copyright owner may strategically deny access to a work in order to prevent competition in the marketplace.[224]

Additionally, the use of copyrighted works can impose psychic costs upon the copyright holder resulting in refusal of the copyrighted owner to let someone use the work.[225] Other works are susceptible to idiosyncratic refusals.[226]

Similarly, an author may refuse to let someone use a work protected by access controls when he is aware, or afraid, that his work

222. *Id.* at 1053.

223. COOTER & ULEN, *supra* note 157, at 296.

224. Lemley, *supra* note 148, at 1058–59.

225. *Id.* at 1060.

226. For example, the trusts of Margaret Mitchell, who authored *Gone With The Wind*, have so far refused to license Alice Randall's derivative work, *The Wind Done Gone. The Wind Done Gone* retells Mitchell's story from the perspective of a slave, Scarlett O'Hara's half sister to be exact. Among other things, the trusts insist that any work written contain "no miscegenation or homosexuality and that Scarlett could not die." David D. Kirkpatrick, *Writer's Tough Lesson in Birthin' a Parody*, N.Y. TIMES, April 26, 2001, at E1. In addition, songwriter Sarah McLachlan refused to license the use of her song, "I Will Remember You," to the University of Michigan Law School on the senior videotape, stating that the song was extremely personal to her. In both situations, new works were prohibited from being created.

would be criticized, ridiculed, parodied.[227] The copyright owner may just not like the person who wants to license his work. This may be especially true if the person wishing to obtain a license is a competitor.[228]

In short, the three assumptions on which the Coase theorem relies are not likely to be true in most cases. Consequently, access controls which act to transform copyrighted works into private property will not result in an efficient use of resources, here copyrighted works.

In addition to being based on questionable assumptions, the Coase theorem fails to account for externalities.[229] Some copyrighted works produce social benefits not captured by the works owner. For example the author of an article published in a scientific journal is not paid directly but rewarded by prestige conferred on him. The author's contribution to science may be significant. Because the author is not directly compensated based on "how valuable their ideas are, . . . they may not be willing to pay for the right to quote prior scholars, notwithstanding the social value that such a quotation would add to the article."[230] In such a situation, without fair use, the efficient production of copyrighted works would be impaired.

IV. REFORM

Access controls transform copyrighted works, from nonexclusive goods to exclusive goods. In doing so, users of copyrights are forced to bargain with copyright owners. Although it is likely that the use of access controls would lubricate bargaining in certain instances, in others bargaining would break down. Agreements would likely be successfully negotiated in instances where use of a work would be considered fair use under the "implied assent" theory. However, it is unlikely that agreements would be struck in other situations—specifically in situations where use of a work would be allowed as fair use under the "enforced assent" theory. In

227. In such a situation, it may be perfectly rational in the economic sense to refuse the license. Lemley, *supra* note 149, at 1060 (A negative review may adversely affect sales of the copyright holder's work).

228. *Id.* at 1061.

229. Externalities arise when the action of one party benefits, or imposes costs on, another party. PINDYCK & RUBINFELD, *supra* note 163, at 624.

230. Lemley, *supra* note 149, at 1057.

addition, secondary markets will likely shrink to the extent that access control measures preclude the reselling and lending of purchased works. Users denied access in secondary markets will either be deprived of access to a copyrighted work altogether or be forced to purchase works in the primary market. Users may decline to purchase works in primary markets especially in cases where externalities are present. To the extent a user is deprived of access to a work completely, efficient creation of new works will be impeded[231] and the level of works produced can be expected to fall.

Economists argue that the best economic case for intellectual property can be made out when asymmetric market failure is present.[232] That analysis can be easily extended to the access control provisions of the DMCA. According to economists, asymmetric market failure exists when two conditions converge:

> 1. [A]uthors and inventors would not be able to obtain much payment for their work in absence of a rule that restrained strangers from copying, and as a result, potential creators produce fewer works than the public would have been willing to pay for.
> 2. [O]nce [the access controls are] in place, licensing will evolve.[233]

The implication of the second condition is that once a rule restraining people from using or copying protected works is in place, then markets will succeed. In cases where markets won't succeed, other measures are required.[234] Here, as discussed above, licensing will likely evolve in situations in "implied assent" cases. That is in fact a situation that would normally qualify for fair use, owners will be likely to license the right to use the works to consumers. However, there are clearly situations in which copyright owners will refuse a license. Such are the cases the fair use doctrine would normally "enforce consent" on copyright owners.

In such instances, fairness and even economic analysis dictates that provision must be made in our laws for those uses. Section 1201(a)(1)(A) of the DMCA should be modified as follows:

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231. Knowledge is cumulative. Authors build necessarily on what came before them. *See generally*, Lemley, *supra* note 149.

232. Wendy J. Gordon, *Asymmetric Market Failure and Prisoner's Dilemma in Intellectual Property*, 17 U. DAYTON L. REV. 853, 854 (1992).

233. *Id.*

234. This is the same approach followed by market-based proponents of fair use. *See* discussion *supra* Part II.C.

> No person shall circumvent a technological measure that effectively controls access to a work protected under this title *for the purposes of copyright infringement.*

Such a modification would bring equity and fair use into the DMCA. Access controls would be allowed to operate to prevent mass piracy. Access controls would not prevent circumvention in instances where fair use would prevent a finding of copyright infringement. In cases where people make a good faith effort to license access are still refused, fair use would allow it. Access controls should not be allowed to short-circuit fair use to the detriment of copyright users.

CONCLUSION

In conclusion, the DMCA provision authorizing access controls measures and penalizing circumvention of them continues the trend of treating intellectual property like private property. Access controls not only prevent end-users from enjoying copyrighted works, but also block potential authors from utilizing works in the creation of new works in ways that were formerly allowed prior to enactment of the DMCA. Although access controls correct some market inefficiencies, they do not correct all of them. Without modification the DMCA will prevent optimal creation and utilization of copyrighted works. Therefore, Congress should amend the DMCA. The prohibition against circumvention of access controls can be maintained. The goal of optimally "promot[ing] Progress of Science and the useful Arts"[235] can only be attained if copyright users are allowed to continue using materials that in the context of a fair use analysis would be considered fair.

235. U.S. CONST., art. I, § 8, cl. 8.