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TABLE OF CONTENTS

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SPAM—OY, WHAT A NUISANCE!

By Adam Mossoff[†]

ABSTRACT

This Article proposes that unsolicited commercial e-mail ("spam") is indeed a nuisance, and that ISPs and other affected businesses should sue the persons responsible for swamping the Internet with billions of spam for creating a nuisance. Nuisance doctrine is superior to the currently favored "trespass to chattels" because it does not require courts to engage in unnecessary legal fictions or doctrinal somersaults in finding that spam has "dispossessed" a plaintiff from its computer network. The direct and consequential costs attributable to this e-mail scourge—such as loss of bandwidth usage, developing and maintaining filtering software, and hiring more staff—are simply not trespass harms. These costs reveal that the real problem is that spam is unreasonably and substantially interfering with an ISP's commercial operations—a paradigmatic nuisance injury. As a common law cause of action, nuisance also avoids the over-protection problems inherent in anti-spam statutes, which have proven ineffective because legislators are rightly concerned about accidentally stifling legitimate commercial activity on the Internet. As ISPs and other businesses continue to sue spammers, they should utilize nuisance doctrine as part of their overall strategy to eliminate this omnipresent menace to the Internet because it precisely redresses the legal harm caused by spam.

TABLE OF CONTENTS

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† Assistant Professor of Law, Michigan State University College of Law. J.D., University of Chicago; M.A., Columbia University; B.A., University of Michigan. The author would like to thank Scott Boone, Adam Candeub, Michael Carrier, Eric Claeys, Chris Cotropia, Shuba Ghosh, Llew Gibbons, Eric Goldman, Rob Heverly, Laura Heymann, Cory Hojka, Matt Jackson, Brian Kalt, Jay Kesan, Michael Landau, Lyrissa Lidsky, Michael Madison, Mark McKenna, Tom Nachbar, Jonathan Nash, Xuan-Thao Nguyen, David Post, Kathy Strandburg, Peter Yu, and the participants at the Tulane Law School Works-in-Progress Intellectual Property Colloquium and the MSU Intellectual Property & Communications Law and Policy Scholars Roundtable for their helpful comments. Nicholas Mathieu provided valuable research assistance, and Amy Mossoff, as always, was an excellent editor. The author also begs forgiveness from the MSU law college tech department for the spam and flames that may likely be sent his way after receipt of this Article by spammers and their industry groups.

> Will the Minister explain how it is that an inedible tinned food can become an unsolicited email, bearing in mind that some of us wish to be protected from having an email?
>
> —Lord Renton
>
> House of Lords, May 6, 2003[1]

I. INTRODUCTION

Aside from hopelessly out-of-touch English aristocrats and the dwindling number of American households without computers, few people are just waking up to the reality of spam. Anyone with an e-mail account knows firsthand that the crescendo of complaints about spam do not refer to Hormel's famous canned-ham product that fed U.S. troops as they marched across Europe in World War Two.[2] A new meaning has accrued to "spam" in a culture now saturated with the terms and acronyms of the digital revolution—from the innocuous-sounding "ISP" (Internet Service Provider) and "netizen" (an inhabitant of cyberspace) to the more menacing-sounding "flame" (an e-mail or web posting comprising abusive and insulting language). Thus, "spam" has re-entered the English lexicon as a term referring to the massive amount of unsolicited commercial e-mail

1. Will Sturgeon, *House of Lords Email Debate Reveals "Spam" Confusion*, May 7, 2003, *at* http://www.silicon.com/management/government/0,39024677,10004059,00.htm (last visited Apr. 21, 2004).

2. *See Spam in Time*, *at* http://www.spam.com (surveying the role of Hormel's Spam in twentieth-century America) (last visited Mar. 20, 2004).

(the formal and largely unused acronym is "UCE") that is sent out each day across the Internet and into inboxes everywhere.[3]

Even if there were no term for it, the spam phenomenon would require a linguistic signifier to identify it. With each year, the deluge worsens. In 2001, e-mail accounts in the United States received more than 140 billion pieces of spam,[4] a staggering and seemingly unbelievable number. More staggering still is that spam increased by 86 percent in 2002, numbering approximately 261 billion pieces.[5] Studies predicted that it would further increase in 2003,[6] although exact numbers have yet to be released.

The ever-growing tidal wave of spam is causing major headaches and consuming extensive resources at ISPs and in other businesses. It is now a primary factor driving the development of new versions of ISP software. Prior to the release of version 9.0 of its dial-up software in late July 2003, America Online (AOL) began marketing its software upgrade by touting the new spam-filtering capabilities. "Spam is the No. 1 concern," declared AOL's product manager, Roy Ben-Yoseph, who explained at that time that AOL blocked an average of 2.4 billion pieces of spam *each day*.[7] Even Bill Gates has confessed, "Like almost everyone who uses e-mail, I receive a ton of spam every day."[8] He complained in the *Wall Street Journal* that "spam is worse than irritating. It is a drain on business productivity, an increasingly costly waste of time and resources that clogs corporate

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3. *See, e.g.*, AMERICAN HERITAGE DICTIONARY (4th ed. 2000) (defining "spam" as "[u]nsolicited e-mail, often of a commercial nature, sent indiscriminately to multiple mailing lists, individuals, or newsgroups; junk e-mail"), *available at* http://dictionary.reference.com/search?q=spam (last visited Oct. 8, 2003); *see also Prepared Statement of The Federal Trade Commission on "Unsolicited Commercial Email" Before the Senate Committee on Commerce, Science and Transportation*, at 1, *available at* http://www.ftc.gov/os/2003/05/spamtestimony.pdf (May 21, 2003) (defining "[u]nsolicited commercial email ('UCE' or 'spam') [as] any commercial electronic mail message that is sent—typically in bulk—to consumers without the consumers' prior request or consent"). The anti-spam organization, The Spamhaus Project, includes "bulk" as an essential component of the definition of "spam." *See* http://www.spamhaus.org/definition.html (noting that ""[t]o be Spam, a message must be sent Unsolicited AND [in] Bulk") (last visited Oct. 8, 2003).

4. Bob Sullivan, *Spam Wars: How Unwanted Email is Burying the Internet*, (Aug. 6, 2003), *available at* http://www.spamsolutions.net/1059.asp (citing a study by Jupiter Research).

5. *Id.*

6. *See Losing the War on Spam*, WIRED, Sept. 2003, at 50.

7. Jane Weaver, *AOL 9.0 Focuses on Spam, Security* (July 29, 2003), *available at* http://msnbc.msn.com/id/3078624/.

8. Bill Gates, *Why I Hate Spam*, WALL ST. J., June 23, 2003, http://www.opinionjournal.com/editorial/feature.html?id=110003662.

networks and distracts workers."[9] Surveys confirm what some might take as anecdotal grumbling by Bill Gates: spam will cost companies approximately $20.5 billion in 2003, and predictions run as high as $198 billion by 2007.[10] In light of such numbers, the Federal Trade Commission (FTC) reported to Congress last spring that "the volume of unsolicited e-mail is increasing exponentially," and that we are reaching the "tipping point" at which "spam is 'killing the killer app.'"[11] The FTC concluded the obvious: finding "a solution to the spam problem is critically important."[12]

As costs mount and exasperation rises, there is one word that is nearly universally used to describe spam: *nuisance*.[13] At the same legislative debate in which Lord Renton inquired about the etymology of "spam," Lord Mitchell complained, "Spam, whether it is nuisance advertising or hardcore pornography is literally choking the [I]nternet."[14] The title of a January 2003 article on the subject reads, "Study: Spam A Costly Nuisance."[15] A June 2003 survey released by BURST! Media, an Internet advertising company, found that 77.1 percent of respondents believe that spam is a nuisance and 54.1 percent of respondents believe that spam is a "major nuisance."[16] Dale Malik, a development leader for communications products in the BellSouth Internet Group, testified before the FTC that spam is considered a "major annoyance" by its customers today, although it was only an "occasional nuisance" in 2000.[17] Steve Dougherty, director of

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9. *Id.*

10. Sullivan, *Spam Wars*, *supra* note 4 (citing study of spam by Radicati Group).

11. *Prepared Statement of The Federal Trade Commission on "Unsolicited Commercial Email" Before the Senate Committee on Commerce, Science and Transportation*, *supra* note 3, at 2 (paraphrasing the conclusion of an FTC-sponsored conference on spam); *see also* Robert MacMillan, *Survey: Spam Driving Internet Users Away From E-mail*, WASH. POST, Mar. 17, 2004, http://www.washingtonpost.com/wp-dyn/articles/A2279-2004Mar17.html (reporting on a Pew survey that found that almost 30 percent of respondents have reduced their use of e-mail because of "mounting spam" and 63 percent were less trusting of e-mail as a "communications tool" because of spam).

12. *Prepared Statement of The Federal Trade Commission on "Unsolicited Commercial Email" Before the Senate Committee on Commerce, Science and Transportation*, *supra* note 3, at 2.

13. An unscientific survey by the author on October 8, 2003, consisting of a Google search of the string "spam + nuisance" produced 36,500 hits.

14. *Supra* note 1.

15. Margie Semilof, *Study: Spam A Costly Nuisance*, *at* http://searchwin2000.techtarget.com/originalContent/0,289142,sid1_gci871979,00.html (Jan. 3, 2003).

16. *See* BURST! Online Insights (July 2003), *at* http://www.burstmedia.com/release/advertisers/online_insights/july_2003.pdf (last visited Oct. 7, 2003).

17. Dale Malik, Testimony at the FTC Spam Forum (May 1, 2003). Malik's PowerPoint presentation from which these quotes are taken is available at http://www.ftc.gov/bcp/workshops/spam/Presentations/malik.pdf (last visited Oct. 7, 2003).

vendor systems management at Earthlink, a prominent ISP, has complained that spam is a "growing nuisance."[18]

This Article proposes that spam should be treated under the law in precisely the same way it is characterized in our common speech—as a nuisance. Nuisance law represents a largely unexplored option for redressing the harms caused by spam; the viability of suing spammers for nuisance has not been examined in the academic literature,[19] nor has a nuisance claim been adjudicated to a final judgment in a published court opinion.[20] This Article fills the lacuna in the literature by explaining how the substantial interference with the use of networks and business operations caused by spam is a paradigmatic example of a nuisance-type injury and how the elements of a traditional private nuisance claim would apply more easily to spammers than the trespass doctrine that plaintiff ISPs and other businesses have asserted to date.

This proposal is not intended to be exclusive of other responses to the spam problem, although it has definite policy advantages over the federal anti-spam legislation enacted in December 2003, the use of anti-spam filtering software, and the current litigation strategy pursued by ISPs and

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18. Michelle Delio, *Spam-Cramming Foils Vacationers*, WIRED, July 5, 2002, http://www.wired.com/news/technology/0,1282,53669,00.html.

19. *See, e.g.*, Anne E. Hawley, Note, *Taking Spam Out of Your Cyberspace Diet: Common Law Applied to Bulk Unsolicited Advertising via Electronic Mail*, 66 UMKC L. REV. 381 (1997) (proposing only trespass to chattels and tortuous interference claims to deal with spam). *But cf.* Dan L. Burk, *The Trouble With Trespass*, 4 J. SMALL & EMERGING BUS. L. 27, 53 (2000) (suggesting that a new action for electronic nuisance be adopted to address spam). Burk is often cited for the general proposition that nuisance actions should be used against spam. *See, e.g.*, Michael A. Fisher, *The Right to Spam? Regulating Electronic Junk Mail*, 23 COLUM.-VLA J.L. & ARTS 363, 389 (2000) (citing Burk for the proposition that "electronic nuisance" should be used in spam cases and discussing it in general terms for several paragraphs). Burk, however, does not analyze the issue of spam as nuisance, nor is this the thesis of his article. Rather, Burk critiques the doctrine of trespass of chattels as used in Internet cases. Burk, *supra*, at 27-53. In the penultimate paragraph of his critique, he mentions that his criticism of trespass of chattels "suggests" that nuisance may be a viable alternative. *Id.* at 53. His discussion of this point consists of only several sentences in which he briefly summarizes an economic analysis of nuisance as involving a cost-benefit assessment of the parties' respective activities, and suggests a few ways this assessment would be applied to spammers. *Id.* While Burk deserves credit for being the first to suggest that nuisance may work against spammers, this Article presents a thorough treatment of the subject.

20. Although the extant court reporters do not reveal any evidence of a successful nuisance claim against a spammer, a Texas trial court ordered an injunction and payment of damages against a spammer in an unpublished opinion in 1997. This case is discussed at the end of Part IV.

other commercial firms.[21] The response to spam should be multifaceted and wide-ranging in scope. Nonetheless, there are numerous advantages to suing spammers for nuisance. First and foremost, this approach redresses the harms caused by spam to ISPs and business networks without resorting to the legal fiction inherent in charging spammers with committing a "trespass." Applying trespass doctrine to spam has been assailed as improperly requiring courts to construct fanciful legal fictions in which spam is somehow "dispossessing" a plaintiff of its computer network. The use of nuisance doctrine avoids these scholarly criticisms. Second, nuisance doctrine better focuses courts' attention on the property entitlement at issue in spam cases. The problem is not that spam violates an ISP's or business's right to exclude people from its network; rather, it is the spammer's misuse of the invitation to send e-mail through a network, resulting in substantial and unreasonable interference with the commercial use of this network. Third, the successful use of a nuisance action preempts the escalating technological arms race, in which programmers feverishly create filtering software and spammers deviously breach the anti-spam filters. This ongoing cycle is partly to blame for the substantial costs that spam imposes on ISPs and businesses.

From a broader perspective, suing spammers for nuisance would achieve efficiencies through the private ordering of the common law system. The parties experiencing the substantial financial harms caused by spam should be the ones to hold spammers accountable, not the individual end-users who experience legally *de minimus* frustration or inconvenience. A successful and coherent cause of action would also reduce the sense of immediacy among end-users and ISPs to expend valuable resources lobbying elected officials, who ultimately enact ineffectual legislation due to very real concerns about over-protection. The common law provides a cause of action that ISPs and other businesses can use to force spammers to take into account—to "internalize," to use the economist's turn of phrase—the millions of dollars in damages that spammers cause to these firms.

This Article explains these points in five parts. Part II presents a brief history of spam, explaining how both lawyers and Monty Python contributed to today's spam phenomenon. Part III surveys the current tripartite response to spam by ISPs and businesses—technological innovation, special legislation, and litigation—and explains why these counterattacks have been less than spectacular at eliminating, or even reducing, spam. Part IV explains how the harms caused by spam are paradigmatic exam-

21. *See infra* Part III.

ples of nuisance-type injuries, and why spam is an injury to a commercial firm's utilization of its "land." Part V discusses how nuisance doctrine addresses the concerns expressed by courts and professors about the use of property rules to protect entitlements on the Internet. Finally, Part VI discusses the general doctrinal advantages to pleading nuisance against spam and notes some of the benefits in relying on the private ordering of the common law to protect new forms of property entitlements.

II. A BRIEF HISTORY OF SPAM

The provenance of "spam" is far more humble than its infamous status today. The term's current use was coined in the early 1990s, when participants on Usenet discussion groups referred to annoying and distracting cross-postings as "spam."[22] The eponymous source was a famous comedy sketch from a 1970 episode of Monty Python's Flying Circus, which consisted of a waitress listing the contents of a menu for a customer, and each item contained Spam as an ingredient. As the waitress (it was actually Terry Jones in drag) spoke, a group of Vikings in the background was singing, "Spam, Spam, Spam, Spam! Lovely Spam! Wonderful Spam!" Eventually, the Spam-loving Vikings made it impossible to hear what the waitress was saying due to their incessant singing of "Spam, Spam, Spam, Spam!"[23] Thus, Usenet denizens labeled any mass Usenet posting that drowned out their discussions with repetitive nonsense as "spam."

As luck would have it, the first *commercial* Usenet spam was sent out by lawyers. On April 12, 1994, two immigration lawyers posted an advertisement for their services to 6,000 Usenet discussion groups in less than 90 minutes.[24] Their postings were entirely commercial: the lawyers sought to create business for themselves, not to engage Usenet users in discussion. Prior to this fateful date, the ethos of the Usenet—and of the Internet generally—was decidedly non-commercial. The lawyers received a blis-

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22. *See The Jargon Files*, *at* http://www.houghi.org/jargon/spam.php (defining spam, in part, as "[t]o cause a newsgroup to be flooded with irrelevant or inappropriate messages" and "[t]o bombard a newsgroup with multiple copies of a message").

23. *See SPAM and the Internet*, *at* http://www.spam.com/ci/ci_in.htm (last visited Apr. 21, 2004) (discussing the birth of the term "spam" on the Internet); Neil Swidey, *Spambusters*, BOSTON GLOBE, Oct. 5, 2003, http://boston.com/business/technology/articles/2003/10/05/spambusters/ (same).

24. K.K. Campbell, *A Net Conspiracy So Immense. . .*, *at* http://www.eff.org/Legal/Cases/Canter_Siegel/c-and-s_summary.article (interviewing one of the attorneys involved in this incident and recounting the event) (last visited Mar. 23, 2004); Ray Everett-Church, *The Spam That Started It All*, WIRED, Apr. 13, 1999, http://www.wired.com/news/politics/0,1283,19098,00.html.

tering avalanche of flames. The lawyers' ISP was also "bombed into oblivion by world-wide complaints."[25] In response, the ISP promptly closed the lawyers' account.[26] Yet the gates were opened. Despite the scathing complaints, the lawyers claimed to have made $100,000 from this first, fateful commercial spamming.[27]

Soon businesses, along with charlatans and pornographers, caught on to the enormous commercial opportunities in the low-cost, mass-communication medium of the Internet. By the end of the 1990s, the Internet was increasingly commercialized, a process that continues today despite the dot-com bust at the turn of the century.[28] Also, as e-mail replaced the Usenet as the principal means of communication over the Internet, the meaning of "spam" shifted from referring to mass bulletin board postings to mass e-mail. The lawyers' posting in 1994 of only 6,000 advertisements in 90 minutes would be considered insignificant by today's standards, when a single spammer can brag about sending from 50 to 250 million e-mails in a single day.[29]

III. THE LESS-THAN-SPECTACULAR ATTEMPTS AT KILLING SPAM

ISPs and businesses have not taken the spam onslaught lying down. They have engaged the enemy on three interrelated fronts: technological innovation, legislation, and litigation. Thus far, the results of their efforts have been decidedly mixed, as evidenced by the rising flood of spam with each passing year.

A. The Folly of Filters

The technological response to spam has been purely defensive, akin to the efforts of medieval kings to protect themselves by building massive walls around their towns and castles in order to keep out brigands and invading armies. In the digital domain, ISPs and businesses are increasingly investing money, time, and capital in software that filters spam from other e-mail arriving into the network. If successful, the filter shunts spam away

25. Campbell, *supra* note 24.

26. *Id.*

27. Swidey, *supra* note 23.

28. *See generally The Net's Good Fortunes*, WIRED 57 (Mar. 2004) (noting that growth in online retails sales, among other commercial activities, are only lagging about one to two years behind predictions made in the late nineties).

29. *See World's Top 10 Spammers*, *at* http://www.msnbc.com/news/wld/tech/brill/Top10Spammers_dw.htm (citing spamhaus.org, an anti-spam organization) (last visited Apr. 17, 2004).

from customer or employee inboxes and into separate storage directories where it is deleted en mass; thus ensuring that the slings and arrows never reach their intended targets.[30] Filtering is one of the key components in AOL version 9.0, and it is the sole service sold by the Internet-companies Brightmail and SpamGuard, which are used by Microsoft's Hotmail and Yahoo! Mail, respectively.[31]

The problem with relying on filtering services and related technological fixes is that it creates a technological arms race between the parties. As the ISPs and "tech support" departments steadily work at blocking spam, increasingly mischievous spammers steadily work at circumventing these efforts.[32] Spammers have every incentive to scale the technological ramparts created by ISPs and companies: substantial profit margins await the spammer who successfully sends out millions of spam a day.[33] Accordingly, the cycle repeats with increasing frequency: ISPs and businesses spend money, programmers write code, and spammers circumvent. Lather, rinse, repeat—ad nauseum.[34] Of course, the costs associated with this vicious cycle are part and parcel of the total economic harms imposed on ISPs and businesses by spam.[35]

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30. As early as 1997, the U.S. government recommended filtering as "the only practical solution today for removing spam messages, and it is less than perfect." *I-005c: Email Spamming Countermeasures*, U.S. Dep't of Energy Computer Incident Advisory Capability (Nov. 25, 1997), *available at* http://ciac.llnl.gov/ciac/bulletins/i-005c.shtml (last visited Mar. 23, 2004).

31. Mark Glassman, *Fortifying the In Box as Spammers Lay Siege*, N.Y. TIMES, July 31, 2003, at G8.

32. Mike Brunker, *In The Trenches of the "Spam War"* (Aug. 7, 2003), *at* http://msnbc.msn.com/id/3078650/.

33. A notorious spammer, Eddy Marin, once told the Miami Herald that he makes "over 80 percent profit," and that he once generated revenue of $750,000 in the first quarter of a year. *World's Top 10 Spammers*, *supra* note 29. Other spammers report that they make $10 for a single lead for a mortgage lender, and thus it takes only 40–50 responses from one day's mailing of 10 million emails to make $400–500 in a single day. Sullivan, *supra* note 4; *See also* Bob Sullivan, *Who Profits From Spam? Surprise*, *at* http://msnbc.msn.com/id/3078642/ (Aug. 8, 2003).

34. As early as July 2002, AOL representatives were characterizing their efforts at filtering spam as "a cat-and-mouse game" between AOL and the spammers. Delio, *supra* note 18 (quoting AOL spokesman, Nicholas Graham).

35. These costs are detailed in Part IV. A secondary problem is false positives, i.e., a filter blocks a legitimate email because it mistakes it for spam. Brightmail claims that it incurs only one false positive for every 1 million pieces of spam that it filters. Glassman, *Fortifying the In Box as Spammers Lay Siege*, *supra* note 31. For people who rely on email for business communications, such as lawyers, the loss of a significant or timely email could prove disastrous.

This technological arms race has also resulted in the same escalation of hostilities as that which now dominates the debate between the recording and movie industries and the peer-to-peer (P2P) file swappers (with equally little hope of peaceful resolution).[36] Representatives from the computer industry and spamming groups almost broke out into fisticuffs in front of FTC commissioners during an FTC-sponsored Spam Forum in the spring of 2003, and one marketing company used the conference as an opportunity to serve an anti-spam proponent with a subpoena.[37] In an article in the January 2004 issue of *Wired*, entitled "101 Ways to Save the Internet," the number one proposal was that people should be permitted to "unleash vigilante justice on spammers" through denial-of-service attacks on a spammer's ISP.[38] The search for a solely technological solution has quickly become part of the problem.

B. Lackluster Legislation

In 2003, an intensive lobbying effort for federal anti-spam legislation began to bear fruit. In the first half of the year, nine anti-spam bills were introduced in Congress, all of which proposed various civil and criminal penalties for spammers.[39] The two most prominent bills—the Controlling the Assault of Non-Solicited Pornography and Marketing Act[40] ("CAN-

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36. Denial of service attacks on websites, nuisance mass mailings of catalogs to people's homes, and even death threats are becoming commonplace in the battles between pro- and anti-spam forces. Brunker, *supra* note 32. In the first ever recognized case of "spam rage," a California resident is facing criminal charges for "threatening to torture and kill employees of the company he blames for bombarding his computer with Web ads promising to enlarge his penis." *Man Arrested Over "Spam Rage"*, WIRED, Nov. 21, 2003, http://www.wired.com/news/culture/0,1284,61339,00.html. The hostilities between the movie and recording industries and P2P file swappers are well known today. *See* David Pogue, *The Difference Between Movies and Music*, N.Y. TIMES, Oct. 2, 2003, http://www.nytimes.com/2003/10/02/technology/circuits/02POGUE-EMAIL.html (assuming his readers' knowledge of the "escalating battle between music companies and their customers" in an essay addressing the movie industry); *see also* Peter K. Yu, *The Escalating Copyright Wars*, 32 HOFSTRA L. REV. (forthcoming 2003) (discussing the seemingly unending and escalating hostilities in the war between copyright-holders and P2P file swappers).

37. Sullivan, *supra* note 4.

38. Paul Boutin, *101 Ways to Save the Internet*, WIRED, Jan. 2004, at 132.

39. *See* http://www.spamlaws.com/federal/list108.html (describing and linking to the nine bills proposed in the 108th Congress); Mike Brunker, *Congress Targeting Outlaw Spammers*, *at* http://www.msnbc.com/news/948022.asp (Aug. 12, 2003). Senator Charles Schumer proposed a "do not email" list similar to the "do not call" list put into effect on October 1, 2003, but support for Schumer's plan within the computer and Internet industry waned over the summer months. *Id.*

40. S. 877, 108th Cong. (2003).

SPAM Act") in the Senate and the Restrict and Eliminate the Delivery of Unsolicited Commercial Electronic Mail or Spam Act[41] ("REDUCE Spam Act") in the House—were buoyed by the three-day FTC Spam Forum[42] in April–May 2003 and by numerous news articles on spam throughout the summer. As a result, these bills appeared to garner the requisite momentum for the 108th Congress to overcome the federal government's institutional inertia. In late 2003, Congress took a break from debating pending budget bills to enact the CAN-SPAM Act,[43] which President George W. Bush signed into law on December 16, 2003.[44]

The CAN-SPAM Act of 2003[45] was the result of substantial back-and-forth lobbying efforts and bill amendments. The final version provides for up to $2 million in fines and prison terms for fraudulent header information, such as false reply addresses or misleading subject lines.[46] In some cases involving substantial violations, the fines may be trebled up to $6 million.[47] Other relevant provisions of the CAN-SPAM Act require all spam to offer an "opt-out" option for recipients[48] and to contain some kind of notice in the subject line if the spam contains pornographic material.[49] It also authorizes the FTC to investigate the implementation of a "do not

41. H.R. 1933, 108th Cong. (2003).

42. *See* FTC Spam Forum, April 30 – May 2, 2003, *at* http://www.ftc.gov/bcp/workshops/spam/ (last visited Apr. 1, 2004).

43. *See* Grant Gross, *Senate Amends, Approves Spam Bill*, PC WORLD, Nov. 25, 2003, http://www.pcworld.com/news/article/0,aid,113667,00.asp (last visited Dec. 2, 2003); David McGuire, *House Passes Anti-Spam Bill*, WASH. POST, Nov. 22, 2003, http://www.washingtonpost.com/wp-dyn/articles/A5892-2003Nov22.html (last visited Apr. 1, 2004); David Firestone & Saul Hansell, *Senate Votes to Crack Down on Some Spam*, N.Y. TIMES, Oct. 23, 2003, at C1, *available at* http://www.nytimes.com/2003/10/23/technology/23MAIL.html (noting that the Senate voted 97-0 in favor of the bill).

44. *See* Jennifer S. Lee, *President Signs Law Aiming to Limit Spam*, N.Y. TIMES, Dec. 16, 2003, http://www.nytimes.com/2003/12/16/politics/16CND-SPAM.html (last visited Apr. 1, 2004).

45. Controlling the Assault of Non-Solicited Pornography and Marketing Act of 2003, Pub. L. No. 108-187, 117 Stat. 2699 (Dec. 16, 2003).

46. § 5(a)(1)-(2), 117 Stat. at 2706-07 (prohibiting fraudulent header information); § 7(f)(3)(B), 117 Stat. at 2713 (defining statutory damages).

47. § 7(f)(3)(C), 117 Stat. at 2713.

48. § 5(a)(3)-(4), 117 Stat. at 2707-08 (mandating a mechanism for recipients to request not to receive spam and prohibiting a spammer sending any additional emails after such a request is received).

49. § 5(d), 117 Stat. at 2709. The CAN-SPAM Act also directs the FTC to define and implement the required warning, *see* § 5(d)(3), 117 Stat. at 2710. On January 28, 2004, the FTC filed a notice of proposed rulemaking, seeking comment on a rule requiring the phrase "sexually-explicit-content" in the subject line of any pornographic spam, as required under the CAN-SPAM Act. 16 C.F.R. 316 (Jan. 28, 2004).

e-mail" list similar to the "do not call" list implemented in September 2003.[50] Finally, the Act permits the FTC and other regulatory agencies, state attorneys general, and ISPs to take spammers to court for violations, but precludes individual end-users from suing spammers.[51]

Despite its myriad prohibitions and sanctions, the CAN-SPAM Act has been heavily criticized for being ineffective. Zoe Lofgren and Mike Honda, House members from the high-tech Silicon Valley, voted against the CAN-SPAM Act because they believed that the bill was too weak. "We clearly recognize the need for anti-spam legislation," stated Honda's press secretary, "but what they passed will not significantly reduce the amount of spam."[52] Why not? The oft-cited reason is that the CAN-SPAM Act implicitly authorizes spam that does not violate its prohibitions; in other words, all non-fraudulent commercial spam that contains opt-out information and appropriate header information is immunized from legal attack under the Act.[53] Essentially, the CAN-SPAM Act offers legitimate business spammers a federal stamp of approval: if you meet our list of requirements, you can continue to spam with abandon.[54] A representative

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50. § 9, 117 Stat. at 2716.

51. § 7, 117 Stat. 2711-15. The likely reason for this limitation on individual end-users suing under the CAN-SPAM Act was that state anti-spam legislation had already obeyed the law of unintended consequences: additional costs were imposed on companies and ISPs by individual end-users suing them under the very statutes intended to alleviate their burgeoning costs attributed to spam. *See* Federal Trade Commission Spam Forum, May 1, 2003 (day two), at 98-99, 101 (statements of Steve Smith, CEO of MindShare Design, and Laura Atkins, President of SpamCon Foundation), *available at* http://www.ftc.gov/bcp/workshops/spam/transcript_day2.pdf. Accordingly, the CAN-SPAM Act also preempts all state laws addressing the same issues. *See* § 8(b), 117 Stat. at 2716. As of the date of the enactment of the CAN-SPAM Act into law, thirty-six states had adopted various anti-spam laws, some of which were far stricter than it. *See* http://www.spamlaws.com/state/summary.html (summarizing the anti-spam statutes in the 38 states that have enacted such laws to date) (last visited Apr. 1, 2004).

52. Roy Mark, *Lawmakers: Spam Bill is a Turkey*, *at* http://www.internetnews.com/bus-news/article.php/3113941 (Nov. 26, 2003) (last visited Dec. 11, 2003).

53. After the Senate and House reached a compromise on their competing versions of the CAN-SPAM Act on November 21, one expert on spam declared that "[t]his bill legalizes spam that isn't fraudulent. There will be a lot more spam by legitimate marketers because they will be able to point to the federal law and say, 'We are following all the rules.'" David Stout, *Congress Poised for Vote on Anti-Spam Bill*, N.Y. TIMES, Nov. 21, 2003, http://www.nytimes.com/2003/11/21/politics/21CND-SPAM.html (quoting David Sorkin, a law professor at the John Marshall Law School in Chicago).

54. *See* Jacquelyn Trussell, *Is The Can-Spam Act The Answer To The Growing Problem Of Spam?*, 16 LOY. CONSUMER L. REV. 175, 187 (2004) ("By regulating spam, the CAN-SPAM Act legitimizes certain types of spam. Many fear that a wave of legitimate spam will be unleashed from companies that previously feared being labeled as spammers.").

from Internet Security Systems has likened the CAN-SPAM Act to "trying to write a law to ban viruses. It's just about that effective. I expect the volume of traffic in your in-box to increase."[55]

The CAN-SPAM Act ultimately under-protects and does not solve the spam problem because of the concern that such legislation may over-protect and do more harm than good. One extreme example of this is China's recent decision to classify some spam as "reactionary,"[56] which implies all of the attendant consequences for the hapless individual labeled as such by China's authoritarian regime.[57] Another example of over-protection, albeit far less worrisome than China's approach, was reflected in the REDUCE Spam Act, one of the primary bills competing with the CAN-SPAM Act for adoption by the 108th Congress.[58] The REDUCE Spam Act arguably failed to win support in Congress due to concerns that it may over-protect by punishing innocent commercial behavior. The REDUCE Spam Act, as originally proposed, mandated that *any* unsolicited business-related e-mail state in its subject header "ADV" (shorthand for "advertisement").[59] The justification for this requirement was that it would

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55. Grant Gross, *CAN-SPAM Law Won't, Critics Say*, PC WORLD, Oct. 27, 2003, http://www.pcworld.com/news/article/0,aid,113137,00.asp (quoting Pete Privateer, senior vice president for product strategy and marketing at security and anti-spam vendor, Internet Security Systems).

56. *China Vows to Curb Junk E-Mail*, *at* http://www.siliconvalley.com/mld/siliconvalley/news/editorial/7855530.htm (Feb. 2, 2004) (quoting the official Xinhua News Agency, which cited the China Police Daily).

57. China is known to torture and execute "criminals," which includes people labeled as "reactionary." *See, e.g.,* Amnesty International, *Appeal Cases: Tenzin Deleg Rinpoche & Lobsang Dhondup*, Mar. 22, 2004, *at* http://web.amnesty.org/library/Index/ENGASA170022004 (detailing denial of due process rights and torture of two individuals labeled as "reactionary and anti-government"); *see also Organs for Sale: China's Growing Trade and Ultimate Violation of Prisoner's Rights, Hearing Before the House Committee on International Relations* (June 27, 2001), *available at* http://wwwc.house.gov/international_relations/107/73452.pdf (discussing China's executing criminals after which family members are required to pay for the bullet used to kill the prisoner and China's harvesting of organs from executed prisoners).

58. The REDUCE Spam Act was proposed by Representative Lofgren, one of the few members in the House who voted against the CAN-SPAM Act due to its perceived ineffectiveness. *See supra* note 52, and accompanying text; s*ee also* Roy Mark, *Spam Solutions Hard to Find, at* http://dc.internet.com/news/article.php/2199191 (Apr. 30, 2003) (last visited Apr. 1, 2004).

59. Declan McCullagh, *A Modest Proposal To End Spam*, CNET News.com, *at* http://news.com.com/2010-1071-998513.html (Apr. 28, 2003). Notably, this was incorporated into the final version of the CAN-SPAM Act, but only by dint of requiring the FTC to deliver a report on the subject within eighteen months to the Senate Committee on Commerce, Science, and Transportation and the House of Representatives Committee on

make it easy for ISPs or end-users to set their filters to delete automatically any e-mail with "ADV" in its subject header.[60] In effect, unsolicited commercial e-mail would be banned—because everyone would filter out e-mails with "ADV" in their subject headers. The REDUCE Spam Act also levied heavy criminal and civil penalties on any person who failed to include "ADV" in the subject header of an unsolicited business e-mail.[61]

Although initially enticing in its promise of spam-free e-mail, the impact of the REDUCE Spam Act would have reached far beyond spammers, and threatened legitimate commercial activities. Anyone who sent an unsolicited e-mail for business purposes, such as a person sending resumes to potential employers, would have fallen within the Act's ambit.[62] Professor Eugene Volokh noted that the bill "would cover freelance writers pitching a story or photographers pitching a photo."[63] Sanctioning such innocent uses of e-mail would only deter people from using the Internet for communication and business purposes. The commercial growth and opportunities of the Internet would be stymied,[64] while political, religious and other non-commercial persons would remain free to send out millions of e-mails a day.[65] The legislative medicine would have been worse for the Internet than the disease.

In response to such criticisms, the bill's sponsor amended it to provide for an affirmative defense against liability for anyone who sends less than

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Energy and Commission. *See* § 11, 117 Stat. at 2717. Again, the weakening of the provisions of the REDUCE Spam Act is evident.

60. Bill Gates supported this legislative requirement for this very reason. *See* Gates, *supra* note 8.

61. H.R. 1933 §§ 3(a), 6(b), 108th Cong. (1st Sess. 2003) (providing for imprisonment up to one year and a fine multiplied by as much as $10 for *each* unsolicited email sent).

62. McCullagh, *supra* note 59; *see also* Joseph P. Kendrick, *"Subject: ADV:" Anti-Spam Laws Force Emerging Internet Business Advertisers to Wear the Scarlet "S"*, 7 J. SMALL & EMERGING BUS. L. 563, 573-75 (2003) (criticizing the "ADV" requirement given its negative impact on legitimate businesses).

63. McCullagh, *supra* note 59.

64. By midyear 2002, commercial firms discovered the real gold in the Internet: increased efficiency in business-to-business (B2B) transactions. Steve Butler, *The Internet Has Greatly Helped to Increase the Efficiency of Transactions*, *at* http://www.gcis.ca/cdne-213-jul-15-2002.html (July 15, 2002). Already numbering in the billions, total online retail sales also virtually doubled in just two years—from $27.3 billion in 2000 to $44.1 billion in 2002. eMarketer's U.S. Online Holiday Shopping Report, *at* http://www.emarketer.com/products/report.php?holiday_us_02 (last visited Apr. 1, 2004). Fourth quarter (Christmas) online sales more than doubled from 1999 to 2001, despite a recession in 2001. *Id.*

65. Jacob Sullum, *Return Spam Laws to Sender*, WASH. TIMES, June 2, 2003, http://www.washingtontimes.com/commentary/20030601-090114-4695r.htm.

1,000 unsolicited commercial e-mails.[66] By amending the bill in this way, though, the problem with such a stringent regulation or prohibition of spam was brought into sharp focus. If legislation strictly banned spam and harshly punished spammers, it would require repeated amendments to accommodate new legitimate Internet uses. Once a bill was enacted into law, however, this would become exceedingly difficult.[67] For example, Congress took almost one year to agree on the terms of the more watered-down CAN-SPAM Act. If past experience dictates, Congress would likely be slow to adopt an amendment to a more inflexible anti-spam statute, and such a delay might cause severe economic repercussions. As California Supreme Court Justice Janice Brown coolly observed, "[I]n the rapidly changing world of technology, in which even technologically savvy providers like America Online and CompuServe are one step behind spammers, the Legislature will likely remain three to four steps behind."[68] Thus, as the Internet continues to evolve in ways unforeseen by legislative drafters (not to mention computer companies and technology pundits), legislation on Internet-related issues risks stifling the ever-expanding commercial applications of this new digital domain. This explains why the less-prohibitory CAN-SPAM Act ultimately was favored over the more-restrictive REDUCE Spam Act, because the 108th Congress did not want the ignoble distinction of having been the legislative body that killed the goose that laid the golden egg.

Thus far, the CAN-SPAM Act's predicted ineffectiveness is being borne out. The CAN-SPAM Act went into effect on January 1, 2004. Businesses and ISPs noted that the spam deluge continued on that date, and has not abated over the first few months of 2004. "Since January 1, we have seen no change in volume. In fact, spam has continued to rise," reported Susan Larson, vice president of a spam-management company, on February 18, 2004.[69] One California-based company, Postini Inc., reported that spam entering its network reached an all-time high in the first week of

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66. *See* H.R. 1933, § 4(d)(2), 108th Cong. (1st Sess. 2003). The prominent tech commentator Declan McCullagh reported that Lofgren explicitly amended the REDUCE Spam Act due to the criticisms noted here. McCullagh, *supra* note 59.

67. This observation applies even to the watered-down version of anti-spam legislation, the CAN-SPAM Act. Before Bush signed the Act into law on December 16, 2003, some in Congress were already admitting that "it is quite possible that we will have to revisit this matter again." *Bush Signs Anti-Spam Bill Into Law*, CNET News.com, *at* http://www.msnbc.msn.com/id/3662680 (Dec. 16, 2003) (quoting Rep. John Dingell).

68. Intel Corp. v. Hamidi, 30 Cal. 4th 1342, 1374 (2003) (Brown, J., dissenting).

69. Lance Ulanoff, *Spam: A Reality Check*, PC MAG., Feb. 18, 2004, http://www.pcmag.com/article2/0,4149,1529737,00.asp.

2004, accounting for 84.9 percent of the processed e-mail.[70] By February 2004, Brightmail was reporting that 62 percent of all e-mail was spam, which was an increase from 58 percent in December 2003.[71]

It may be too early to judge the overall effectiveness of the CAN-SPAM Act, as the FTC has yet to adopt its regulations under the statute.[72] Moreover, four major ISPs filed hundreds of lawsuits in March 2004 against spammers throughout the country, alleging violations of the new federal law.[73] But if the seemingly inexorable rise in the amount of spam in the first several months of 2004 means anything, it suggests that spammers believe that their activities are unaffected by the CAN-SPAM Act.

C. Losing the Litigation: *Intel v. Hamidi*

The third response to spam—litigation against spammers using the trespass to chattels doctrine—suffered a serious blow in the 2003 decision in which Justice Brown made her prophetic remark (in dissent) about the inherent lag between technological advances and legislative responses.[74] In *Intel Corp. v. Hamidi*,[75] the California Supreme Court overturned two lower court decisions and rejected Intel's claim that a disgruntled former employee, Kourosh Hamidi, committed "trespass to chattels" by sending unsolicited e-mails critical of the company to thousands of Intel employees.

The *Hamidi* decision deserves attention because it represents the apex of the development of the archaic doctrine of trespass to chattels as a litigation tool against spammers. The significance of *Hamidi* is two-fold. First, Intel cannot by faulted for its litigation strategy in this case because plaintiff ISPs and other businesses successfully had used trespass to chattels against spammers for many years prior to *Hamidi*.[76] Based on this fa-

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70. Jonathan Krim, *Spam is Still Flowing into E-Mail Boxes*, WASH. POST, Jan. 6, 2004, at E1, *available at* http://www.washingtonpost.com/wp-dyn/articles/A57315-2004Jan5.html.

71. Saul Hansell, *Four Big Internet Providers File Suits to Stop Spammers*, N.Y. TIMES, Mar. 11, 2004, at A1, *available at* http://www.nytimes.com/2004/03/11/technology/11spam.html.

72. *See* MacMillan, *supra* note 11 (reporting that the FTC is still "developing regulations for implementing the law"). As a spokesperson for Sen. Ron Wyden, a co-sponsor of the CAN-SPAM Act, stated on March 17, 2004: "It's premature to judge the effectiveness of the Can-Spam Act 77 days after it becomes effective." *Id.*

73. Hansell, *supra* note 71 (reporting on the coordinated lawsuits filed by AOL, Earthlink, Yahoo, and Microsoft).

74. *See supra* note 68 and accompanying text.

75. 30 Cal. 4th 1342 (Cal. 2003).

76. *See* Am. Online, Inc. v. LCGM, Inc., 46 F. Supp. 2d 444 (E.D. Va. 1998); Am. Online, Inc. v. IMS, 24 F. Supp. 2d 548 (E.D. Va. 1998); Hotmail Corp. v. Van$ Money

vorable precedent, Intel prevailed before the trial court and on direct appeal.

Intel's initial success in the lower courts and its loss before the California Supreme Court also illustrates the second significant aspect about the *Hamidi* decision. Intel lost in the final round of appeals, because the California Supreme Court diverged from the anti-spam case law that had developed over the past seven years by requiring plaintiffs to prove that they have suffered *substantial interference* with their networks in order to recover against spammers. This reveals a fundamental doctrinal flaw in framing the harm caused by spam as a *trespass*. As all first-year law students learn in their property courses, trespass does not have a substantiality requirement, as it protects a property owner's absolute right to exclude. *Hamidi* thus reveals that the courts view the harm caused by spam as a *nuisance* injury, not a trespass. This was best exemplified in the *Hamidi* court's attempt to mollify concerns that the new substantial-interference requirement would not undermine "legal remedies of Internet service providers (ISP's) against senders of unsolicited commercial bulk e-mail (UCE), also known as 'spam.'"[77] Do not worry, the court intoned, as "unsolicited commercial bulk e-mail" is always substantial enough to justify a finding of trespass to chattels. Underlying the legal trespass analysis, such comments reveal the courts are in fact *conceptualizing* the property entitlement that is being infringed by spammers as one that is protected by nuisance doctrine—the right to use and enjoy one's property without substantial and unreasonable interference. This doctrinal confusion unsettles *ex ante* expectations and creates incoherency and indeterminacy in the developing case law governing the Internet.

As noted, Intel was justified by the extant case law in asserting trespass to chattels against Hamidi. The common law doctrine of trespass to chattels was reintroduced into modern jurisprudence in the 1996 California case, *Thrifty-Tel, Inc. v. Bezenek*,[78] which specifically addressed the issue of protecting computer networks from unauthorized access or use by third parties. In *Thrifty-Tel*, a young computer hacker was held liable for

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Pie Inc., No. C-98 JW PVT ENE, C 98-20064 JW, 1998 WL 388389 (N.D. Cal. Apr. 16, 1998); CompuServe Inc. v. Cyber Promotions, Inc., 962 F. Supp. 1015 (S.D. Ohio 1997). eBay also successfully used trespass to chattels to sue an Internet company that was searching eBay's auctions without authorization. *See* eBay, Inc. v. Bidder's Edge, Inc., 100 F. Supp. 2d 1058 (N.D. Cal. 2000).

77. *Hamidi*, 30 Cal. 4th at 1348.

78. 46 Cal. App. 4th 1559 (1996). All of the Internet cases holding spammers or other offending persons liable for trespass to chattels have relied on *Thrifty-Tel*, *see supra* note 76. Notably, the *Hamidi* court barely acknowledges the existence of *Thrifty-Tel*.

accessing a local telephone company's network, although he hacked the computer network only a limited number of times over the span of about six to seven hours.[79] The evidence of damage, if it could even be called that, was limited and largely circumstantial: the defendant "overburdened the [plaintiff's] system, denying some subscribers access to phone lines" during the short period in which he queried the system looking for the codes to make unauthorized telephone calls.[80] The plaintiff "presented no evidence of actual losses,"[81] relying instead on regulatory tariffs governing unauthorized use of a phone system to establish damages.[82] The defendant in *Thrifty-Tel* was found liable for trespass to chattels solely because he gained unauthorized accessed to plaintiff's computer network. In reviving the trespass to chattels doctrine in the new digital world, *Thrifty-Tel* established that liability was predicated on only "an intentional interference with the possession of personal property [that] has proximately caused injury," regardless of how negligible this "injury" might be.[83]

The cases following in the wake of *Thrifty-Tel* set equally low damage thresholds for finding defendants liable for trespass to chattels. Each successive court ruling found defendants liable on no more evidence than *some* interference with plaintiffs' computer networks, regardless of the actual losses asserted by plaintiffs.[84] In one illustrative case, CompuServe (an ISP) obtained a preliminary injunction against a spammer on the basis of trespass to chattels. CompuServe obtained the injunction solely on the basis of asserting that the spammer's use of disk space and processing power showed that "the value of that equipment to CompuServe is diminished even though it is not physically damaged by defendants' conduct."[85]

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79. Thrifty-Tel, 46 Cal. App. 4th at 1564.

80. *Id.*

81. *Id.* at 1564.

82. *Id.*

83. *Id.* at 1566.

84. In one case litigated by AOL, the ISP evidenced that a spammer was responsible for sending more than 92 million emails, which consumed server capacity, caused technical costs, reduced the functioning of AOL's server for its clients, and generated more than 450,000 complaints by AOL customers, which indirectly damaged AOL's goodwill. *See* Am. Online, Inc. v. LCGM, Inc., 46 F. Supp. 2d 444, 448-49 (E.D. Va. 1998). In another AOL case, the ISP submitted evidence that the spammer sent over 60 million emails, causing technical staff to be redirected to "defend" against his spam, generating more than 50,000 complaints from customers and again damaging AOL's goodwill. *See* Am. Online, Inc. v. IMS, 24 F. Supp. 2d 548, 549 (E.D. Va. 1998). In neither case did AOL offer evidence of substantial, direct monetary damages caused by the spam.

85. CompuServe Inc. v. Cyber Promotions, Inc., 962 F. Supp. 1015, 1022 (S.D. Ohio 1997).

The lack of any requirement of actual damages is striking, but understandable because the cause of action is a type of trespass.

As the legal standard for a trespass action is interference with exclusive possession, the *extent* of harm resulting from this interference is not relevant in determining liability.[86] The *Hamidi* court correctly noted that trespass to chattels requires an injury proximately caused by the alleged tortfeasor's interference with the *possession* of the plaintiff's chattel,[87] but the court then concluded that it was relevant that Intel suffered only *indirect* and *consequential* harms from Hamidi's e-mails. In fact, Intel's injuries were quintessential examples of the harms suffered in previous trespass to chattels cases, such as the cost of redeploying tech support personnel to block e-mails and projected losses in employee productivity resulting from the time spent reading or deleting Hamidi's e-mails.[88] Still, the court held that it was dispositive that Intel's exclusive possession of its network—the central issue in any trespass claim—was not damaged or substantially interfered with in any way. As the court poignantly observed: "Reading an e-mail transmitted to equipment designed to receive it, in and of itself, does not affect the possessory interest in the equipment."[89] But substantially interfering with a possessory interest is *irrelevant* in determining whether a trespass has occurred—the interference *as such* establishes liability because "any loss of possession by the plaintiff is regarded as necessarily a loss of something of value, even if only for a brief interval."[90]

By focusing on the extent of both the interference and the resulting harm, the *Hamidi* court required that Intel demonstrate *substantial interference* with the *use* of its property—in other words, Intel was required to prove that Hamidi was liable for *nuisance*, not trespass. But that is not the

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86. WILLIAM PROSSER ET. AL., PROSSER AND KEETON ON TORTS § 14, at 87 (5th ed. 1984) (noting that "any loss of possession by the plaintiff is regarded as necessarily a loss of something of value, even if only for a brief interval—so that wherever there is found to be dispossession . . . the requirement of actual damages is satisfied"). Justice Brown also cogently describes how the majority opinion, by requiring a showing of substantial harm, contradicts—and emasculates in practice—the doctrine of trespass to chattels. *Hamidi*, 30 Cal. 4th at 1367-85 (Brown, J., dissenting).

87. *Hamidi*, 30 Cal. 4th at 1350-51.

88. *Id.* at 1349, 1352-53 (noting that Intel submitted *uncontroverted* evidence that employees requested that the company block emails from Hamidi and that Intel's technical support staff spent "time and effort" in attempting to do so). *See supra* note 84 (detailing similar evidence of harms caused to plaintiffs' networks in past trespass to chattels cases).

89. *Id.* at 1359 (quoting Intel Corp. v. Hamidi, 94 Cal. App. 4th 325 (2001) (Kolkey, J., dissenting)).

90. PROSSER § 14, *supra* note 86, at 87.

cause of action with which Intel obtained a judgment against Hamidi, nor is this required in pleading trespass to chattels. By entertaining claims for trespass to chattels against spammers for what is actually conceived of as a nuisance injury, courts are creating doctrinal confusion. Based on the trespass to chattels case law, Intel was justified in spending substantial resources in litigation against Hamidi. Also, given the divergence between the *Hamidi* and *Thrifty-Tel* decisions, as well as the other trespass to chattels cases decided between these two momentous cases, it is now unclear how much spam is actionable, and whether other jurisdictions will follow California.

This doctrinal confusion is the second reason for the significance of the *Hamidi* decision. The *Hamidi* court's choice to cherry-pick a pleading requirement from nuisance and graft it onto the trespass to chattels doctrine was driven by the substantial academic criticism of the past court decisions applying trespass to chattels in Internet cases.[91] Commentators have maintained that trespass is "too broad a claim,"[92] which, according to one oft-cited article relied on by the *Hamidi* court,[93] requires judges to employ "legal gymnastics" in adopting the "fiction of impinging electrons" as the *sole* criterion for liability in trespass to chattels cases.[94] If *any* "impinging electron" creates the fiction of "disposing" an ISP or business from its computer network, then how are courts to distinguish abhorrent spam from innocuous, albeit unauthorized, electronic signals? Trespass to chattels does not provide an answer to this question, but only because it is not the function of any trespass doctrine to this question.[95]

As one dissenting judge on the California Court of Appeal sardonically explained the logic of extending trespass in this area:

> Under Intel's theory, even lovers' quarrels could turn into trespass suits by reason of the receipt of unsolicited letter or calls from the jilted lover. Imagine what happens after the angry lover

91. *See, e.g.*, John D. Saba, Jr., *Internet Property Rights: E-Trespass*, 33 ST. MARY'S L.J. 367 (2002); R. Clifton Merrell, Note, *Trespass to Chattels in the Age of the Internet*, 80 WASH. U. L.Q. 675 (2002); Mary Anne Bendotoff & Elizabeth R. Gosse, *Stay Off My Cyberproperty!: Trespass to Chattels on the Internet*, 6 INTELL. PROP. L. BULL. 12 (2001); Burk, *supra* note 19. For a more limited criticism of the courts' use of trespass to chattels only as a "cure-all" doctrine without imposing proper limitations on its application, see Edward W. Chang, *Bidding on Trespass: eBay, Inc. v. Bidder's Edge, Inc. and the Abuse of Trespass Theory in Cyberspace Law*, 29 AIPLA Q. J. 445 (2001).

92. Saba, Jr., *supra* note 91, at 402. This claim is further explored in Parts IV and V.

93. *Hamidi*, 30 Cal. 4th at 1358 (quoting Burk, *supra* note 19, at 35, 37).

94. Burk, *supra* note 19, at 40 (comparing this to similar problems in adjudicating intellectual property entitlements in digital media).

95. How nuisance doctrine escapes this problem is discussed *infra* Part V.

> tells her fiancé not to call again and violently hangs up the phone. Fifteen minutes later the phone rings. Her fiancé wishing to make up? No, trespass to chattels.[96]

By agreeing with this dissent and reversing the appellate court, the California Supreme Court demanded that a plaintiff pleading trespass to chattels show harms similar to "the burdens and costs caused ISP's and their customers by the ever-rising deluge of commercial e-mail."[97] Yet this takes the court out of trespass doctrine and into the traditional requirements of nuisance doctrine, in which *substantial interference* with the *use* of one's property is a prerequisite for stating a claim.

Ironically, the *Hamidi* court chided Richard Epstein's arguments in an amicus brief that trespass rules should be extended to the Internet based on a "metaphorical application of real property rules."[98] The court contended that "such fictions promise more confusion than clarity in the law."[99] The same charge of "confusion," though, can be leveled at the *Hamidi* court for conflating requirements from two separate legal actions for protecting property rights—trespass and nuisance.[100] The distinction between trespass and nuisance is already marked with confusion.[101] The courts should not muddle the law any more than it already is, leaving ISPs and businesses uncertain of their legal rights and remedies.[102] This is particularly true in the context of the Internet, a fast-growing and somewhat unruly domain in dire need of legal guidance and the protection of the rights of its netizens.

In the last analysis, the *Hamidi* court simply balked in the face of the basic requirement of trespass doctrine that *any* uninvited encroachment of plaintiff's property creates liability for the defendant. The logic of relying on trespass to redress harms caused by spam was leading the courts into a

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96. Intel Corp. v. Hamidi, 94 Cal. App. 4th 325, 348 (2001) (Kolkey, J., dissenting), *rev'd*, Intel Corp. v. Hamidi, 30 Cal. 4th 1342 (2003).

97. *Hamidi*, 30 Cal. 4th at 1356.

98. *Id.* at 1360-61.

99. *Id.* at 1361.

100. *Cf.* Johnson v. La. Dep't of Educ., 330 F.3d 362, 365-71 (5th Cir. 2003) (Wiener, J., dissenting or specially concurring), *reh'g en banc granted*, 343 F.3d 732 (5th Cir. 2003), (criticizing the majority opinion for conflating two separate tests for determining a state's waiver of its sovereign immunity).

101. PROSSER § 13, *supra* note 86, at 69.

102. *Cf.* THE FEDERALIST NO. 62, at 287-88 (James Madison) (Clinton Rossiter ed., 1961) (discussing the benefits of stability in public policy, and noting that the "internal effects of a mutable policy are still more calamitous. It poisons the blessings of liberty itself. . . . Law is defined to be a rule of action: but how can that be a rule, which is little known, and less fixed?")

dizzying and unsettling realm of legal fiction in which ISPs and other businesses are "dispossessed" of their computer networks by a single, uninvited, infringing electron. Worse yet, trespass doctrine provided no means to limit the scope of this liability. Rather than face these uncomfortable facts, the *Hamidi* court chose the easy way out: affirming the use of trespass to chattels, but making a further mess of the law by requiring courts in California to now treat digital trespass as a *de facto* nuisance. Why not simply treat spam as a *de jure* nuisance?

IV. RETHINKING THE LITIGATION STRATEGY: SPAM AS NUISANCE

Notably, Intel originally pleaded both nuisance and trespass to chattels in its complaint against Hamidi. However, Intel voluntarily dismissed the nuisance claim before the trial court ordered summary judgment on its behalf.[103] Intel likely pleaded both nuisance and trespass because its counsel was acting properly as an advocate, claiming that the defendant breached two alternative legal entitlements.

Why then did Intel voluntarily dismiss the nuisance claim? Although none of the court opinions indicate why the nuisance claim was dismissed, one can infer an answer from the definition of a "private nuisance." The Restatement of Torts defines a "private nuisance [as] a nontrespassory invasion of another's interest in the private use and enjoyment of land."[104] To understand this definition, it is necessary to distinguish the different legal rights protected by the complementary actions of nuisance and trespass. A nuisance is a substantial and unreasonable interference with the use and enjoyment of land, and a trespass is an act that dispossesses the rightful owner from his land. Historically, courts described the difference between interference and dispossession in terms of "intangible" versus "tangible" invasions of land—the distinction between dust particles floating over land versus a person stepping onto it—but this method of differentiating nuisance and trespass has long since been abandoned in most jurisdictions.[105] Nonetheless, courts continue to distinguish nuisance from trespass inasmuch as nuisance-type disturbances constitute only "low-

103. *Hamidi*, 30 Cal. 4th at 1349-50.

104. RESTATEMENT (SECOND) OF TORTS § 821D (1979); *see also* Richard A. Epstein, *Nuisance Law: Corrective Justice and Its Utilitarian Constraints*, 8 J. LEGAL STUD. 49, 53 (1979) ("Nuisances are invasions of the plaintiff's property that fall short of trespass but which still interfere in the use and enjoyment of land.").

105. *See* Borland v. Sanders Lead Co., 369 So. 2d 523, 529 (Ala. 1979) (noting that the "tangible" versus "intangible" distinction is no longer dispositive in determining whether an unlawful intrusion is a trespass or nuisance).

level invasions"[106] that fall short of directly taking physical possession of the land itself.[107] Accordingly, courts typically frame the now-dominant distinction as follows: "If the intrusion interferes with the right to exclusive possession of property, the law of trespass applies. If the intrusion is to the interest in use and enjoyment of property, the law of nuisance applies."[108] Regardless of whether an owner is seeking to protect the right to use (nuisance) or the right to exclusive possession (trespass), the property that is at issue is real property—land.

If one considers only the abstract definition of nuisance and ignores how it applies in practice, these broad doctrinal statements suggest that pleading nuisance against spammers is a non-starter because spam does not interfere with land. Even the *Hamidi* court pointed out what it thought was obvious: the "plain fact is that computers, even those making up the Internet, are . . . personal property, not realty."[109] Who could deny this plain fact? Computers are chattels. The networks created by computers exist only in the wires that connect the computers together. Wires, like computers, are chattels. E-mail consists of programming code and electronic signals transferred over wires between computers. The Internet is a world comprised solely of chattels. The question naturally arises: in a spam lawsuit, where is the land that the spammer is interfering with, hindering, or obstructing use and enjoyment of? It's just chattels all the way down.[110]

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106. RICHARD A. EPSTEIN, TAKINGS 230 (1985) (distinguishing the type of invasion to property required by nuisance versus trespass).

107. PROSSER § 13, *supra* note 86, at 70 (noting that "an intentional and nontrespassory interference with the use and enjoyment of another's real property is actionable as a private nuisance," and that "[a]ny physical entry upon the surface of the land is a trespass").

108. Borland, 369 So. 2d at 529; *see also* Carrigan v. Purkhiser, 466 A.2d 1243, 1243-44 (D.C. App. 1983) (holding that trespass and nuisance are distinguished on the basis of whether a defendant interferes with *possession* or *use* of land); Exxon Corp. v. Yarema, 69 Md. App. 124, 148 (1986) ("Nuisance is not contingent upon whether the defendant physically impinged on plaintiff's property, but whether the defendant substantially and unreasonably interfered with plaintiff's use and enjoyment of its property.").

109. *Hamidi*, 30 Cal. 4th at 1361.

110. I am referring here to the famous philosopher's joke about an exchange between a philosophy professor and a student studying metaphysics. They are discussing the problem of infinite regress and how philosophers answer this with such conceptions as metaphysical "essences," and the student tells his professor that the universe rests on the back of a giant turtle. The professor asks a logical question: what does the turtle stand on? The student answers: another giant turtle. And that turtle, asks the professor. Naturally, answers the student, another turtle. The professor asks again: and what does that turtle stand on? The student answers: you don't understand, it's just turtles all the way down. *See* Roger C. Cramton, *Demystifying Legal Scholarship*, 75 GEO. L.J. 1, 1-2 (1986) (identify-

But is it really? Computer networks do not float in the ether, nor does the e-mail that travels through them. Computers—whether mainframes, desktops or notebooks—are machines used by companies in their business operations. For Internet companies, such as an ISP, their computers *are* their business. Without their computers, AOL or CompuServe have no product to offer to their customers—no connection service to the Internet or storage capacity for hosting websites and databases. The same holds true for firms that sell software or computer consulting services, such as Intel, Microsoft and PeopleSoft. Without their computers and networks, these firms have no commercial function. Traditional brick-and-mortar ("old economy") firms have also integrated computers into their production processes, and their computers are now as vital to their successful operation as are the robots working in their manufacturing plants or the copying machines used by their office employees. Computers are a necessary, omnipresent fact in the business operations of virtually all commercial firms today.

Simply put, it is not chattels all the way down. Computers and computer networks are chattels, but these chattels are integral and necessary tools for the productive use of real property by a commercial firm. In this sense, computers are analogous to the animals that constitute a farmer's use of his property or the production-line machines that likewise constitute an industrial firm's use of its property. Maintaining that the sole legal wrong committed by spammers is trespass to chattels is an exercise in over-abstraction, and certainly a legal fiction. For ISPs and other businesses, day-to-day operations are significantly hindered by spam, which constitutes a substantial and unreasonable interference with their use and enjoyment of their real property. When land is dedicated to commercial goals that are achieved only with computers, the interference with the use of these computers is *ipso facto* an interference with the use of the land.

It is unnecessary to engage in the same rationalistic and formalistic treatment of legal terminology that led to using trespass to chattels in spam cases in order to expose its folly. Moving beyond simple definitions and looking at both the commentary and the cases, it becomes clear that nuisance has always been applied to redress harms caused to chattels in the use of real property. The commentary in the Restatement of Torts, for instance, provides that "[t]he phrase 'interest in the use and enjoyment of land' is used in this Restatement in a *broad sense*. It comprehends . . . the

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ing the source of this story in the work of William James, one of the originators of pragmatism).

interests that a person may have in the actual present use of land for residential, agricultural, *commercial*, *industrial* and other purposes."[111]

The traditional applications of nuisance universally confirm this broad reading of "use and enjoyment of land." While some nuisance cases entail a tangible or physical invasion of land,[112] the typical nuisance cases are those in which ephemeral interferences substantially and unreasonably prevent a land-owner from using and enjoying chattels for personal or commercial purposes, regardless of whether those chattels are machines, products, animals, or crops. A quick review of modern nuisance cases reveals claims involving: cement dust interfering with the functioning of a lumber yard;[113] smoke and spray paint from a shipyard interfering with an automobile company's production of new cars;[114] construction of a bank disrupting customer access to a store at a shopping mall;[115] annoyance and discomfort affecting homeowners of a neighbor who kept "junk" cars in his front yard;[116] emission of gas and airborne particles from a copper smelter interfering with a husband and wife's use and enjoyment of their home;[117] noxious odors, flies, and dust from a cattle feedlot interfering with the agricultural use of neighboring farmland;[118] and pesticide blown by winds from a farm damaging a neighboring farm's bean crop.[119] The Oregon Supreme Court affirmed a nuisance verdict against a telephone company that negligently listed a homeowner's telephone number as an

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111. RESTATEMENT (SECOND) OF TORTS § 821D cmt. b (emphases added).

112. *See* Canton v. Graniteville Fire Dist. No. 4, 171 Vt. 551 (2000) (flooding of basement); Holmberg v. Bergin, 172 N.W.2d 739 (Minn. 1969) (encroaching tree); Graham v. Lowden, 15 A.2d 69 (Me. 1940) (erecting a building on plaintiff's land).

113. Jefferson Lumber & Concrete Prods., Inc. v. Jimco, Inc., 217 So. 2d 721 (La. Ct. App. 1969).

114. Nissan Motor Corp. v. Md. Shipbuilding & Drydock Co., 544 F. Supp. 1104 (D. Md. 1982), *aff'd*, 742 F.2d 1449 (4th Cir. 1982). In this case, the district court ruled that Maryland Shipbuilding was not liable for nuisance only because "the utility of defendant's conduct outweighs the gravity of the occasional harm which Nissan has sustained." 544 F. Supp. at 1118. Of course, this meant that the smoke and spray paint was interfering with the use of Nissan's property, but only that it was not deemed substantial after the requisite utility calculus.

115. Great Atlantic & Pac. Tea Co., Inc. v. LaSalle Nat'l Bank, 77 Ill. App. 3d 478 (1979) (reversing trial court's dismissal of nuisance claim and remanding for trial).

116. Foley v. Harris, 223 Va. 20 (1982).

117. Bradley v. Am. Smelting & Refining Co., 104 Wash. 2d 677 (1985) (certifying question from federal district court that plaintiffs could plead both trespass and nuisance claims).

118. Scott v. Jordan, 99 N.M. 567 (N.M. Ct. App. 1983).

119. Hall v. Phillips, 231 Neb. 269 (1989) (reversing summary judgment for plaintiff only on grounds of outstanding factual issues concerning the unreasonableness of defendant's actions).

after-hours florist, which resulted in severe emotional distress arising from "an invasion of plaintiff's right to enjoy her property without unreasonable interference."[120] In 1996, the Wisconsin Supreme Court, reversing an appellate court's ruling to the contrary, affirmed a nuisance verdict against a defendant electrical company whose power lines produced stray electrical voltage that harmed a farmer's dairy herd.[121]

How can it be that stray electrons interfering with the milk production of a farmer's dairy herd are a nuisance, but electrons intentionally sent over wires in the form of e-mail that interfere with the operation of a company's computer network are not? If injuries suffered to automobiles, lumber, crops, cattle, as well as general annoyance injuries caused by unsightly junk cars or excessive late-night telephone calls, are sufficient for a successful nuisance claim, then so are injuries suffered to computers and business operations by e-mail. To distinguish between computers and other chattels is inconsistent with long-standing commentary and case law on the "broad property interest" that is protected by the doctrine of private nuisance.

The injuries suffered by ISPs and businesses are classic examples of a nuisance injury, not a trespass injury. ISPs and businesses are not dispossessed of their networks; spammers are not literally coming into their offices to seize or even to hijack their networks. ISPs and business are suffering from *substantial and unreasonable interference* with the use of their computer networks, which is literally a substantial and unreasonable interference with their normal business operations.[122]

The amount of spam is simply staggering. As noted earlier, spam now numbers in the hundreds of billions.[123] One notorious spammer claims he can send from 50 to 250 million e-mails in a single day.[124] Others are believed to send merely 30 to 40 million e-mails each day.[125] But this is only

120. Macca v. Gen. Tel. Co. of N.W., Inc., 262 Or. 414, 418 (1972).

121. Vogel v. Grant-Lafayette Elec. Coop., 548 N.W.2d (Wis. 1996). *See also* Page County Appliance Ctr., Inc. v. Honeywell, Inc., 347 N.W. 2d 171 (Iowa 1984) (reversing on evidentiary issues a nuisance verdict against an electronics vendor whose computers were "leaking radiation" that interfered with television signals in nearby appliance store).

122. RESTATEMENT (SECOND) OF TORTS § 821F, cmt. g (noting that "[s]ignificant harm is necessary for a private nuisance"); *see also id.* § 822 (requiring some type of liability-forming conduct on the part of the defendant, such as intentional, unreasonable, or reckless conduct).

123. *See supra* notes 4-7, and accompanying text.

124. *See World's Top 10 Spammers*, *supra* note 29 (speaking of Eddy Marin, a spammer based in Boca Raton, Florida).

125. Sullivan, *supra* note 33 (identifying Juan Garavaglia, a spammer known as "Super-Zonda").

what a single person or company can do; there are hundreds, if not thousands, of spammers around the world who believe in their "God-given right to spam."[126] The results of their activities are painfully clear. A representative from BellSouth Internet Group testified at the 2003 FTC Spam Forum that approximately 75 percent of its inbound e-mail traffic is spam, and that this accounted for 60 percent of all of BellSouth's e-mail processing activities on its network.[127] BellSouth is probably suffering more than most ISPs, but only by a little. In mid-2003, Brightmail found that about 48 percent of all e-mail sent each day is spam.[128] By January 2004, Brightmail found that spam accounted for approximately 60 percent of the e-mail it handled.[129] Another study revealed that spam accounted for almost two-thirds of all business e-mail sent in December 2003, up from approximately 50 percent of all business e-mail traffic in May 2003.[130]

The ISPs have responded by investing increasingly more resources to stop the onslaught—hiring more personnel, directing existing personnel to work on spam issues, and purchasing filtering software or services. The filter used by Hotmail must be upgraded every 10 minutes in order to incorporate the new data required to continue blocking the flood of spam.[131] And yet spam continues to pour into ISP networks, resulting in high costs to manage it. In 2001, Verizon sued a notorious spammer for $37 million for twice paralyzing the company's network with a deluge of bulk e-mail.[132] BellSouth's costs in dealing with spam rose 500 to 700 percent from 2000 to 2002, and then doubled from 2002 to 2003.[133] These costs included lost productivity and expenses incurred in system overhead, buying and running anti-spam filtering software, hiring personnel, producing educational materials, and providing additional customer support.[134] With

126. *World's Top 10 Spammers*, *supra* note 29 (quoting Mike Cunningham, one of the "top 10" spammers of 2003, who made this statement on a Usenet discussion group).

127. Malik, Presentation Slides of Testimony at the FTC Spam Forum, *supra* note 17. Except for the information cited in note 135, all of the data concerning BellSouth is taken from this source.

128. Glassman, *supra* note 31.

129. Krim, *supra* note 70.

130. *Bush Signs Anti-Spam Bill Into Law*, *supra* note 67 (referring to a study by e-mail security company, MessageLabs).

131. Glassman, *supra* note 31.

132. *World's Top 10 Spammers*, *supra* note 29 (discussing the exploits of Alan Ralsky, who ultimately settled with Verizon in 2002, which included a promise by him to stop sending spam over Verizon's network).

133. Malik, Presentation Slides of Testimony at the FTC Spam Forum, *supra* note 17.

134. Chris Lewis, Transcript of Testimony at FTC Spam Forum (Matter No. P024407), at 79, *available at* http://www.ftc.gov/bcp/workshops/spam/transcript_day2.pdf (May 1, 2003) (breaking spam costs down into costs associated with bandwidth us-

thousands of customers, BellSouth estimates that it spends from $3 to $5 per customer on spam, a cost it must absorb because the hyper-competitive nature of the ISP market means that it cannot raise prices without losing its customer base.[135] Smaller ISPs are in worse straits. A representative from Aristotle, Inc., a small Arkansas-based ISP with only 26,000 customers, testified at the 2003 FTC Spam Forum that 65 to 70 percent of the e-mail it receives is spam.[136] Aristotle estimated that overall costs directly attributable to spam were approximately $5 per customer, almost the entire amount of a one-month subscription rate of $6.[137] Thus, at 26,000 customers, Aristotle is suffering recurring annual damages of approximately $130,000. A representative from NortelNetworks testified at the 2003 FTC Spam Forum that 80 percent of its bandwidth costs are attributable to spam, and that it operates entire servers dedicated solely to fighting spam.[138] Despite the dedicated filtering servers, somewhere between 5,000 and 10,000 spams get past its filters on a daily basis,[139] and that each one costs NortelNetworks approximately $1 in lost productivity.[140] According to its testimony before the FTC, NortelNetworks is incurring spam-related damages *each day* of approximately $5,000 to $10,000,[141] which amounts to annual damages of approximately $1.8 to $3.6 million. This is what it means in exact dollar terms when one columnist stated in the abstract that the "costs of spam are paid mostly by Internet service providers (ISPs), which are forced to invest in extra capacity and maintain filtering systems."[142]

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age, additional equipment, hiring additional staff, and reputational effects); Dale Malik, Transcript of Testimony at FTC Spam Forum (Matter No. P024407), at 92, *available at* http://www.ftc.gov/bcp/workshops/spam/transcript_day2.pdf (May 1, 2003) (noting that of "software, hardware, and abuse desk," most of the cost attributable to spam is software-related).

135. Malik, Transcript of Testimony at FTC Spam Forum, *supra* note 134, at 88-92.

136. Carl Shivers, Transcript of Testimony at FTC Spam Forum (Matter No. P024407), at 92, *available at* http://www.ftc.gov/bcp/workshops/spam/transcript_day2.pdf (May 1, 2003).

137. *Id.*

138. Lewis, *supra* note 134, at 79.

139. *Id.* at 81. Mr. Lewis further stated that "if our filters weren't as good as they are, we would be talking a million [unsolicited commercial emails getting through the filters] per day." *Id.* at 82.

140. *Id.* at 81 (stating that "every e-mail that gets past our filters costs us $1 in lost productivity").

141. *Id.* (confirming that spam costs NortelNetworks "approximately $5,000 to $10,000 a day").

142. Sullum, *supra* note 65.

Such substantial harms meet a plaintiff's burden for establishing a nuisance claim, i.e., that a defendant's activities cause *substantial and unreasonable interference* with the plaintiff's use of its property. Spam causes direct damage to computers: network servers crash under the spam onslaught, which in one case caused $37 million in damages.[143] Spam also causes numerous consequential damages: additional computer servers purchased to run the filters and store spam before it is deleted, reduced services to paying customers, lost productivity in wasted time of employees, lost productivity resulting from employees' inability to use the company network, and wasted resources spent on redirecting employees to address and prevent these harms. In some cases, these consequential damages run into the millions.[144] Establishing harm for purposes of nuisance would be simple: the documentation that underlies the ISPs' testimony before the 2003 FTC Spam Forum would easily serve as a basis for establishing this element of a nuisance claim. At the very least, such damages are likely far more than the damages incurred in the nuisance cases mentioned earlier to plaintiffs' cattle, crops and other chattels, not to mention the harms of interfering with peaceful sleep and pleasant-looking neighborhoods.[145]

It bears noting that identifying spam as a nuisance is not merely an exercise in academic conjecture. At least one court has already ordered legal and equitable remedies against a spammer on the grounds that the spam constituted a nuisance (and a trespass). In *Parker v. C.N. Enterprises & Craig Nowak*,[146] a Texas trial court found that the defendant spammer had used plaintiffs' "flowers.com" domain name without authorization, resulting in plaintiffs being deluged with returned ("bounced," in Internet parlance) e-mails. The ISP hosting the flowers.com web address, also a plaintiff in the case, was helpless as its server crashed under the avalanche of thousands of e-mails coming from the defendants. The court ruled that this "massive, unwanted delivery of the Defendants' garbage to the Plaintiffs' doorstep inflicted substantial harm, including substantial service disruptions, lost access to communications, lost time, lost income and lost opportunities."[147] Moreover, the evidence indicated that defendants continued to send spam using the unauthorized flowers.com return address, causing ongoing harm to the plaintiffs. The court thus ruled that defendants'

143. *See supra* note 132, and accompanying text (discussing Verizon's lawsuit against spammer Alan Ralsky).

144. *See supra* note 140, and accompanying text.

145. *See supra* notes 113-121, and accompanying text.

146. No. 97-06273 (D.C. Travis County Nov. 10, 1997).

147. *Id.*

spamming activities "constituted a common law nuisance and trespass."[148] Plaintiffs requested and received a permanent injunction against the spammers, as well as payment of actual damages in the amount of $13,910 and attorneys' fees in the amount of $5,000.

The specific injuries recognized by the *Parker* court are the same as those repeatedly identified by ISPs and other companies: "substantial service disruptions, lost access to communications, lost time, lost income and lost opportunities."[149] And with total damages of approximately $19,000, this case represents a small fraction of the legal and equitable remedies available to Verizon, NortelNetworks, BellSouth, AOL, Intel, and the litany of other businesses currently suffering hundreds of thousands—if not millions—of dollars in losses attributable to spam.

V. LITIGATING SPAM AS NUISANCE: COST-BENEFIT ANALYSES AND DEFENSES

Although it is seemingly an easy task to frame the injuries caused by spam to ISPs and other businesses as an ongoing substantial and unreasonable interference with their business operations, this does not end the nuisance inquiry. If a plaintiff pursues a nuisance claim against a spammer, a court will balance the utility of the parties' respective activities against each other. If a plaintiff also requests an injunction, which is likely because most ISPs and businesses simply wish to stop the spam, then a court must similarly "balance the equities." A court performing this utility calculus may permit some activities to continue unabated (although payment of damages remains a viable remedy) after balancing the benefits of the alleged nuisance-creating activity against its costs. Spammers might also assert the affirmative defense of "coming to the nuisance," in which a plaintiff asserting a nuisance claim arrived on the scene *after* the alleged nuisance-creating activity had begun. In such cases, as with the balancing of the equities, an activity may cause a substantial and unreasonable interference, but the defendant may escape some of the more harsh results of liability. Finally, there are basic procedural concerns, such as whether spammers are unreachable for purposes of personal service of summons and complaints.

In private nuisance suits in many jurisdictions, courts assess the utility of the parties' respective activities.[150] Accordingly, a court may determine

148. *Id.*

149. *Id.*

150. RESTATEMENT (SECOND) OF TORTS § 829A (discussing the nuisance test for gravity of harm to plaintiff versus utility of defendant's behavior and listing cases in

that a defendant's actions result in a *substantial interference* with the use of a plaintiff's property, but that the interference is not unreasonable or that the utility of the defendant's operations outweighs the disutility of its harm.[151] This utility assessment gives a court some discretion in determining whether an alleged spamming tortfeasor has committed a sufficiently substantial violation to justify an award of legal or equitable remedies, or both.[152]

In the final analysis, however, this discretionary characteristic of nuisance doctrine is unlikely to relieve the spammer of liability. Although a spammer may invoke the value of his "God-given right to spam,"[153] a court would balance the value of this "right" against the costs imposed on innocent third parties, such as Verizon's claim for $37 million damages as a result of the exercising of such a right.[154] The same would be true for the spammers who caused damages to servers and company goodwill in past trespass to chattels cases.[155] A court may find that such damages are substantial enough to justify finding the spammer's activities unreasonable as

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various jurisdictions). *But see* Jost v. Dairyland Power Coop., 45 Wis. 2d 164, 174-5 (1969) (noting in nuisance case that the court knows of no damages rule in Wisconsin that permits someone engaged in important and desirable enterprises to injure with impunity those who are engaged in enterprises of lesser economic significance).

151. RESTATEMENT (SECOND) OF TORTS § 822, cmt. i (noting that "the actor's conduct may have sufficient utility . . . to outweigh a certain quantum of risk to another's use and enjoyment of land"). *See, e.g.,* Nissan Motor Corp., 544 F. Supp. at 1118 (recognizing interference of paint spray with plaintiff's business but holding defendant not liable because "the utility of defendant's conduct outweighs the gravity of the occasional harm which Nissan has sustained"); Ferguson v. City of Keene, 111 N.H. 222, 225 (1971) (noting that claim for damages in nuisance suit requires "balancing the utility of the use against the gravity of the harm suffered by the plaintiff"); Boomer v. Atlantic Cement Co., 26 N.Y. 2d 219, 223 (1970) (applying the rule in New York that a nuisance will be enjoined if a utility calculus shows a "marked disparity . . . in economic consequence between the effect of the injunction and the effect of the nuisance"); Hughes v. Emerald Mines Corp., 303 Pa. Super. 426, 441-42 (1982) (affirming in part a nuisance verdict against the defendant because defendant failed to show that the damage caused by its pollution was not unreasonable and that the utility of its conduct outweighed the harm that it caused to the plaintiff).

152. In his brief comments on the possibility of using nuisance to address spam, Burk implicitly invokes the balancing of the equities as an advantage of this doctrine, *see* Burk, *supra* note 19. He says that nuisance is better than trespass because it can "better accommodate the peculiar calculus of benefits and harms in cyberspace." *Id.* at 54.

153. *See supra* note 126.

154. *See supra* note 132, and accompanying text.

155. *See supra* note 84 (detailing nuisance-type injuries in two of the trespass to chattels cases involving an ISP suing a spammer).

a matter of law.[156] If a plaintiff ISP or business suffering the injuries described in the prior section makes it this far in the nuisance analysis, then it seems like an easy sprint to the finish line.

The court's discretion to weigh the respective benefits and costs of each party's actions is also significant because it permits the court to consider variables beyond simple economic or monetary values. As noted earlier, the trespass rule requires a finding of trespass for *any* "impinging electron."[157] This creates over-protection concerns, similar to the specter of over-protection that haunted the REDUCE Spam Act and other proposed legislation.[158] This is why scholars have criticized trespass as "too broad a claim."[159] The deleterious impact on either free speech or the commercial development of the Internet is no less a concern in the context of absolute, exclusionary trespass rules than it is under over-reaching legislation.

A court's cost-benefit assessment, or its balance of the equities, resolves this concern. In applying nuisance, a court has the discretion to distinguish between innocuous or privileged e-mails and truly odious spam—between, for example, e-mail containing constitutionally protected political speech and e-mail sent by mortgage lenders, sellers of Viagra, con-artists, pornographers, and others. A court would also have the ability in adjudicating a nuisance claim to assess the *de minimus* inconvenience caused by the limited number of non-commercial e-mail sent by some netizens, such as the several thousand e-mails sent by Hamidi over Intel's network.[160] In the case of Hamidi, it is a trespass possibly, but it hardly rises to the level of a nuisance, at least by balancing the insignificant damages suffered by Intel against Hamidi's right to use the Internet in ways that are entirely normal and expected of any person paying a monthly access fee.[161]

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156. *See* RESTATEMENT (SECOND) OF TORTS § 829A cmt. b (1979) (noting that "certain types of harm may be so severe as to require a holding of unreasonableness as a matter of law, regardless of the utility of the conduct").

157. *See supra* note 94, and accompanying text.

158. *See supra* notes 56–65, and accompanying text.

159. *See supra* note 92, and accompanying text (noting how this concern, among other similar criticisms, caused the *Hamidi* court to mangle its trespass analysis).

160. PROSSER § 88, *supra* note 86, at 629 (noting that nuisance liability is "imposed only in those cases where the harm or risk to one is greater than he ought to be required to bear under the circumstances, at least without compensation") (quoting RESTATEMENT (FIRST) OF TORTS, § 822 cmt. j (1939)).

161. *See* Borland v. Sanders Lead Co., 369 So. 2d 523, 529 (Ala. 1979) (recognizing in nuisance doctrine that "there is a point where the entry is so lacking in substance that

Unlike trespass, nuisance affords spammers another potential defense (beyond asserting the economic or social value of their work): they may claim that a plaintiff "came to the nuisance," and thus knowingly exposed themselves to a preexisting condition.[162] Unfortunately for the spammers, the scope of this defense is limited and unlikely to succeed. It is not an absolute defense, but simply serves as another factor for the court to take into consideration in weighing the propriety of equitable and legal relief.[163] Even if the defense is accepted by a court, most ISPs, such as AOL, CompuServe and MSN, offered e-mail services *before* the spam deluge began in earnest, and similarly so for any business that had connected its network to the Internet before spam's dramatic rise in volume around the turn of the century. Again, nuisance does not force a court to create a legal fiction of a dispossessed network, but rather requires a court to assess the actual impact of the parties' behavior in both its quantitative and temporal dimensions.

Finally, before an ISP or business could sue a spammer for private nuisance, it must first locate the spammer and serve the individual (or business representative) with a summons and complaint. This raises two potential problems: first, a plaintiff may be unable to locate a potential defendant, particularly when most spammers work behind well-constructed electronic veils of secrecy, and second, if the spammer is located overseas, any potential claim lying in U.S. jurisdictions would be frustrated.

Although it may seem a daunting task with billions of spam flooding the Internet each day, identifying those responsible for creating this nuisance is not as difficult as some might think. For instance, Verizon was

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the law will refuse to recognize it, applying the maxim *de minimis non curat lex*—the law does not concern itself with trifles").

162. *See, e.g.*, Page County Appliance Ctr., Inc., 347 N.W. 2d at 175 (recognizing in nuisance doctrine that "[p]riority of occupation and location—'who was there first'—is a circumstance of considerable weight"); Spur Indus., Inc. v. Dell E. Webb Dev. Co., 494 P.2d 700, 708 (1972) (affirming an injunction ordered against a nuisance defendant, but requiring the plaintiff to indemnify defendant for the cost of shutting down or moving the business as the plaintiff "brought people to the nuisance to the foreseeable detriment" of the defendant).

163. RESTATEMENT (SECOND) OF TORTS § 840D (noting that this claim is "not in itself sufficient to bar [plaintiff's] action, but it is a factor to be considered in determining whether the nuisance is actionable"). *See, e.g.*, Burt v. Beautiful Savior Church of Bloomfield, 809 P.2d 1064, 1069 (Colo. Ct. App. 1990) (rejecting "moving to the nuisance" defense because this "would, in effect, allow defendant to condemn part of the value of [plaintiff's] property"); Patrick v. Sharon Steel Corp., 549 F. Supp. 1259, 1267 (N.D.W.V. 1982) (recognizing that the "majority view rejects the doctrine of coming to the nuisance as an absolute defense to a nuisance action") (quoting Lawrence v. Eastern Airlines, Inc., 81 So. 2d 632, 634 (Fla. 1955)).

able to identify and sue the lone individual who caused its networks to crash twice under a torrent of spam.[164] The numerous ISPs and Internet companies, such as eBay, that have successfully sued in the past for trespass to chattels were also able to identify and serve the persons responsible for damaging their networks and their businesses.[165] Studies indicate that approximately 200 spammers are solely responsible for 90 percent of the world's spam.[166] Given the billions of spam sent out each day, this is an amazingly small number of perpetrators, and it is a list that is easily manageable for a company such as BellSouth or NortelNetworks with the will, the resources, and the substantial interests at stake.

Furthermore, while a plaintiff cannot plead nuisance against a spammer in a foreign country, this is a problem for *any* domestic legal remedy for spam. In any lawsuit or agency enforcement action, the defendant must be identified and served, regardless of whether the charge is a violation of the CAN-SPAM Act, trespass to chattels, or private nuisance.[167] The international dimension of the spam problem can be addressed only through international treaties, regardless of the legal options available under U.S. law.[168] Still, ISPs and other businesses need an effective remedy today against the spammers causing substantial and unreasonable interference with their computer networks. Thus far, the studies indicate, and the case law confirms, that most offenders or at least the most egregious offenders, reside or work within the United States.[169]

VI. THE BROADER PERSPECTIVE: HOW TO PROTECT THE PROPERTY ENTITLEMENT AT ISSUE IN SPAM CASES

In reversing the trial and appellate courts' rulings that Hamidi was liable for trespass to chattels, the California Supreme Court revealed that it found the concerns expressed in the academic literature about property

164. *See World's Top 10 Spammers, supra* note 132, and accompanying text.

165. *See supra* note 76 (listing trespass to chattels cases).

166. Sullivan, *supra* note 4.

167. *See, e.g.*, Hansell, *supra* note 71 (describing hundreds of lawsuits filed under the CAN-SPAM Act in March 2004 against defendants residing in the United States).

168. *See* Declan McCullagh, *Be Wary of Washington's Spam Solution*, CNET NEWS.COM (Sept. 9, 2002), *at* http://news.com.com/2010-1071-957024.html (noting criticism of proposed CAN-SPAM Act and REDUCE Spam Act bills pending before Congress that they will only force spammers to go overseas, thereby evading the reach of the federal government).

169. Nancy Anderson, Deputy General Counsel for Microsoft, stated in March 2004 that "[m]ost of the individuals involved in spam live in the United States." Hansell, *supra* note 71.

metaphors in the digital realm to be convincing.[170] Such metaphors require the courts to construct legal fictions of "dispossession" of computers by encroaching ones and zeros of digital code.[171] Worse yet, the *Hamidi* court recoiled at the logical implications of holding *any* intruding byte (or even a bit) of code liable for trespass. Although the *Hamidi* court ultimately came to the wrong conclusion, these concerns are legitimate.

Trespass rules protect an absolute and impenetrable property right. It is trespass, more than any other property doctrine, that implements in the law the distinctive Anglo-American social norm that every person's home is his castle.[172] This explains the lack of any substantiality requirement in finding trespass liability. It is the invasion of the property—the dispossession *per se*—that is the wrong committed, not the extent of the damages resulting from this invasion. If a homeowner wishes to be a hermit, or a student refuses to loan out her bicycle, the law protects these choices absolutely. Both the hermit and the student are secure in the knowledge that they may sue for trespass any person who attempts to dispossess them of their home or bicycle.

This strict protection of the right to exclude is inconsistent with the nature of the property entitlement at issue in a spam case: a computer server that is, by its nature, connected to a world-wide computer network dedicated to the exchange of information. A company that connects to the Internet, or the ISP whose sole service is providing access to the Internet, is arguably consenting to receiving e-mail from third parties. It is not the

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170. *See supra* notes 91–100, and accompanying text; *see, e.g.*, Jonathan H. Blavin & I. Glenn Cohen, Note, *Gore, Gibson, and Goldsmith: The Evolution of Internet Metaphors in Law and Commentary*, 16 HARV. J. L. & TECH. 265 (2002) (discussing generally the rise and use of the "internet as real space" metaphor); Mark A. Lemley, *Place and Cyberspace*, 91 CALIF. L. REV. 521, 523 (2003) (discussing in part "why the cyberspace as place metaphor is not a particularly good one"); Michael J. Madison, *Rights of Access and the Shape of the Internet*, 44 B.C. L. REV. 433 (2003) (discussing, in part, the implications of property metaphors applied to the Internet); Edward Lee, *Rules and Standards for Cyberspace*, 77 NOTRE DAME L. REV. 1275 (2002) (critiquing the implicit legal formalism in the use of property metaphors); Maureen A. O'Rourke, *Property Rights and Competition on the Internet: In Search of an Appropriate Analogy*, 16 BERKELEY TECH. L.J. 561, 598-613 (2001) (noting general anticompetitive policy implications in applying property metaphors to the Internet).

171. *See* Am. Online, Inc. v. IMS, 24 F. Supp. 2d 548, 550-51 (E.D. Va. 1998) (holding that defendant did not rebut plaintiff AOL's claim that "its possessory interest in its computer network [has] been diminished by the bulk e-mailing").

172. *See* 2 WILLIAM BLACKSTONE, COMMENTARIES *2 (describing the "right to property" as "that sole and despotic dominion which one man claims and exercises over the external things of the world, in total exclusion of the right of any other individual in the universe").

right to exclude that is at issue in a spam case,[173] it is the injuries arising from the *misuse* of the access right granted by the owner.[174] A factory may have the right to produce a minimal amount of pollutants that drift onto neighboring homes, but this does not justify this factory's decision to increase its production of pollutants by a thousand-fold simply because homeowners accept responsibility for the previously produced minimal amounts. The same is true for a computer server processing e-mails from third parties to customers and employees.

In this sense, the doctrine of trespass does not properly reflect the nature of the property entitlement that an ISP or business is attempting to protect. The *Hamidi* court recognized this somewhat in discussing the problems associated with erecting impenetrable virtual "walls" on the Internet, particularly when the *raison d'etre* of domains and e-mail addresses is facilitating interaction and communication between customers, employees and third parties.[175] This is the operative fact underlying the spam cases that is obscured by the "dispossession" metaphor of trespass to chattels.[176]

Attempting to escape the ill-effects of using trespass to chattels in a case that highlighted the fundamental disconnect between this legal doctrine and the property entitlement at issue in spam cases, the *Hamidi* court made a further mess of the law. The *Hamidi* court trumpeted its rejection of confusing property metaphors,[177] but its decision revealed its own blind

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173. This is not to say that in some contexts the strict protection of the right to exclude is a valid means of protecting a property entitlement on the Internet. This is the case with cybersquatting, in which people illegitimately use trademarks on the Internet. *See, e.g.*, Virtual Works, Inc. v. Volkswagon of Am., Inc., 238 F.3d 264 (4th Cir. 2001) (affirming summary judgment for Volkswagon against Virtual Works's use of "vw.net"); Sporty's Farm L.L.C. v. Sportsman's Mkt., Inc., 202 F.3d 489 (2d Cir. 2000) (affirming injunction against domain name owner of "sportys.com" in favor of catalog owner's trademark).

174. *Cf. Bidder's Edge, Inc*., 100 F. Supp. 2d at 1065-66 (rejecting eBay's analogy to defendant's act as equivalent to an invasion of a "brick-and-mortar store" by robots as an "admittedly formalistic" and "inappropriate" comparison).

175. *Hamidi*, 30 Cal. 4th at 1363 (recognizing loss of "ease and openness of communication and . . . lost network benefits" in treating "undesired communications" on the Internet as a trespass violation); *Id.* at 1364 (rejecting the proposed "rigid property rule of computer server inviolability").

176. *See* IMS, 24 F. Supp. 2d at 550-51 (holding defendant did not rebut plaintiff AOL's claim that "its possessory interest in its computer network [has] been diminished by the bulk e-mailing").

177. *See supra* note 99, and accompanying text.

commitment to a fundamentally confused seven-year-old jurisprudence.[178] Although Justice Cardozo was right to chastise courts who blindly follow metaphors, it is equally wrong for a court to follow blindly an improper legal doctrine in the name of rejecting an improper metaphor.[179]

Nuisance sweeps all of these problems aside, because it does not require a court to consider whether a portion of the Internet—more specifically, a website or a company network or an e-mail inbox—is property that is susceptible to being trespassed. To the contrary, nuisance asks a court to consider only whether a computer is a tool that is similar to any other machine or animal used in a company's business operations. And the legal issue before the court in such a case is simply whether the plaintiff's use of that tool has been substantially and unreasonably interfered with by the defendant's activities. Accordingly, nuisance keeps a court focused on objective facts in the real world, and, unlike trespass to chattels, supports a finding of liability only on the basis of such real-world actions. There is no need for a court ruling on a private nuisance claim to find a constructive or metaphorical "dispossession" of a company's computer network by a spammer.

This conclusion is admittedly contrary to the generally prevailing attitude today that nuisance is a doctrinal "morass."[180] This prevailing view explains, in part, the shift to statutory solutions for land-use conflicts, such as zoning, and "the disintegration of private law mechanisms for controlling nuisances."[181] This view of nuisance is contrary to the thesis of this Article that a private cause of action for nuisance should be used by ISPs and businesses against the spammers who are interfering with their business operations.

This theoretical criticism of nuisance doctrine is not fatal to this Article's proposal. Irrespective of any *general* theoretical failings in traditional nuisance doctrine, the use of nuisance against spammers can and should work to redress the novel harms arising from the new uses of the Internet and e-mail. As with any common law doctrine, the application of the general rules to particular fact patterns would develop over time, creating a body of law that would define the nature of the legal entitlement that ISPs

178. The *Thrifty-Tel* case was decided in 1996, and thus the use of trespass to chattels in Internet cases was only seven years old at the time of the *Hamidi* decision.

179. *See* Berkey v. Third Ave. Ry. Co., 244 N.Y. 84, 94 (1926) (Cardozo, J.) (stating eloquently that "[m]etaphors in law are to be narrowly watched, for starting as devices to liberate thought, they end often by enslaving it").

180. Robert G. Bone, *Normative Theory and Legal Doctrine in American Nuisance Law: 1850 to 1920*, 59 S. CAL. L. REV. 1101, 1224-25 (1986).

181. *See* Epstein, *supra* note 104, at 98.

and businesses have in the unfettered use of their computer networks. Certainly, such a development might also occur with trespass to chattels, and one might argue that this is what the *Hamidi* court was doing: defining the boundaries of trespass doctrine as applied to spam. But if courts *de facto* are treating a problem in one way, while *de jure* defining it in an entirely different way that requires them to create legal fictions and indeterminate distinctions, then it is hardly a knockdown criticism that expressly adopting the *de facto* approach might create problems itself. At least in adopting nuisance, the courts will forthrightly face the real problems in assessing the substantial interference, as well as the costs and benefits associated with this interference.

At a minimum, courts should also correlate their legal analyses and remedies to the legal entitlement at issue. The law is filled with enough complexity and problems; there is no reason to add to them by wrestling with the doctrinal equivalent of using a hammer to do the work of tweezers. Given the somewhat unique correlation between the elements of nuisance and the type of injurious interference with property caused by spam, it would be easier and more efficient for the courts to resolve these problems using the legal tool best suited for the job. Although nuisance might be a messy doctrine *generally*, Ockham's razor recommends it for the *particular* problem of spam.

A more fundamental criticism of pleading spam as nuisance is that this proposal entails the same invalid extension of a traditional common law cause of action as the past application of trespass to chattels to computer servers and websites. Nuisance arose to address substantial, nontrespassory interferences with *land*, whether a farm, a factory or a home. Applying this doctrine to computers, even when cast in terms of interferences with business operations, is at least one degree further removed from land than a cow or a piece of lumber. Obviously, a computer firm or ISP owns land only out of necessity, and not because the land itself is integral to the operation of its business. A cow needs grass and crops need soil; both are intimately connected to land. A computer only needs plastic, metal, and silicon. Thus, maybe computers and their networks really are just a world of chattels.[182]

It is true that applying nuisance to spam would be a novel application of this doctrine, bringing a whole new sphere of economic activity within

182. *See* Richard A. Epstein, *Cybertrespass*, 70 U. CHI. L. REV. 73, 76 (2003) ("[T]he various equipment and facilities that make up the internet are not by any stretch of the imagination real property. Rather, they are a new form of chattel, which are presumptively governed by the law of trespass to chattels.").

the ambit of a legal cause of action that arose in entirely different circumstances to redress entirely different harms. But is it not a virtue of the common law system that it is adaptable to changing socio-economic circumstances? This criticism really strikes at the basic question of how a legal system can effectively secure legal entitlements and ensure orderly transaction-facilitating behavior in the midst of radical economic and social transformation. Such a topic is far beyond the limited scope of this Article, and a proper justification of the common law as a default system for defining legal rules in the midst of social and economic transformation would require a lengthy monograph in its own right.[183]

Nonetheless, a few remarks on this subject are in order. At first blush, this criticism actually cuts in favor of a common law solution to the problem of spam, as opposed to enacting legislation or wasting resources on purely defensive technologies that are continuously circumvented. Over the centuries, the common law has survived in Anglo-American jurisdictions precisely because of its highly adaptive capabilities. "The basic common law system of property, tort, contract, and restitution is sensible through[out] changes in scarcity conditions, tastes, and technology. Indeed, the system is sensible precisely because it is a framework for efficient adaptation to changes in scarcity conditions, tastes, and technology."[184] This is hardly a modern insight. In 1829, Justice Joseph Story praised both the ability of the common law to evolve beyond its origins in the feudal system and its embracing of "general rules, by which rights or actions are to be governed."[185] Of course, the latter made the former possible.

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183. *See, e.g.*, Louis Kaplow, *An Economic Analysis of Legal Transitions*, 99 HARV. L. REV. 509 (1986). Kaplow's article has sparked a growing field in the academic literature, analyzing the causes and implications of stability in legal doctrines over time. *See, e.g.,* Thomas W. Merrill & Henry E. Smith, *Optimal Standardization in the Law of Property: The Numerus Clausus Principle*, 110 YALE L. J. 1, 37 (2000) (noting that the creation of certain basic and fundamental property rules provides for the efficient development of property regimes over time).

184. Christopher T. Wonnell, *The Noncompensation Thesis and its Critics: A Review of this Symposium's Challenges to the Argument for not Compensating Victims of Legal Transitions*, J. CONTEMP. LEGAL ISSUES 293, 306 (2003); *see also* Richard A. Epstein, *Beware of Legal Transitions: A Presumptive Vote for the Reliance Interest*, 13 J. CONTEMP. LEGAL ISSUES 69, 70 (2003) (noting that the presumption of the common law system is that "[w]herever possible try to keep the legal framework constant, and allow the response to societal changes to take place through private adjustments").

185. Joseph Story, *An Address Delivered Before the Members of the Suffolk Bar, at Their Anniversary on the Fourth of September, 1821, at Boston*, 1 AM. JURIST 1, 1 (1829). This was the inaugural article in the very first American law journal.

The radical transformation of the digital revolution and the rise of the Internet do not necessarily require a similarly radical response by the legal system. The solution to spam is not more likely to be found in new statutes or in new technologies simply because these are as novel as the problem itself. "Let us not vainly imagine," wrote Justice Story, "that we have unlocked and exhausted all the stores of juridical wisdom and policy."[186] The common law continues to protect legal entitlements, such as the right to use and enjoy one's property without substantial interference, and it can continue to redress new forms of injury, such as the harmful effects of spam. The viability of the common law is that it permits private ordering through context-dependent responses in the legal system: private actors invoke general legal rules to redress particular types of harms arising in particular circumstances. This is especially important when the subject matter of legal ordering—the Internet and "high tech" generally—continually outpaces the best efforts of legislators to capture it.[187] Thus, the courts can avoid the problems of over- and under-protection by carefully tailoring their decisions to the circumstances at hand, and do so by calling upon general rules that can assist and guide the relevant parties in their continuing commercial endeavors.

Sometimes the first attempt at a legal solution does not pan out as hoped, as proponents for trespass to chattels discovered in *Hamidi*, but the common law offers several general doctrines for securing the myriad legal property entitlements that exist in our society. Trespass secures the right to exclude and nuisance secures the right to use. Intel's loss in *Hamidi* indicates that trespass to chattels has the led the courts down the proverbial garden path: they were blinded to the proper legal entitlement at issue by the formal elegance of applying the trespass rules. The reasons for the California Supreme Court's reluctance to affirm trespass liability in *Hamidi* point the way to nuisance.

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186. *Id.* at 29.

187. *See* Bruce P. Keller, *Condemned to Repeat the Past: The Reemergence of Misappropriation and Other Common Law Theories of Protection for Intellectual Property*, 11 HARV. J. L. & TECH. 401, 428 (1998) (noting that "technology in this century has continually outpaced statutory law and litigants have repeatedly turned to judge-made law to protect important rights . . . . [A]s the Internet geometrically expands its speed, accessibility, and versatility . . . intellectual property owners again must consider the common law as a source of protection at the end of this century, much as it was at the beginning . . . . ").

VII. CONCLUSION

This Article has proposed that ISPs and businesses have missed an important, existing cause of action that may help to remedy the damage caused by spam. Although spammers may believe in their "God-given right to spam,"[188] it is far more relevant to our social and economic interactions that "[t]he 'great principle of common law' is that one may not use their property to injure others."[189] As the FTC concluded in its report to Congress: "spam imposes real costs."[190] In the economists' terms, spammers are creating negative externalities through the use of their e-mail accounts. Nuisance doctrine is an ideal legal mechanism for forcing spammers to internalize the costs they impose on innocent third parties.

Nuisance doctrine, of course, is not a panacea. It will not stop the spam deluge alone. As noted in Part I, the various responses to spam are not mutually exclusive. In fact, the problems with spam have been exacerbated in part by the attempts to create a single solution, whether that solution is a spam filter or an all-encompassing statute. There is a place in the anti-spam arsenal for filters. The use of spam filters is no more improper than the use of burglar alarms or water filtration devices, despite laws against burglary and pollution. There is also a place for the sanctioning of fraudulent commercial e-mail (although it is a separate question whether this is best done through new legislation or through existing statutes prohibiting fraud). Criminal statutes, though, do not make related private causes of actions unnecessary or moot; thus, there is a place in the arsenal against spam for a litigation tool that holds non-fraudulent spammers accountable for the costs they knowingly impose on ISPs and other businesses.

The costs imposed by spam arise from its substantial interference with the commercial operations of ISPs and businesses—a classic nuisance-type injury. Spam disrupts the operation and use of the computers that constitute a firm's commercial exploitation of its property. To put it bluntly, computers are no different to the ISP than are cows to the dairy farmer. The nuisance rule that applies to the latter should apply to the for-

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188. *See supra* note 126, and accompanying text.

189. Moon v. N. Idaho Farmers Ass'n, No. CV 2002 3890, 2002 WL 32102995, at *7 (D. Idaho Nov. 19, 2002) (quoting Baltimore & Potomac R.R. Co. v. Fifth Baptist Church, 108 U.S. 317, 331 (1883)); *see also* Eric R. Claeys, *The Revolution in American Nuisance Law* (suggesting that nuisance doctrine is internally consistent and coherent if it is assessed as arising from this basic political principle) (manuscript on file with author).

190. *See Prepared Statement of The Federal Trade Commission on "Unsolicited Commercial Email" Before the Senate Committee on Commerce, Science and Transportation*, *supra* note 3, at 13.

mer.[191] And, except for spammers, few people dispute the claim that deluging computer networks with billions of unsolicited e-mails is a fundamentally unreasonable act. Legal scholars may disagree about the precise applications on the margins of the context-dependent "reasonableness" standard, but economists and rights theorists would probably find common cause in the judgment that the person(s) responsible for the 2.4 *billion* spams that AOL filters daily (not counting what actually gets through to AOL's customers) is unreasonably harming AOL and any other ISP suffering under a similar torrent of spam.[192] Nuisance doctrine exists to protect property owners against such harms.

Spam is a nuisance. As Washington State Attorney General Christine Gregoire declared last year, "It has become obvious our delete key will not solve this problem. We need to make life tough on spammers. They need to know they may have to defend themselves in court."[193] Nuisance doctrine can make this a meaningful and viable threat.

191. *See supra* note 121, and accompanying text (noting Wisconsin case affirming nuisance judgment against electric company whose wires produced stray voltage injuring plaintiff's dairy herd); *see also* PROSSER § 87, *supra* note 86, at 619-20 (discussing application of nuisance to unpleasant odors, smoke, dust, gas, noises, pollution, destruction of crops, and phone calls).

192. *See supra* note 7, and accompanying text.

193. Bob Sullivan, *Microsoft Files 15 Spam Lawsuits*, *at* http://msnbc.msn.com/id/3078458 (June 17, 2003).

BUILDING A BETTER BOUNTY: LITIGATION-STAGE REWARDS FOR DEFEATING PATENTS

By Joseph Scott Miller †

ABSTRACT

A patent challenger who defeats a patent wins a prize that it must share with the whole world, including all its competitors. This forced sharing undermines an alleged infringer's reason for fighting the patent case to the finish—especially if the patent owner offers an attractive settlement. Too many settlements, and too few definitive patent challenges, are the result. A litigation-stage bounty would correct this defect in patent litigation's basic framework, for it would provide cash prizes to successful patent challengers that they alone would enjoy. After briefly describing the free rider problem with inventions that patent law attempts to solve, this Article details how the Supreme Court's decision in *Blonder-Tongue* creates an equally troubling free rider problem in the context of patent validity challenges. It then critiques two recent proposals directed at solving the free rider problem that undercuts patent challenges: an examination-stage bounty proposed by Professor Thomas, and a one-way fee-shifting rule more recently proposed by Professor Kesan. The Article next proposes a new bounty, one that offers the benefits of the Thomas and Kesan proposals without their respective drawbacks. The proposed bounty would apply at the litigation stage, in an amount that varies as a function of the patentee's net profits from practicing the technology set forth in the asserted patent claims. Finally, the Article answers the most likely objections to a litigation-stage bounty.

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† Assistant Professor, Lewis & Clark Law School. I wrote this Article with the support of a summer research grant from Lewis & Clark Law School, as well as the benefit of helpful comments at the Lewis & Clark Law School Faculty Colloquium, the 3rd Annual Intellectual Property Scholars Conference at Boalt Hall School of Law, University of California, Berkeley, the Pacific Intellectual Property Scholars Conference, and from John Allison, Ann Bartow, Ed Brunet, Vince Chiapetta, Jay Kesan, Mark Lemley, Lydia Loren, Rob Merges, William Miller, Maureen O'Rourke, Lisa Schneider, Jim Speta, John Thomas, and Polk Wagner. Jermaine Grubbs and Alex Ortiz provided able research assistance. Comments are welcome at jsmiller@lclark.edu.

TABLE OF CONTENTS

I. INTRODUCTION

Patent litigation's basic framework tilts decisively against a definitive court test of patent validity. A patent challenger who succeeds in defeating a patent wins spoils that it must share with the world, including all its competitors. This forced sharing undercuts an alleged infringer's incentive to stay in the fight to the finish—especially if the patent owner offers an attractive settlement. Too many settlements, and too few definitive patent challenges, are the result. A litigation-stage bounty would correct this tilt against patent challenges, for it would provide cash prizes to successful patent challengers that they alone would enjoy.

Consider, for example, Amazon's patent case against Barnesandnoble.com ("B&N"). The trial court preliminarily enjoined B&N from giving its repeat customers a one-click purchasing method during the height of the 1999 winter shopping season.[1] The case fast became a cause célèbre in

1. Amazon.com, Inc. v. Barnesandnoble.com, Inc., 73 F. Supp. 2d 1228, 1249 (W.D. Wash. 1999) (granting preliminary injunction in favor of Amazon.com, ordering Barnesandnoble.com to cease infringing U.S. Patent No. 5,960,411 (issued Sept. 28, 1999)), *rev'd*, 239 F.3d 1343 (Fed. Cir. 2001) (vacating preliminary injunction). For a concise summary of the trial and appellate court opinions, see Matthew G. Wells, Note, *Internet Business Method Patent Policy*, 87 VA. L. REV. 729, 753-59 (2001).

the e-commerce world.[2] The one-click patent symbolized a Patent Office[3] that, oblivious to longstanding business practices, routinely and wrongly granted patents on computer-implemented inventions that seemed painfully obvious and unpatentable.[4] If the trend continued, the press warned, only bad could come of it.[5]

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2. *See* Margo A. Bagley, *Internet Business Model Patents: Obvious by Analogy*, 7 MICH. TELECOMM. & TECH. L. REV. 253, 254 (2001) (noting the "seemingly unprecedented public outcry over the granting of Internet business model patents," including Amazon's one-click patent); William C. Smith, *Patent This!*, A.B.A. J., Mar. 2001, at 48, 49 ("Amazon's lawsuit sparked flaming e-mails, incendiary Web sites, and even a sputtering consumer boycott."); Russell A. Korn, Comment, *Is Legislation the Answer? An Analysis of the Proposed Legislation for Business Method Patents*, 29 FLA. ST. U. L. REV. 1367, 1371 (2002) (calling the case "[o]ne of the most well-known, highly publicized business method patent disputes," and noting that "[v]arying sectors of the public were outraged by the issuance of the 'one-click' patent").

3. The agency is formally the "United States Patent and Trademark Office." 35 U.S.C. § 1(a) (2000). This Article focuses on patent law questions and thus, as is common in the literature, refers to the agency simply as the "Patent Office." *See, e.g.*, Jay P. Kesan, *Carrots and Sticks to Create a Better Patent System*, 17 BERKELEY TECH. L.J. 763, 765 & n.1 (2002); Robert P. Merges, *One Hundred Years of Solicitude: Intellectual Property Law, 1900-2000*, 88 CALIF. L. REV. 2187, 2216-17 (2000) [hereinafter Merges, *One Hundred Years*]; John R. Thomas, *Collusion and Collective Action in the Patent System: A Proposal for Patent Bounties*, 2001 U. ILL. L. REV. 305, 306 & n.2 [hereinafter Thomas, *Proposal for Patent Bounties*].

4. *See* Bagley, *supra* note 2, at 254 ("[T]he oft-repeated theme has been that many Internet business method 'inventions' being patented are obvious . . . . "); Rochelle Cooper Dreyfuss, *Are Business Method Patents Bad for Business?*, 16 SANTA CLARA COMPUTER & HIGH TECH. L.J. 263, 268 (2000) (noting the "frequency with which the Patent Office issues patents on shockingly mundane business inventions"); Andy Johnson-Laird, *Looking Forward, Legislating Backward?*, 4 J. SMALL & EMERGING BUS. L. 95, 120 (2000) (reporting a similar perception in the computer science community); Arti Rai, *Addressing the Patent Gold Rush: The Role of Deference to PTO Patent Denials*, 2 WASH. U. J.L. & POL'Y 199, 212 (2000) ("Commentators have expressed concern that program patents, particularly business method patents, are being granted on inventions that are obvious."); John R. Thomas, *Liberty and Property in the Patent Law*, 39 HOUS. L. REV. 569, 577 (2002) ("Many newly issued patents appear to appropriate familiar concepts that lie within the public domain."); Korn, *supra* note 2, at 1371 ("They felt that the patenting of such obvious and nonnovel methods would stifle competition.").

5. *See, e.g.*, James Gleick, *Patently Absurd*, N.Y. TIMES MAG., Mar. 12, 2000, at 44, 44 ("When 21st century historians look back at the breakdown of the United States patent system, they will see a turning point in the case of Jeff Bezos and Amazon.com and their special *invention*: 'The patented One Click® feature,' Bezos calls it."). Contemporary Patent Office absurdities have even made it onto pop culture's radar: we learn, in the fifth installment of the *Harry Potter* series, that the Ministry of Magic, the pinnacle of anglophone wizarding officialdom, contains a "Ludicrous Patents Office." J.K. ROWLING, HARRY POTTER AND THE ORDER OF THE PHOENIX 129 (2003). If anything is mass

Some commentators, struck by the Patent Office's fumbles with applications for patents on computer-implemented inventions, have proposed improving Patent Office procedures.[6] Others take comfort (even if only a little) from the fact that the courts, guarding against Patent Office errors, have the power to strike down invalid patents during litigation.[7] Turning further toward the courts, Professor Lemley urges that, "[b]ecause so few patents are ever asserted against a competitor, it is much cheaper for society to make detailed validity determinations in those few cases" where a patent is litigated or licensed than it is to greatly increase the accuracy of all Patent Office patentability determinations.[8] It is thus common ground, across a range of views about the urgency of Patent Office reform, that the

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culture, Harry Potter is. *See Harry Potter and the Merchandising Gold*, ECONOMIST, June 21, 2003, at 64 ("Globally, the first four Harry Potter books have sold some 200M copies in 55 languages; the two movies have grossed over $1.8 billion at the box office.").

6. *See, e.g.*, Robert P. Merges, *As Many as Six Impossible Patents Before Breakfast: Property Rights for Business Concepts and Patent System Reform*, 14 BERKELEY TECH. L.J. 577, 600-15 (1999) [hereinafter Merges, *Six Impossible Patents*]; Rai, *supra* note 4, at 218-20; John R. Thomas, *The Responsibility of the Rulemaker: Comparative Approaches to Patent Administration Reform*, 17 BERKELEY TECH. L.J. 727, 756-60 (2002) [hereinafter Thomas, *Patent Administration Reform*].

7. *See* Bagley, *supra* note 2, at 265-77 (demonstrating that courts, applying the full range of prior art sources that are relevant to the computer-implemented methods on which patents are sought, can readily identify invalid patents); Dreyfuss, *supra* note 4, at 270 (observing that invalid patents on "really important" business methods can be invalidated through litigation, and cautioning that such patents can inflict harm in the interim). The federal courts give plenary review to all patent validity questions during patent infringement litigation. 35 U.S.C. § 282, ¶ 2 (2000); JANICE M. MUELLER, AN INTRODUCTION TO PATENT LAW 269-70, 295-96 (2003).

8. Mark A. Lemley, *Rational Ignorance at the Patent Office*, 95 NW. U. L. REV. 1495, 1497, 1508-11 (2001) [hereinafter Lemley, *Rational Ignorance*]. In other words, "society ought to resign itself to the fact that bad patents will issue, and attempt to deal with the problem ex post, if the patent is asserted in litigation." *Id.* at 1510. As Professor Lemley recognizes, some Patent Office reforms are worth pursuing. *Id.* at 1523-25. He contends, however, that the primary reform goal should be "to strengthen the validity inquiry made by the trial courts." *Id.* at 1532.

Professor Lemley's essay has provoked a lively debate in the literature. *See* Shubha Ghosh & Jay Kesan, *What Do Patents Purchase? In Search of Optimal Ignorance in the Patent Office*, 40 HOUS. L. REV. 1219 (2004) (presenting an alternative "optimal ignorance" approach to determining Patent Office policy); Arti K. Rai, *Engaging Facts and Policy: A Multi-Institutional Approach to Patent System Reform*, 103 COLUM. L. REV. 1035, 1080-85 (2003) (discussing *Rational Ignorance*); Thomas, *Patent Administration Reform*, *supra* note 6, at 731-40 (offering a spirited critique of *Rational Ignorance*).

U.S. patent system's health depends on the ready availability of robust court review of patent validity.[9]

However, what if the courts are routinely blocked from fixing the Patent Office's mistakes? What if patent litigation's current procedural framework strongly disfavors exhaustive review of the validity of asserted patent claims,[10] even where commercially important technology is at stake? The outcome of the Amazon case points to such a tilt against definitive resolution of patent validity challenges, and for reasons that apply well beyond the Internet patent context.

In December 1999, the trial court granted Amazon a preliminary injunction against B&N.[11] Just over a year later, in February 2001, the U.S. Court of Appeals for the Federal Circuit vacated the preliminary injunction, concluding that B&N had "mounted a substantial challenge to the validity of the patent in suit."[12] Showing its grave doubts about the one-click patent's validity, the Federal Circuit discussed in detail five different computer-implemented techniques that predated the Amazon one-click system and appeared to render it obvious.[13] The Federal Circuit formally reserved the question whether the one-click patent is invalid for obviousness, stating that it was "a matter for resolution at trial."[14] At the same time, its exhaustive seven-page review of the prior art provided a step-by-

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9. The point is not new. As a commentator stated over sixty years ago, "[t]he judicial determination of the validity of patents is not a mere 'check' or 'brake' on the accuracy or good judgment of an administrative tribunal, but is itself a fundamental part of the machinery of the patent system." William R. Woodward, *A Reconsideration of the Patent System as a Problem of Administrative Law*, 55 HARV. L. REV. 950, 959 (1942).

10. I use the word "claim" here in its patent law sense, rather than as a synonym for "cause of action." A claim in a patent is one of the numbered paragraphs that appear at the end of the patent document. The one-click patent, for example, has twenty-six separately numbered claims. U.S. Patent No. 5,960,411 (issued Sept. 28, 1999). The Patent Act requires the patentee to provide these numbered claim paragraphs, the function of which is to "particularly point[] out and distinctly claim[] the subject matter which the applicant regards as his invention." 35 U.S.C. § 112, ¶ 2 (2000). Each claim in an issued patent is presumed to be valid, "independent[] of the validity of other claims." 35 U.S.C. § 282, ¶ 1 (2000). And each claim provides the patentee with a separate right to exclude others. *See* Leeds & Catlin Co. v. Victor Talking Mach. Co., 213 U.S. 301, 319 (1909) (discussing legal separateness and viability of individual patent claims); MUELLER, *supra* note 7, at 37-39.

11. Amazon.com, Inc. v. Barnesandnoble.com, Inc., 73 F. Supp. 2d 1228, 1249 (W.D. Wash. 1999).

12. Amazon.com, Inc. v. Barnesandnoble.com, Inc., 239 F.3d 1343, 1347, 1358 (Fed. Cir. 2001).

13. *Id.* at 1360-66.

14. *Id.* at 1360.

step guide for the trial court to strike down Amazon's patent on remand—its analysis so damning that some have stated that the Federal Circuit invalidated the claims.[15]

It may surprise one, then, that the parties settled the case in March 2002, a year after B&N's victory on appeal.[16] Even with the Federal Circuit's powerful endorsement of its invalidity case in hand, B&N preferred settlement to a definitive determination that Amazon's one-click patent is invalid. Although the parties kept the terms of their settlement secret,[17] one thing is plain: every claim of the one-click patent is as valid today as it was when the Patent Office granted it. Amazon can license the patent to others for a royalty or refuse to do so, and it can continue to sue, and to settle with, those who appear to have infringed the patent.

Why did B&N give up the fight when the appeals court had drawn the trial court a map to near-certain victory? One suspects that B&N's decision turned, at least in part, on a basic procedural feature common to all patent litigation—namely, that an invalidity judgment in favor of one accused infringer helps all accused infringers.[18]

Consider the alternatives that this procedural rule creates. If B&N had successfully invalidated Amazon's patent claims, Amazon would have been unable to assert those claims against any firm, including B&N's other competitors (such as Alibris.com or Powells.com). A settlement, by contrast, gives B&N peace and leaves Amazon's patent intact as a barrier against one-click offerings from other e-tailers. So long as acceptable settlement terms could be found—a condition made more likely by the ease with which B&N had designed around Amazon's patent[19]—it made little sense for B&N alone to continue to pay attorney fees to confer a benefit freely on others. These once embattled booksellers have thus aligned their interests behind the patent's continued presence in the marketplace, not-

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15. *See* Dan L. Burk & Mark A. Lemley, *Is Patent Law Technology-Specific?*, 17 BERKELEY TECH. L.J. 1155, 1167 (2002) ("The Federal Circuit has found software patents invalid for obviousness in two recent cases, *Lockwood v. American Airlines* and *Amazon.com v. Barnes & Noble*.") (footnotes omitted).

16. *Amazon Settles Suit Against Online Rival Over Buying Shortcut*, WALL ST. J., Mar. 8, 2002, at B5, *available at* 2002 WL-WSJ 3388159.

17. *Id.*

18. *See* MUELLER, *supra* note 7, at 297 ("[O]nce a U.S. patent has been declared invalid, it is dead and cannot be resuscitated.").

19. *See Additional Developments*, 16 BERKELEY TECH. L.J. 487, 492 (2001) ("[T]he company has modified its Express Lane feature by adding a 'confirmation' step in which the user is asked to click a second time to verify address and billing information.").

withstanding the patent's likely invalidity.[20] The crux of such reasoning, which applies in some measure to every patent case, is the now-routine approach to collateral estoppel, or issue-preclusion, that the Supreme Court ushered into federal law in *Blonder-Tongue Laboratories, Inc. v. University of Illinois Foundation*.[21]

In *Blonder-Tongue*, the Court held that an alleged patent infringer can use issue-preclusion to foreclose an infringement suit where the patent claim in question had already been declared invalid in an earlier suit. So long as "a patentee has had a full and fair chance to litigate the validity of his patent in an earlier case," the Court held, even an accused infringer who is a stranger to that earlier case can raise "a plea of estoppel" to defend "a charge of infringement of a patent that has once been declared invalid."[22] With this rule in place, an alleged infringer who wins a patent invalidity judgment earns a benefit not only for itself but for everyone, including those of this winner's competitors who were either practicing the patented technology already or might wish to adopt it in the future.

Defensive nonmutual issue-preclusion admittedly has a superficial appeal, effectively eliminating any repeat costs of defending an infringement allegation based on a patent claim that has already been invalidated in a

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20. *See* Joseph Scott Miller, *This Bitter Has Some Sweet: Potential Antitrust Enforcement Benefits from Patent Law's Procedural Rules*, 70 ANTITRUST L.J. 875, 890-91 & n.44 (2003) (discussing way in which interests of settling patentee and accused infringer become aligned against other competitors); Thomas, *Proposal for Patent Bounties*, *supra* note 3, at 335-37 (same).

21. 402 U.S. 313 (1971). Federal civil procedure treatises acknowledge that *Blonder-Tongue*, although a patent infringement case, more generally ushered nonmutual defensive issue-preclusion into the federal courts. *See* ROBERT C. CASAD & KEVIN M. CLERMONT, RES JUDICATA 175 (2001) ("Such 'defensive use' [of issue-preclusion] by a stranger was authorized as part of the federal common law of res judicata by *Blonder-Tongue*. . . ."); FLEMING JAMES, JR. & GEOFFREY C. HAZARD, JR., CIVIL PROCEDURE § 11.24, at 634 (3d ed. 1985) (explaining that *Blonder-Tongue* "rejected the 'mutuality' rule" for federal courts); 18 JAMES W. MOORE ET AL., MOORE'S FEDERAL PRACTICE § 132.01[2], at 132-11 & n.6 (3d ed. 2003) (citing *Blonder-Tongue* for proposition that issue-preclusion "often protects a defendant from the burden of litigating an issue that has been fully and fairly tried in a prior action and decided against the same plaintiff"); *id.* § 132.04[2], at 132-156.1 to 132-158 (recounting history of mutuality's demise, citing *Blonder-Tongue* throughout); 18A CHARLES ALAN WRIGHT ET AL., FEDERAL PRACTICE & PROCEDURE § 4464, at 696 (2d ed. 2002) ("The first major retreat from mutuality by the Supreme Court came in Blonder-Tongue . . . [and] the opinion paved the way for the wholesale rejection [of mutuality] that quickly followed, first in lower courts and then in the Supreme Court itself.").

22. *Blonder-Tongue*, 402 U.S. at 333, 350.

prior court case.[23] But *Blonder-Tongue* also imposes social costs, and nearly everyone has ignored them. In particular, it sharply reduces the incentive an alleged infringer has to fight a patent case to the finish, even where the alleged infringer has (as B&N did) strong proof of the patent's invalidity. Invalid patents thus continue to cast shadows on the market, and firms waste resources avoiding these shadows or paying needless royalties as insurance for safe passage through them.

Professor Thomas recently called much-needed attention to this defect in patent litigation's basic structure.[24] Recognizing that, under *Blonder-*

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23. The issue-preclusion rule cannot entirely eliminate defense costs for a subsequent alleged infringer, but it has come close. A patentee can sue on an invalidated patent claim, urging that the prior suit did not provide the patentee a full and fair opportunity to litigate the claim's validity; the alleged infringer then faces the cost of litigating the issue-preclusion question. Indeed, just after *Blonder-Tongue* was decided, one commentator expressed concern that the Court's apparent interest in a highly context-sensitive "justice and equity" approach to issue-preclusion, *id.* at 334, could lead to lengthy and expensive issue-preclusion proceedings. *See* Frederick J. Rerko, Note, Blonder-Tongue*: Abrogation of Mutuality Requirement for Defensive Use of Collateral Estoppel in Patent Infringement Suits*, 33 U. PITT. L. REV. 287, 293 (1971) ("[C]loser inspection of the Court's decision reveals that the vague guidelines set forth for determination of a [prior] full and fair opportunity may very well defeat the objectives sought in overruling [the mutuality requirement from] *Triplett*."). Subsequent cases, however, have proved otherwise: "Lower court decisions after *Blonder-Tongue* generally rebuff efforts by patent owners to establish absence of full and fair opportunity to litigate." 6 DONALD S. CHISUM, CHISUM ON PATENTS § 19.02[2][b], at 19.54 (2003) [hereinafter CHISUM]. The defense costs for a subsequent alleged infringer are thus, in practice, zero.

24. *See* Thomas, *Proposal for Patent Bounties*, *supra* note 3, at 333-34. Among the more than twenty-five law review commentaries on the *Blonder-Tongue* case that appeared from about 1970 to 1975, only one—John A. Kidwell's *Comity, Patent Validity, and the Search for Symmetry: Son of* Blonder-Tongue, 57 J. PAT. OFF. SOC'Y 473 (1975)—recognizes that defensive nonmutual issue-preclusion discourages patent validity challenges:

> [T]he alleged infringer's incentives to litigate the validity of the patent were materially reduced [by *Blonder-Tongue*] since his investment in a successful attack on the patent has become a public good. Any competitors have the benefit of the finding of invalidity without paying the costs of litigation. . . . All this seems to suggest that the existence of this community of interest [between the patentee and the alleged infringer] will affect the issues raised by parties to the first suit, and will affect the litigation in a manner which will reduce the extent to which patent-validity determinations are made at all—hardly the effect contemplated by the Court in *Blonder-Tongue*!

Id. at 488-89. Unlike Professor Thomas, however, Professor Kidwell does not suggest any changes to the patent laws to counteract the issue-preclusion rule's challenge-suppressing effect.

Tongue, "patent challenges will be subject to collective action problems . . . [that] result in fewer patent challenges than are socially optimal," he observes that "industry actors have not been sufficiently animated into challenging patents that should be brought down."[25] He both critiques the way in which a variety of popular reform proposals fail to grapple with the perverse incentives created by *Blonder-Tongue*[26] and offers a fresh alternative that tackles the incentive problem head on: pay a cash bounty to any informant who provides the Patent Office with new information that helps defeat a patent application.[27] The Thomas bounty thus operates at the patent examination stage, before a wrongly granted patent has a chance to distort other firms' behavior.

Though it is laudable to prevent unpatentable applications from issuing as patents in the first place, the examination-stage bounty's timing is its great weakness. This weakness flows from the fact that, at the time a patent issues, it is hard to tell whether the technology it purports to control—and thus the patent itself—has any commercial significance. Indeed, judging from what we know about patent litigation and licensing rates, the safest prediction for the typical patent is that it will generate little or no economic benefit for its owner.[28] This is so because, as Professor Scherer's

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25. Thomas, *Proposal for Patent Bounties*, *supra* note 3, at 334.

26. *Id.* at 334-40.

27. *Id.* at 307, 341-42.

28. *See* Lemley, *Rational Ignorance*, *supra* note 8, at 1501-08 (showing that "the overwhelming majority of patents are neither litigated nor licensed"); F.M. Scherer, *The Innovation Lottery*, *in* EXPANDING THE BOUNDARIES OF INTELLECTUAL PROPERTY: INNOVATION POLICY FOR THE KNOWLEDGE SOCIETY 3, 8-9 (Rochelle Cooper Dreyfuss et al. eds., 2001) (reporting results of a "survey of the license royalties obtained by six research-oriented US universities on their patent portfolios during four years of the early 1990s," wherein "a single bundle [of three patents] yielded 24 to 33 percent of the total royalties obtained from 350 to 486 individual bundles of licensed technology" and "one to two percent of the sample members . . . generated from 66 to 76 percent of total sample patent royalties").

Empirical research may enhance our ability to predict which patents will be litigated and which will not. In a pathbreaking study, Professor Allison et al. demonstrate that some basic patent characteristics are statistically reliable predictors of which patents are likely to be litigated. *See* John R. Allison et al., *Valuable Patents*, GEO. L.J. (forthcoming 2004) (manuscript on file with author). And many of these predictors can be assessed at or about the time the Patent Office issues the patent. For example, they show that litigated patents tend to have more claims than issued patents generally, *id.* (manuscript at § II.A.1.a, on file with author); litigated patents cite more prior art "U.S. patents, total patents (including foreign patents), non-patent references, and total prior art references than non-litigated patents," *id.* (manuscript at § II.A.1.b, on file with author); "[l]itigated patents cite more prior art owned by the same assignee than non-litigated patents," *id.*;

empirical work demonstrates, "[a] minority of 'spectacular winners'" in the patenting game "appropriate the lion's share of total rewards."[29] A bounty that operates before the market sifts the spectacular winners from the patents without commercial value thus seems bound to divert resources away from more productive uses and toward eliminating many patent applications that, if issued as patents, will have no effect on the market. Such applications, which are not worth the cost it takes to prosecute them to completion, are surely not worth the cost it would take to weed them out with an examination-stage bounty.[30]

Instead, the bounty mechanism should target those patents that cover commercially significant inventions, the better to ensure that challengers receive bounties only in cases where the social gain from invalidating the patent warrants the bounty's cost. Perhaps the most reliable signal that a patent covers a commercially significant technology is the patentee's willingness to litigate the patent against an alleged infringer.[31] This Article thus constructs a litigation-stage bounty mechanism that rewards definitive patent challenges.[32]

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litigated patents result from more complex and lengthier prosecution histories than issued patents generally, *id.* (manuscript at §§ II.A.2.a, b, on file with author); and "[p]atents originally issued to individuals and small businesses [are] far more likely to be litigated than patents originally issued to large corporations," *id.* (manuscript at § III.A, on file with author). At the same time, the low litigation base rate for all patents is clear: "Ninety-nine percent of patent owners never even bother to file suit to enforce their rights." *Id.* (manuscript at 1, on file with author).

29. Scherer, *supra* note 28, at 11.

30. Professor Lemley has criticized the Thomas bounty proposal on just this ground. *See* Lemley, *Rational Ignorance*, *supra* note 8, at 1525 & n.112.

31. "A rational patent owner won't file suit unless his expected return is at least a few million dollars." Allison et al., *supra* note 28 (manuscript at 8, on file with author). A patentee shows its willingness to litigate the patent either by filing an infringement complaint against an alleged infringer, or by making a threat of infringement litigation that is pointed enough to give the threatened party an objectively reasonable apprehension of suit. Such a pointed litigation threat helps trigger jurisdiction over a declaratory judgment action brought by the alleged infringer. *See infra* Part V.B.1.

Asserting a patent in court or licensing it for royalties are not, of course, the only indicia of the patent's value; patents serve valuable functions other than excluding, or extracting a royalty from, a competitor. *See infra* Part V.A.1. Litigation and royalty licensing are, however, the best indications that a specific patent, if it is invalid, imposes social costs high enough to warrant encouraging parties to expose the patent's invalidity by offering them a bounty for doing so.

32. This Article expands greatly on a proposal I first made in testimony before the May 14, 2002, session of the Joint Hearings on Competition and Intellectual Property Law and Policy in the Knowledge-Based Economy, conducted by the Federal Trade

Part I first briefly describes the free rider problem with inventions that patent law attempts to solve, then details how the Supreme Court's decision in *Blonder-Tongue* creates an equally troubling free rider problem in the context of patent validity challenges. Part II critiques two recent proposals directed at solving the free rider problem that undercuts patent challenges: the examination-stage bounty proposed by Professor Thomas, and a one-way fee-shifting rule more recently proposed by Professor Kesan.[33] Part III proposes a new bounty, one that offers the benefits of the Thomas and Kesan proposals without their respective drawbacks. This bounty would apply at the litigation stage, in an amount that varies as a function of the patentee's net profits from practicing the technology set forth in the asserted patent claims. Finally, Part IV provides answers to the most likely objections to a litigation-stage bounty.

II. BLONDER-TONGUE CHANGED PATENT INVALIDITY JUDGMENTS FROM PRIVATE TO PUBLIC GOODS

Before the Supreme Court's 1971 decision in *Blonder-Tongue*, an alleged infringer who successfully challenged the validity of a patent claim had the benefit of that court judgment to itself. In the 1936 case of *Triplett v. Lowell*, for example, the Supreme Court had roundly rejected the contention that a patentee could be estopped from suing on its patent by an earlier invalidity judgment.[34] The Court noted in *Triplett* that it "ha[d]

Commission and the Antitrust Division of the U.S. Department of Justice. *See* Miller, *supra* note 20, at 891-95 (noting hearings, and sketching litigation-stage bounty mechanism). A transcript of the session is available at http://www.ftc.gov/opp/intellect/020514trans.pdf. Commenting on the bounty proposal I made at the hearings, Professors O'Rourke and Brodley observe that "[s]uch an idea, while theoretically sound, faces a host of practical questions." Maureen A. O'Rourke & Joseph F. Brodley, *An Incentives Approach to Patent Settlements: A Commentary on Hovenkamp, Janis & Lemley*, 87 MINN. L. REV. 1767, 1779 (2003). This Article answers the practical questions by fully exploring the theoretical justifications for a litigation-stage bounty.

33. *See* Kesan, *supra* note 3, at 787-97 (proposing a one-way fee-shifting rule in favor of winning accused infringer).

34. *See* 297 U.S. 638, 642 (1936). The Court stated:

> Neither reason nor authority supports the contention that an adjudication adverse to any or all the claims of a patent precludes another suit upon the same claims against a different defendant. While the earlier decision may by comity be given great weight in a later litigation and thus persuade the court to render a like decree, it is not *res adjudicata* and may not be pleaded as a defense.

Id. The first *Restatement of Judgments* was to the same effect, stating that, as a general rule, "a person who is not a party or privy to a party to an action in which a valid judg-

several times held valid the claims of a patent which had been held invalid by a circuit court of appeals in an earlier suit brought by the same plaintiff against another defendant."[35] *Blonder-Tongue* thus turned *Triplett* on its head, giving the whole world the benefit of a patent invalidity judgment in favor of one alleged infringer.

More than thirty years later, defensive nonmutual issue-preclusion has become routine in patent litigation and in federal litigation more generally.[36] Long familiarity with the current rule may obscure the social costs it imposes as applied to patent litigation. A moment's reflection on the rule's effects in varied settings brings these social costs back into view.

When a court permits defensive nonmutual issue-preclusion in a case that affects only a small number of readily identifiable people—such as a contract case concerning a handful of parties, or a tort case involving a few crashed cars, each with a few passengers—the rule eliminates wasteful duplication of litigation effort with only a modest downside risk of distorting litigation incentives.[37] Perhaps this is why the California Supreme Court case that touched off a rush toward nonmutual issue-preclusion, *Bernhard v. Bank of America National Trust & Savings Ass'n*,[38] took no account of the possibility that rejecting the traditional mutuality require-

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ment other than a judgment in rem is rendered . . . is not bound by or entitled to claim the benefits of an adjudication upon any matter decided in the action." RESTATEMENT OF JUDGMENTS § 93(b) (1942). The *Restatement* also provided an illustration:

> A brings an action against B for infringement of a patent. B defends on the ground that the alleged patent was void and obtains judgment. A brings an action for infringement of the same patent against C who seeks to interpose the judgment in favor of B as res judicata, but setting up no relation with B. On demurrer, judgment should be for A.

Id., cmt. d, illus. 10. Both *Triplett* and the *Restatement* simply followed settled practice in this respect. *See* 2 HENRY C. BLACK, A TREATISE ON THE LAW OF JUDGMENTS § 534, at 808 (2d ed. 1902) (stating mutuality requirement); Francis P. Devine, Comment, Blonder-Tongue *Bites Back: Collateral Estoppel in Patent Litigation – A New Look*, 18 VILL. L. REV. 207, 214 (1972).

35. 297 U.S. at 643 (listing cases).

36. *See supra* note 21.

37. The duplication is wasteful if, as is usually the case, each court that adjudicates the case is equally likely to reach the correct result. *See* CASAD & CLERMONT, *supra* note 21, at 29; RICHARD A. POSNER, ECONOMIC ANALYSIS OF LAW § 21.11, at 635 (5th ed. 1998); *see also* Bruce L. Hay, *Some Settlement Effects of Preclusion*, 1993 U. ILL. L. REV. 21, 41-51 (analyzing nonmutuality rule's effects on parties' incentives to settle the first of a series of similar suits).

38. 122 P.2d 892 (Cal. 1942); *see Blonder-Tongue*, 402 U.S. at 323-26 (discussing *Bernhard* and its "significant impact" on adoption of nonmutual preclusion rules in state and federal courts).

ment could diminish each party's incentive to litigate a case in the first place (rather than hanging back until another shoulders that burden).

Bernhard involved a dispute among a bank, a deceased woman's caretaker, and the four beneficiaries of her estate; at issue was the bank's authority to pay money out of the deceased woman's account to her caretaker.[39] In this relatively simple case, involving at most six parties, the California Supreme Court focused on avoiding the waste of duplicative litigation: "it would be unjust to permit one who has had his day in court to reopen identical issues merely by switching adversaries."[40] It is hardly surprising that the four beneficiaries of the estate, so few in number, were able to coordinate their attempts to recapture the payout the caretaker had received.[41] Limiting them to one such attempt would not undermine their coordination.

A patent, unlike the typical contract or tort, affects the rights and obligations of everyone in the United States who would practice the technology claimed in it.[42] Patents are, in this sense, nationwide regulations.[43] And patent litigation, to the extent it tests the very validity of a given patent grant, affects not only the alleged infringer before the court, but also every other party who is, or may wish to begin, practicing the patented technology. The public importance of validity determinations explains, for example, the statutory mandate that a patent infringement arbitral award is not enforceable between the parties until a detailed notice of the arbitration proceeding, including a copy of the award, is filed with the Patent Office.[44] With the rights of so many other independent parties at stake, a nonmutual issue-preclusion rule raises serious questions about who appropriates the bulk of the return on an alleged infringer's investment in a definitive ruling on patent validity. These serious questions, in turn, make each party less likely to make the investment in the first place. Moreover,

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39. 122 P.2d at 893.

40. *Id.* at 895.

41. *Id.* at 893, 895.

42. *See* Mikohn Gaming Corp. v. Acres Gaming, Inc., 165 F.3d 891, 896 (Fed. Cir. 1998) (noting "the national scope of the patent grant").

43. *See* Thomas, *Patent Administration Reform*, *supra* note 6, at 741. Thomas states:

> There can be no question that Congress has conferred substantial rule-making power [on patentees] through the patent system. Each issued patent instills in all of us the duty to avoid practicing the patented invention without the permission of the patentee. Patent instruments yield causes of action in tort that applicants write for themselves.

Id. (footnote omitted).

44. 35 U.S.C. § 294(e) (2000).

if every alleged infringer pays a royalty to the patentee in the hope that another might take the far more costly step of challenging the patent, the social cost of a wrongly granted patent can far exceed the social cost of an unenforced contract or overlooked tort case.

It is ironic that *Blonder-Tongue*, a patent infringement case, has generated an incentive problem of the very sort that patent law itself is adapted to solve. Before turning to the Court's reasoning in *Blonder-Tongue*, it is helpful to review the standard account of patent protection's role in solving a free rider problem that can dampen the incentive to invest in costly inventions.

A. Patent Law Solves a Free Rider Problem

A U.S. utility patent[45] confers on its owner the right to exclude others from making, using, selling, offering for sale, or importing into the United States an embodiment of the invention claimed in the patent.[46] This right to exclude generally lasts from the patent's issue date until twenty years from the date the patent application was first filed.[47] The patent system, by

45. This Article focuses on utility patents, by far the most important type. U.S. law provides for three separate types of patents: utility patents, design patents, and plant patents. *See* 1 CHISUM, *supra* note 23, § 1.04 at 1-296 (comparing utility and design patents), § 1.05 at 1-505 (describing plant patents); MUELLER, *supra* note 7, at 169 & n.1, 194-96. Utility patents cover useful, new, and nonobvious products and processes. 35 U.S.C. §§ 101-103. This is the sort of patent most people think of as, simply, a patent. Design patents cover new, original, and ornamental designs for "article[s] of manufacture." 35 U.S.C. §§ 171-173. Plant patents cover distinct and new varieties of plants that are asexually reproduced. 35 U.S.C. §§ 161-164. The Patent Office grants many more utility patents than design or plant patents. For example, during the eight years from 1994 to 2001 inclusive, the Patent Office granted 1,049,263 utility patents (or about 131,158 per year); 109,415 design patents (or about 13,677 per year); and 3,756 plant patents (or about 470 per year). *See* U.S. PATENT AND TRADEMARK OFFICE, U.S. PATENT STATISTICS, CALENDAR YEARS 1963-2001 (reporting annual grant totals), *at* http://www.uspto.gov/web/offices/ac/ido/oeip/taf/us_stat.pdf (Mar. 2002).

46. 35 U.S.C. §§ 154(a)(1), 271(a). As explained above, *supra* note 7, an alleged infringer has the right to demonstrate that the patent is not valid. It is thus, in a sense, more accurate to say that a patent confers a right to sue, rather than a right to exclude. *See* Herbert Hovenkamp et al., *Anticompetitive Settlement of Intellectual Property Disputes*, 87 MINN. L. REV. 1719, 1761 (2003) ("[A] patent is not a right to exclude, but rather a right to try to exclude."); Miller, *supra* note 20, at 881-82.

47. 35 U.S.C. § 154(a)(2). The twenty-year term is subject to a variety of upward adjustments, available in such events as long delays at the Patent Office, 35 U.S.C. § 154(b), and FDA drug approval processes, 35 U.S.C. §§ 155-156. *See generally* 5 CHISUM, *supra* note 23, § 16.04[1], [5], [6]. The basic point, however, is that patents are granted for a limited term, and that term usually expires twenty years from the first filing date. *See* MUELLER, *supra* note 7, at 16-17.

providing an inventor with this right to exclude others, helps to solve a free rider problem that would otherwise undercut an inventor's incentive to risk inventing in the first place.[48]

The free rider problem that would undercut the incentive to invent in a world without patent protection or a cash prize equivalent[49] arises from two facts: (1) an invention, separate from the things that embody it, is

48. What follows in this section summarizes the standard account of patent protection's role in solving the invention/free rider problem. This standard account is common across both the economics and legal literatures. For examples from the economics literature, see SUBCOMM. ON PATENTS, TRADEMARKS, & COPYRIGHTS, SENATE COMM. ON THE JUDICIARY, 85TH CONG., AN ECONOMIC REVIEW OF THE PATENT SYSTEM 58-60 (Comm. Print 1958); ROBERT S. PINDYCK & DANIEL L. RUBINFELD, MICROECONOMICS 605, 661-65 (2d ed. 1992); F.M. SCHERER & DAVID ROSS, INDUSTRIAL MARKET STRUCTURE AND ECONOMIC PERFORMANCE 622-30 (3d ed. 1990); and CARL SHAPIRO & HAL R. VARIAN, INFORMATION RULES 8-17, 19-23 (1999). For examples from the legal literature, see ROBERT COOTER & THOMAS ULEN, LAW AND ECONOMICS 42-43, 106-09, 126-29 (3d ed. 2000); POSNER, *supra* note 37, at 43-45; STEVEN SHAVELL, FOUNDATIONS OF ECONOMIC ANALYSIS OF LAW 138-44 (2004); Ann Bartow, *Separating Marketing Innovation from Actual Invention: A Proposal for a New, Improved, Lighter, and Better-Tasting Form of Patent Protection*, 4 J. SMALL & EMERGING BUS. L. 1, 2 (2000); Kenneth W. Dam, *The Economic Underpinnings of Patent Law*, 23 J. LEGAL STUD. 247, 247-48 (1994); Rebecca S. Eisenberg, *Patents and the Progress of Science: Exclusive Rights and Experimental Use*, 56 U. CHI. L. REV. 1017, 1024-26 & n.31 (1989); and Mark A. Lemley, *The Economics of Improvement in Intellectual Property Law*, 75 TEX. L. REV. 989, 994-97 (1997) [hereinafter Lemley, *Economics of Improvement*].

49. For recent discussions of the cash prize approach to solving the invention/free rider problem, see Michael Abramowicz, *Perfecting Patent Prizes*, 56 VAND. L. REV. 115 (2003); Steven Shavell & Tanguy Van Ypersele, *Rewards Versus Intellectual Property Rights*, 44 J.L. & ECON. 525 (2001).

The challenge in designing any prize system is matching the size of the award to the social value of the invention, as experts on the subject recognize. Abramowicz, *supra*, at 121 ("Prize system advocates recognize that the devil is in the details and that the devil for a prize system is the government's ability to dispense rewards accurately."); Shavell & Van Ypersele, *supra*, at 526 ("A principal difficulty with reward systems, however, concerns the government's need for information to calculate rewards (although the government might be able to base rewards on sales and other ex post data)."). The patent system, as Adam Smith noted long ago, harnesses the market to value the invention:

> For if the legislature should appoint pecuniary rewards for the inventors of new machines, etc., they would hardly ever be so precisely proportioned to the merit of the invention as [the exclusive privilege of making and vending that invention for the space of fourteen years] is. For here, if the invention be good and such as is profitable to mankind, he will probably make a fortune by it; but if it be of no value he also will reap no benefit.

ADAM SMITH, LECTURES ON JURISPRUDENCE 83 (R.L. Meek et al. eds., 1978) (editorial notations omitted).

simply information; and (2) information is a "public good," i.e., it is nonrivalrous (one person's use of it does not leave any less for another to use) and nonexcludable (it is difficult to restrict its use to those who have paid for access). The public good characteristics of information make it more difficult to earn a good return on an investment in producing new information, as a brief thought experiment amply demonstrates.

Imagine a case where inventing a new solution to a particular problem requires a relatively large capital investment up front.[50] Success, however likely, is not certain. Should the inventor try?

The typical inventor is unlikely to invest the capital needed to make the invention unless she predicts a good return from doing so. She earns her return, if at all, by selling a good or service that embodies or relies on the invention at a price that exceeds the cost of generating the invention. And this is where information's public good characteristics can take a bite. If the invention is apparent from the inventor's eventual offering in the market, other firms, noting consumer demand, will determine the invention from the inventor's offering and use the invention to provide a substitute good or service.[51] Moreover, absent a legal rule that prevents it, these competitors will offer the good or service at a lower price than the inventor because they need not take account of the cost of generating the invention. The inventor already will have paid those invention costs, and the competitors will take a free ride. The inventor, to stay in the game, will cut her price below that of the free riders, who will quickly cut their price in turn. Soon, all who remain in the market will be selling at the competitive price dictated by the cost structure that the free riders face, which ignores the costs of inventing. The inventor, concluding that it will not recover its invention costs, abandons the invention effort before it begins.

The key insight here is that, if an inventor who is motivated by profit concludes that free riders will compete away her chance to cover her invention costs, the inventor will refuse to incur those costs at the outset. As a result, if we want the benefits offered by capital-intensive inventions and easily copied inventions, we must provide a fix that banishes the free riders.

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50. The would-be inventor's problem could be medical, and finding a new drug or other therapy could cost millions of dollars over a number of years; or the problem could be electromechanical, and building and testing a new device or process could cost thousands of dollars over a few months; and so on.

51. The inventor's use of the information, far from exhausting it, leaves as much information for competing firms to use. And the inventor cannot, without more, readily exclude competitors from using the information.

There is little one can do to make information rivalrous. The excludability dimension, however, offers hope because free riders cannot compete away the inventor's chance at a return without using the information to offer a substitute good or service. We can thus target the free riders' use with a right to exclude, providing the inventor with a time-limited right to exclude others from using the invention, i.e., a patent. The patent insulates the inventor from price competition and thus provides the inventor a chance to recoup her investment. Of course, consumers pay higher prices for the goods or services that embody or rely on the invention, but this is the short-term cost of obtaining the long-term benefit of inventions that would not otherwise have been made.[52]

The free rider theory underlying this utilitarian account of patent protection has been a driving force in U.S. intellectual property law since the founding era.[53] Indeed, this folk theory has been at the root of patent law since 1474, when the Republic of Venice—in what is the first recognizably modern patent statute—acted to protect the inventions made by its "men of great genius."[54] The Republic provided inventors with exclusive rights to their inventions "so that others who may see them could not build them and take the inventor's honor away," in the hope that "more men would then apply their genius, would discover, and would build devices of

52. *See* SCHERER & ROSS, *supra* note 48, at 624; Frank H. Easterbrook, *The Court and the Economic System*, 98 HARV. L. REV. 4, 21-22 (1984); Lemley, *Rational Ignorance*, *supra* note 8, at 1515 & n.75.

53. Citations for this point are legion. For examples from the literature—one a bit older than the rest—see SUBCOMM. ON PATENTS, TRADEMARKS, & COPYRIGHTS, SENATE COMM. ON THE JUDICIARY, 86TH CONG., THE PATENT SYSTEM: ITS ECONOMIC & SOCIAL BASIS 3-6 (Comm. Print 1960); ROBERT P. MERGES ET AL., INTELLECTUAL PROPERTY IN THE NEW TECHNOLOGICAL AGE 10-16 (3d ed. 2003); ROGER E. SCHECHTER & JOHN R. THOMAS, INTELLECTUAL PROPERTY: THE LAW OF COPYRIGHTS, PATENTS AND TRADEMARKS § 1.3.1 (2003); Daniel J. Gifford, *Antitrust's Troubled Relations with Intellectual Property*, 87 MINN. L. REV. 1695, 1697 (2003); Lemley, *Economics of Improvement*, *supra* note 48, at 993-94; Mark A. Lemley, *Reconceiving Patents in the Age of Venture Capital*, 4 J. SMALL & EMERGING BUS. L. 137, 139 (2000) [hereinafter Lemley, *Reconceiving Patents*]; and Maureen A. O'Rourke, *Toward a Doctrine of Fair Use in Patent Law*, 100 COLUM. L. REV. 1177, 1181-83 (2000). The Supreme Court has long recognized this utilitarian basis for patent and copyright law. *See, e.g.*, Graham v. John Deere Co., 383 U.S. 1, 9 (1966) (patent case); Twentieth Century Music Corp. v. Aiken, 422 U.S. 151, 156 (1975) (copyright case).

54. MUELLER, *supra* note 7, at 7 & n.22 (describing Venetian patent law as the "first known general patent law"); Giulio Mandich, *Venetian Patents (1450-1550)*, 30 J. PAT. OFF. SOC'Y 166, 176 (1948).

great utility and benefit to [the] commonwealth."[55] Replace "honor" with "money," and you have the modern justification for patents.

Patent protection is only one solution to the foregoing free rider problem. Another, already mentioned, is a cash prize for an invention. Depending on the nature of the invention, still other solutions may apply. If the inventor's market offering does *not* reveal the invention, as can be the case with many cost-saving process inventions, trade secret protection may be an adequate inducement to invent. With almost every invention, the inventor will also likely enjoy some lead time in the market while competitors learn about the invention and adapt their businesses to take advantage of it. This lead time, during which the inventor is the only provider who benefits from the invention, varies from case to case; it may be long enough for the inventor to recoup her invention costs. Even if the inventor's lead time is not long enough, by itself, to permit recovery of invention costs, it may be long enough for the inventor to gain an additional buffer against price competition. Consumer loyalty to a brand, for example, may become strong enough for the inventor to maintain a price premium even after competitors enter the market.[56] Or the inventor's offering may benefit from some network effect that continues to drive sales despite the presence of lower-priced competitors.[57] Finally, quite apart from such things as trade secrecy and advantages rooted in lead time, the inventor may be able to bundle the invention-dependent offering with a related offering that cross-subsidizes the first and that others cannot duplicate, such as a service contract or a companion good that is protected in some way (trade secrecy, brand loyalty, etc.).

These additional solutions to the free rider problem that threatens information generation have long been a supplement to—or, in the case of

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55. Mandich, *supra* note 54, at 176.

56. Listerine® antiseptic mouthwash, the formula for which generic competitors have known for decades, is one example. *See* Warner-Lambert Pharm. Co. v. John J. Reynolds, Inc., 178 F. Supp. 655, 659 (S.D.N.Y. 1959), *aff'd*, 280 F.2d 197 (2d Cir. 1960).

57. The auction site eBay.com is an obvious example. Even if a new entrant in the online auction business were to charge sellers a listing fee far below eBay's, most sellers would not use the new service, for the simple reason that the new auction site would not expose the seller to very many buyers (resulting in a lower final bid price). *See generally* Robert B. Ahdieh, *Making Markets: Network Effects and the Role of Law in the Creation of Strong Securities Markets*, 76 S. CAL. L. REV. 277, 288 & n.39 (2003); *Queen of the Online Flea Market*, ECONOMIST, Jan. 3, 2004, at 48 ("The biggest advantage of eBay is its size and the networking effect which that creates. If you are a seller, it is the place with the most buyers; if you are a buyer, it is the place with the most price information.").

trade secrecy, an alternative to[58]—patent protection. Interestingly, none of these additional solutions has called into serious doubt, much less displaced, the patent system, which has been part of U.S. national law since 1790.[59] Nonmutual issue-preclusion, on the other hand, has actually *created* its own troubling free rider problem, where the information to be generated is proof of the invalidity of a patent, rather than a new invention.

B. Blonder-Tongue Creates a Free Rider Problem

By the time the Supreme Court heard *Blonder-Tongue* in 1971, the range of post-*Bernhard* state and federal cases embracing nonmutual issue-preclusion had grown substantially.[60] Indeed, Professor Vestal, a leading authority on preclusion at that time, contrasted *Triplett*'s mutuality rule for patent cases with the nonmutuality rule already common in other areas—what he termed "the *normal* rules of res judicata/preclusion."[61] And, just a few years before, a presidential commission had urged that "[a] final federal judicial determination declaring a patent claim invalid [should] be *in rem*."[62] The commission's intent was to "preclude a subsequent suit on a patent claim previously held invalid by a federal court."[63] Perhaps it is less surprising, against this backdrop, that the Court requested

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58. *See* Thomas, *Proposal for Patent Bounties*, *supra* note 3, at 338 ("[A]n inventor who makes a secret, commercial use of an invention for more than one year prior to filing a patent application at the PTO forfeits his own right to a patent.").

59. MUELLER, *supra* note 7, at 28-29 (briefly reviewing history of primary U.S. patent statutes). According to Professor Janis, "[i]n the United States, no substantial patent abolitionist movement has ever emerged." Mark D. Janis, *Patent Abolitionism*, 17 BERKELEY TECH. L.J. 899, 901 (2002). England, by contrast, experienced a patent abolition movement from the early 1850s to the middle 1870s. *Id.* at 922-24.

60. *See* Blonder-Tongue Labs., Inc. v. Univ. of Ill. Found., 402 U.S. 313, 324-27 (1971) (collecting and discussing cases and commentaries).

61. ALLAN D. VESTAL, RES JUDICATA / PRECLUSION V-410 (1969) (emphasis added); *see also id.* at V-300 to V-303 (discussing abandonment of mutuality rule); A.H. Evans & W.R. Robins, *The Demise of Mutuality in Collateral Estoppel (The Second Round Patent Suit—The Not-So-Instant Replay)*, 24 OKLA. L. REV. 179, 180 (1971) (noting, just prior to the *Blonder-Tongue* decision, that "mutuality is essentially dead in all areas of the federal law except patent law").

62. PRESIDENT'S COMM'N ON THE PATENT SYS., "TO PROMOTE THE PROGRESS OF . . . USEFUL ARTS" IN AN AGE OF EXPLODING TECHNOLOGY 38 (1966) (recommendation no. 23).

63. *Id.* at 39. By the time of its *Blonder-Tongue* decision, the Court was well aware of the commission's proposal, quoting it and discussing at length the legislative proposals it provoked. *See* 402 U.S. at 339-42.

on its own initiative that the parties in *Blonder-Tongue* brief the question whether *Triplett* should be overruled.[64]

And overrule *Triplett* it did. The Court made quick work of the patentee's contention that it should not be estopped by an earlier invalidity judgment because "patent litigation [is] so technical and difficult as to present unusual potential for unsound adjudications."[65] The Court quite correctly focused not on the accuracy of any single patent validity judgment, but on the uniformity of the accuracy level across all patent validity judgments, quipping that "one might ask what reason there is to expect that a second district judge or court of appeals would be able to decide the issue more accurately" than the first.[66] Moreover, given that the patentee has the flexibility to choose whom, when, and where to sue, "there is no reason to suppose that plaintiff patentees would face either surprise or unusual difficulties in getting all relevant and probative evidence before the court in the first litigation."[67] Neither accuracy nor fairness justified keeping *Triplett*.

The *Blonder-Tongue* Court was far more interested in "the acknowledged fact that patent litigation is a very costly process,"[68] for both the patentee and the alleged infringer.[69] It focused on what it viewed as the two chief consequences of patent litigation's high cost. First, successive litigation wasted both parties' money and time, so long as the earlier invalidity judgment was sound.[70] Second, and "far more significant" to the Court, even an invalid patent continued to have an *in terrorem* effect against other potential defendants: faced with the choice, "prospective defendants will often decide that paying royalties under a license or other settlement is preferable to the costly burden of challenging the patent," notwithstanding the other alleged infringer's success at invalidating the patent.[71]

The Court recoiled at the prospect of firms making royalty payments in tribute to a demonstrably invalid patent. Such payments were "an unjust

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64. *Blonder-Tongue*, 402 U.S. at 313.

65. *Id.* at 330. This was, at the time, a leading argument in favor of preserving *Triplett*. *See* Max L. Lieberman & George R. Nelson, In rem *Validity—A Two-Sided Coin*, 53 J. PAT. OFF. SOC'Y 9, 24 (1971); Neil T. Neumark, Comment, Blonder-Tongue Laboratories, Inc. v. University of Illinois Foundation*: Mutuality of Estoppel—A Final Eulogy*, 5 IND. L.F. 208, 213 (1971).

66. *Blonder-Tongue*, 402 U.S. at 331-32; *see supra* note 37.

67. *Blonder-Tongue*, 402 U.S. at 332.

68. *Id.* at 334.

69. *Id.* at 335-36.

70. *Id.* at 338.

71. *Id.*

increment to the alleged infringer's costs" and caused higher consumer prices.[72] At the same time, the alleged infringer who enjoyed a patent invalidity judgment in its favor could exploit the royalty payments that its weaker rivals were still forced to pay: "Because he is free of royalty payments, the manufacturer with a judgment against the patent may price his products higher than competitive levels absent the invalid patent, yet just below the levels set by those manufacturers who must pay royalties."[73] The Court thus concluded that, in the competition that followed an alleged infringer's successful attack on a patent's validity, another alleged infringer's continuing royalty "payments put him at a competitive disadvantage."[74] This observation is accurate as far as it goes, but the Court's analysis is nonetheless incomplete.

It is true that, under *Triplett*, an infringer who succeeds in invalidating a patent may be able to price its patent-dependent good just below the price charged by royalty-paying producers. It is equally true, however, that the patent attacker confronts a fixed cost of bringing the patent-dependent good to market that its competitors, who have licensed the patent, do not—namely, the cost of its successful attack on the patent. The premium the patent attacker earns by selling its good at a price just below the price charged by licensees, rather than at marginal variable unit cost, is the patent attacker's way to recoup that successful attack cost. Indeed, if the patent attacker had no way to charge this premium (e.g., if it shared the patent invalidity judgment with other producers, who thus confronted no royalty cost), one might fairly wonder why the patent attacker would mount the attack in the first place.[75] If it succeeded, its competitors would be free to enter the market and compete away its ability to recoup the litigation costs. The Court describes the patent attacker's pricing advantage, and yet fails to see it for what it is: a vital incentive that encourages a patent attacker to defend against an infringement charge.

The Court viewed *Blonder-Tongue* as another step in the line of cases designed to "encourage authoritative testing of patent validity."[76] It was mistaken. *Blonder-Tongue*, considered alone, eliminates a patent attacker's ability to exclude others from appropriating the benefit of its successful patent attack. It thus turns patent invalidity judgments into public goods. And the resulting free rider problem, which discourages patent

72. *Id.* at 346.
73. *Id.*
74. *Id.*
75. *See* Kidwell, *supra* note 24, at 487-89.
76. *Blonder-Tongue*, 402 U.S. at 344.

challenges, is at least as stark as the one that justifies providing a patent system in the first place.

The Court was surely right to find it repugnant for firms to pay royalties under demonstrably invalid patents. At the very least, such a practice conflicts with the traditional rule favoring unfettered use of information as to which there is no controlling intellectual property right.[77] We thus should not solve the free rider problem that *Blonder-Tongue* creates simply by reinstating *Triplett*. A replacement for the patent attacker's pricing advantage under *Triplett* must be sought elsewhere.

C. The Undersupply of Patent Validity Challenges Merits Correction

A court judgment that a patent claim is invalid is a public good. And obtaining such a judgment requires the expensive, up-front cost of patent litigation.[78] These facts suggest that profit-maximizing firms will supply definitive patent challenges at a less-than-optimal rate.[79]

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77. *See* Dastar Corp. v. Twentieth Century Fox Film Corp., 123 S. Ct. 2041, 2048 (2003) ("The rights of a patentee or copyright holder are part of a 'carefully crafted bargain,' under which, once the patent or copyright monopoly has expired, the public may use the invention or work at will and without attribution.") (quoting Bonito Boats, Inc. v. Thunder Craft Boats, Inc., 489 U.S. 141, 150-51 (1989)); TrafFix Devices, Inc. v. Mktg. Displays, Inc., 532 U.S. 23, 29 (2001) ("In general, unless an intellectual property right such as a patent or copyright protects an item, it will be subject to copying."). As Professor Mueller puts it, "[i]n free market economies such as that of the United States, the general rule is that competition through imitation of a competitor's product or service is permitted, so long as that competition is not deemed legally 'unfair.'" MUELLER, *supra* note 7, at 7-8; *see also* Pamela Samuelson & Suzanne Scotchmer, *The Law and Economics of Reverse Engineering*, 111 YALE L.J. 1575, 1582-85 (2002) (discussing longstanding legal approval of reverse engineering as a method for discovering and using another's trade secret). Of course, the objection that a legal doctrine conflicts with our traditions of free use of public domain materials carries less force than it once did, given this tradition's steady erosion over the past several years. *See* James Boyle, *The Second Enclosure Movement and the Construction of the Public Domain*, 66 LAW & CONTEMP. PROBS. 33, 39 (2003) ("That baseline—intellectual property rights are the exception rather than the norm; ideas and facts must always remain in the public domain—is still supposed to be our starting point. It is, however, under attack. Both overtly and covertly, the commons of facts and ideas is being enclosed."). All the same, we should hesitate to solve a free rider problem that undercuts patent challenges by condoning royalties for patents that should never have been issued in the first place.

78. The American Intellectual Property Law Association conducts a comprehensive biennial survey of, among other things, typical patent litigation costs. The most recently published survey, released in 2003, provides data about respondents' median estimates of

How serious is this problem? Assuming, for example, the Patent Office did not grant very many invalid patents, one might be unconcerned about an undersupply of definitive patent challenges. The Patent Office, however, appears to grant many patents that, when carefully scrutinized, fail to meet basic patentability standards.[80] To be sure, only about 2% of U.S. patents are ever litigated at all.[81] If, however, the proportion of wrongly granted patents among all the patents issued is similar to the invalidation rates we see in court cases,[82] then a litigation framework that discourages patent challenges is cause for concern.

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patent litigation costs by stage of proceedings (through discovery; and from the start of the case through any appeal) and by the amount of the alleged infringer's exposure (less than $1 million at risk; $1-$25 million at risk; and more than $25 million at risk). AM. INTELLECTUAL PROP. LAW ASSOC., REPORT OF THE ECONOMIC SURVEY 2003, at 21, 93-94 tbl.22 (2003) [hereinafter ECONOMIC SURVEY]. Using the data from the survey report, one can summarize the median cost estimates as follows:

	Cost through Discovery	Cost through any Appeal
Less than $1 million at risk	$290,000	$500,000
$1-$25 million at risk	$1,001,000	$2,000,000
More than $25 million at risk	$2,500,000	$3,995,000

See id. at 93-94 tbl.22.

79. *See generally* COOTER & ULEN, *supra* note 48, at 43, 109, 126 (discussing market's tendency to undersupply public goods); PINDYCK & RUBINFELD, *supra* note 48, at 605, 664-65 (same); SHAVELL, *supra* note 48, at 140 (same); Thomas, *Proposal for Patent Bounties*, *supra* note 3, at 334 (discussing undersupply problem in context of definitive patent validity judgments).

80. For example, recent studies show that the courts strike down asserted patent claims from 33% to 46% of the time. John R. Allison & Mark Lemley, *Empirical Evidence on the Validity of Litigated Patents*, 26 AIPLA Q.J. 179, 194, 205 (1998) (reporting patents held invalid in 46% of 300 final, written determinations by U.S. trial and appeals courts from early 1989 through 1996); Kimberly A. Moore, *Judges, Juries, and Patent Cases: An Empirical Peek Inside the Black Box*, 99 MICH. L. REV. 365, 380, 390 tbl.4 (2000) (reporting patents held invalid in 33% of 1151 validity determinations in U.S. patent trials from 1983 to 1999).

81. Lemley, *Rational Ignorance*, *supra* note 8, at 1501.

82. The invalidity rate among all issued patents is, if anything, likely to be higher than the invalidity rate among litigated patents. This is so because the patents that owners are willing to assert in litigation, and thus expose to a validity challenge, are likely to be among the stronger patents.

Invalid patents are costly, which exacerbates the undersupply problem. Commentators largely agree on the social costs that improvidently granted patents generally inflict:[83]

- Costs of obtaining invalid patents
- Costs of negotiating licenses of invalid patents
- Royalties paid to owners of invalid patents and unrealized gains from inventions that licensees fail to make because they lack that royalty money
- Dead weight loss from supracompetitive pricing of offerings covered by invalid patents
- Costs third parties incur to use noninfringing alternative technologies
- Unrealized gains from beneficial activities that third parties avoid for fear of infringement liability, including activities that would have led to other inventions
- Unrealized gains from beneficial activities that patentees would have undertaken were it not for their rent-seeking efforts to obtain dubious patents and enforce those patents against others.

There are no reliable quantitative estimates of these costs. All the same, given the high rate at which the courts strike down patents, these costs appear to be substantial.[84] The costs imposed in the form of inventions that do not occur (which otherwise would have, but for improvidently granted patents that deter third parties) are especially serious, given that the very purpose of the patent system is to augment inventive activity.

Both the rate at which the Patent Office grants invalid patents and the social costs such patents impose counsel in favor of a patent litigation framework that encourages, rather than discourages, definitive court tests

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83. This list is adapted from Kesan, *supra* note 3, at 767-68; Lemley, *Rational Ignorance*, *supra* note 8, at 1515-17; Merges, *Six Impossible Patents*, *supra* note 6, at 592-93; and Thomas, *Proposal for Patent Bounties*, *supra* note 3, at 319-20.

84. As Professor Merges notes, "[t]he fundamental assumption behind public expenditures on a patent office in the first place is that, as a society, we do not want to bear the costs of a significant number of invalid patents." Merges, *Six Impossible Patents*, *supra* note 6, at 593.

of patent validity. Nonmutual issue-preclusion, at least as applied to patent validity judgments, is at odds with this counsel.

In fairness to the *Blonder-Tongue* rule, one might observe that there *are* ways to exclude others from the benefits of a successful attack on a patent's validity, even in a nonmutual issue-preclusion regime.[85] Some of these techniques parallel the techniques an inventor might use in lieu of, or in addition to, patent protection. For example, lead time advantages might help a patent challenger recoup the cost of defeating a patent during the period when its competitors have not yet adapted to the availability of the technology. After all, the litigation was likely prompted by the patent challenger's practicing of the technology.[86] Bundling a protected good or service with the patent-dependent offering might also help a successful patent challenger maintain a competitive edge long enough to recoup its investment in defeating the patent.

Trade secret protection, by contrast, likely offers far less aid to a patent challenger than to an inventor. An invalidity judgment is a public, judicial act that everyone—including the patent challenger's actual or potential competitors—can learn about if they care to. These competing firms know that, once an invalidity judgment is final and unappealable, they can practice the technology claimed in the invalidated patent without fear of infringing it. They thus enjoy equal access to the basic fact of the patent's invalidity. To be sure, trade secret know-how might enhance one's ability to practice the technology claimed in the invalidated patent, and a given patent challenger might have more such know-how than some of its competitors. If it has more secret know-how (perhaps from having practiced the technology during litigation), the patent challenger may be better situated to exploit the invalidity judgment than its competitors. One should keep in mind, however, that the Patent Act expressly requires a patentee to spell out, in the patent itself, both (1) enough information about "the man-

85. Professor Thomas does not present any analysis along these lines. He simply asserts that a successful patent attacker "cannot prevent others from practicing the invention claimed in the invalidated patent," or, put another way, "cannot appropriate the benefits of a successful charge of patent invalidity to itself." Thomas, *Proposal for Patent Bounties*, *supra* note 3, at 333-34. His observation is generally accurate, and the qualifications on it that I introduce here are also important.

86. This is likely the case, rather than certainly the case, because infringement litigation can begin before the alleged infringer enters the market with an infringing product or service. For example, litigation may result from a declaratory judgment complaint filed against the patentee by an alleged infringer; so long as the alleged infringer has taken concrete steps toward conduct that would infringe if it were to commence, the courts may hear the case. *See infra* Part V.B.1.

ner and process of making and using" the invention "to enable any person skilled in the art to which [the invention] pertains . . . to make and use" the invention, and (2) "the best mode contemplated by the inventor," if any, "of carrying out his invention."[87] These substantive disclosures, which are available to everyone, make it less likely that trade secret know-how will give any one firm—even the successful patent challenger—a decisive edge over its rivals in exploiting a new invalidity judgment.[88]

In addition to the foregoing techniques for excluding competitors, a patent challenger has an option that the inventor in our earlier thought experiment (in a world without patents) lacked. Specifically, the patent challenger can use patents of his own to exclude others from the benefit of an invalidity judgment. This option exists because patents can be granted on quite closely related inventions.

Imagine, for example, that Firm A owns a patent covering a knife (a handle attached to a blade), and that Firm B owns a patent covering a switchblade (a handle movably attached to a blade). A appears to have the right to exclude B from making any kind of knife, including a switchblade.[89] B appears to have the right to exclude A from making a switchblade. These patents are known as "blocking patents," because each one blocks the power to fully exploit the technology in the other.[90] If B were to invalidate A's knife patent in court, other competitors could make knives, but B, and B alone, would still have the right to exclude others

87. 35 U.S.C. § 112, ¶ 1 (2000). These disclosures are the inventor's side of the basic trade that supports every patent: a government-backed right to exclude others, in exchange for full disclosure of the invention. *See* MUELLER, *supra* note 7, at 66-67.

88. A patent challenger is unlikely to gain access to a patentee's trade secrets during a patent case, for the simple reason that courts routinely approve protective orders that screen a competitor's employees from seeing sensitive trade secret information. *See, e.g.*, Volvo Penta of the Americas, Inc. v. Brunswick Corp., 187 F.R.D. 240, 240 (E.D. Va. 1999) (approving protective order in litigation between competitors); William Lynch Schaller, *Protecting Trade Secrets During Litigation: Policies and Procedures*, 88 ILL. B.J. 260, 264 (2000) (discussing this use of protective orders).

89. This is so because "a handle movably attached to a blade" is simply one kind of a "handle attached to a blade."

90. *See* MUELLER, *supra* note 7, at 15-16 (discussing blocking relationship between patents on an invention and on an improvement thereof); Lemley, *Economics of Improvement*, *supra* note 48, at 1009-10 (same); Robert Merges, *Intellectual Property Rights and Bargaining Breakdown: The Case of Blocking Patents*, 62 TENN. L. REV. 75, 79-80 (1994) (same) [hereinafter Merges, *Blocking Patents*]; Gilbert Goller, *Competing, Complementary and Blocking Patents: Their Role in Determining Antitrust Violations in the Areas of Cross-Licensing, Patent Pooling and Package Licensing*, 50 J. PAT. OFF. SOC'Y 723, 723-27 (1968) (discussing knife-and-switchblade and other examples).

from making switchblades. Similarly, if A were to invalidate B's switchblade patent, A would still have the right to exclude others from making any knives, including switchblades; indeed, assuming there were no other relevant patents, A would take the switchblade market. Firms A and B, reflecting on these various scenarios, might each decide to seek multiple patents on various aspects of knife technology in the hope of being the last firm standing when any validity challenges shake out.

This stylized example, while simple, demonstrates that a patent challenger who owns a blocking patent may be able to exclude competitors from an important market segment, and thus recoup his litigation costs, even after invalidating a related patent. Importantly, the patent challenger's own patent need not be strictly blocking to provide this benefit. A patent on a strong complement to the once-patented good, such as an input required to use it (film for a camera, ink cartridge for a printer, etc.) or to make it (catalyst for a process, part for a machine, operating system for a computer, etc.), is also a blocking patent in the sense that is relevant here.[91] All such blocking patents can help a successful patent challenger exclude rivals from making use of the technology in a newly invalidated patent. Indeed, this potential use of blocking patents may help explain why, in the last few years, generic drug makers have begun to obtain patents on methods of making or using drugs that are already controlled by more basic patents owned by name-brand drug makers.[92]

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91. *See* Lemley, *Economics of Improvement*, *supra* note 48, at 1010 n.87.

92. Consider, for example, Teva Pharmaceutical Industries Ltd., "the largest generic drug company in the world." *See* TEVA PHARM. INDUS. LTD., A LEGACY OF LEADERSHIP, *at* http://www.tevapharm.com (last visited July 26, 2003). In an interview published in April 2003, Teva's patent director Yehudah Livneh—when asked, "What kinds of patents does a generic-drug manufacturer hold?"—indicated that, "[o]n the generic side, [Teva] ha[s] patents protecting processes for making active pharmaceutical ingredients . . . [and] for new formulations." Steven Anderson, *Litigation is the Business Model for Generic Drug Maker*, CORP. LEGAL TIMES, Apr. 2003, at 24. A July 28, 2003 search of the Patent Office's online database of issued patents, available at http://patft.uspto.gov/netahtml/search-adv.htm, indicates that Teva is the assignee named on the face of ninety-two patents. Sixty-nine of them (75%) issued in January 1996 or later, and thirty-four of them (37%) issued in April 2001 or later. Several of these patents claim methods for preparing drug compounds that are already controlled by one of the name-brand drug makers. For example, Teva's U.S. Patent No. 6,586,576 (issued July 1, 2003) claims a method for making hydrates of azithromycin, the active ingredient in Pfizer's name-brand drug Zithromax. Teva's U.S. Patent No. 6,255,526 (issued July 3, 2001) claims a method for making gabapentin, the active ingredient in Warner-Lambert's name-brand drug Neurontin. *See* Warner-Lambert Co. v. Apotex Corp., 316 F.3d 1348, 1351-52 (Fed. Cir. 2003) (describing Neurontin). And Teva's U.S. Patent No. 6,248,888 (issued June 19,

The perverse result of using blocking patents to protect one's investment in eliminating invalid patents owned by others is the proliferation of patents on both incremental improvements to another's unpatentable technology and on strong complements to that technology (not to mention patents on incremental improvements to the strong complements). Many of the patents in this quickly growing mass will no doubt be invalid, just as is true of patents generally. And each one of these patents will cost money to prosecute. If the basic goal of helping firms appropriate the benefits of successful patent challenges is to reduce the social costs imposed by invalid patents, this "secure blocking patents of your own" cure is a good bit worse than the disease.[93]

2001) claims a method for making terazosin hydrochloride dihydrate, the active ingredient in Abbott Labs' name-brand drug Hytrin. *See* Abbott Labs. v. Geneva Pharms., 182 F.3d 1315, 1316-17 (Fed. Cir. 1999) (describing Hytrin).

Or consider generic drug maker Ranbaxy Laboratories. A July 28, 2003 search of the Patent Office's online database of issued patents indicates that Ranbaxy is the assignee named on the face of forty-five patents. Twenty-five of them (56%) issued in May 2000 or later. And six of the forty-five patents (13%) relate to methods for making or using the antibiotic cefuroxime axetil, the active ingredient in GlaxoSmithKline's name-brand drug Ceftin. *See* GlaxoGroup Ltd. v. Ranbaxy Pharms., 262 F.3d 1333, 1334-35 (Fed. Cir. 2001) (describing Ceftin). Ranbaxy, which has won FDA approval to sell a generic version of Ceftin, has also been defending against patent infringement allegations by another generic drug maker—Apotex, Inc.—that owns a patent purporting to cover a process for making cefuroxime axetil. *See* Ranbaxy Pharms., Inc. v. Apotex, Inc., 350 F.3d 1235, 1237 (Fed. Cir. 2003).

By obtaining such patents, generic drug makers enhance their ability to fence competing firms out of the market when a name-brand drug comes off patent. Although I have not conducted a comprehensive study of this phenomenon, I doubt that Teva and Ranbaxy are alone among generic drug makers in using this strategy.

93. In addition to increasing the number of invalid patents, with all their attendant social costs, the proliferation of closely related patents causes a host of other problems that are well recognized in the literature. Professor Merges, for example, has discussed both the hold-up problems that blocking patents can cause in negotiations between pioneering and improving firms, *see* Merges, *Blocking Patents*, *supra* note 90, at 84-91 (discussing historical examples), and the rights clearing organizations that have emerged to resolve such holdup problems, *see* Robert P. Merges, *Contracting Into Liability Rules: Intellectual Property Rights and Collective Rights Organizations*, 84 CALIF. L. REV. 1293, 1340-58 (1996). *See also* Robert P. Merges, *Intellectual Property Rights and the New Institutional Economics*, 53 VAND. L. REV. 1857 (2000) (discussing ways that firms clear blocking patent problems to enable market entry); Carl Shapiro, *Navigating the Patent Thicket: Cross Licenses, Patent Pools, and Standard Setting*, *in* 1 INNOVATION POLICY AND THE ECONOMY 119 (Adam B. Jaffe et al. eds., 2000) (same). Professors Eisenberg, Heller, and Rai have expanded the discussion of holdup problems to focus on concerns that the cycle of cumulative innovation in the biological sciences might grind to a halt under the weight of myriad patents covering minute biotechnological discoveries.

The foregoing techniques can provide a patent challenger with some protection against those who would free ride on his investment in securing a patent invalidity judgment. The protection these techniques afford, however, seems either weak (in the case of lead time, bundling, or trade secrecy) or downright perverse (in the case of blocking patents). The free rider problem that undercuts definitive patent challenges is grave enough to warrant a better solution.

Reinstating the *Triplett* rule, perhaps the simplest solution, would fix this free rider problem, but in a way that does little to reduce the social costs of wrongly issued patents. By contrast, a bounty for the successful attacker would encourage patent validity challenges without leaving other firms in thrall to a demonstrably invalid patent. Such a bounty can be implemented at any one of a number of stages in the patent life cycle, and can entail a payment measured by any one of a number of variables. It is useful, in determining the best stage and metric for such a bounty, to review two recent proposals aimed at increasing the reward for invalidating a patent.

III. EXISTING BOUNTY PROPOSALS FALL SHORT OF THE MARK

Any bounty mechanism—in the patent context or elsewhere—depends for its success upon when the bounty is awarded (or, put another way, what one must do to earn it), and of what the bounty consists (e.g., cash

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See generally Rebecca S. Eisenberg, *Bargaining Over the Transfer of Proprietary Research Tools: Is This Market Failing or Emerging?*, *in* EXPANDING THE BOUNDARIES OF INTELLECTUAL PROPERTY: INNOVATION POLICY FOR THE KNOWLEDGE SOCIETY 223 (Rochelle Cooper Dreyfuss et al. eds., 2001); Michael A. Heller, *Three Faces of Private Property*, 79 OR. L. REV. 417 (2000); Michael A. Heller & Rebecca S. Eisenberg, *Can Patents Deter Innovation? The Anticommons in Biomedical Research*, 280 SCIENCE 698 (1998); Arti K. Rai, *Fostering Cumulative Innovation in the Biopharmaceutical Industry: The Role of Patents and Antitrust*, 16 BERKELEY TECH. L.J. 813 (2001); Arti K. Rai & Rebecca S. Eisenberg, *Bayh-Dole Reform and the Progress of Biomedicine*, 66 LAW & CONTEMP. PROBS. 289 (2003). Finally, Professor Lemley has noted that patent portfolio swapping among established firms in a market can pose a significant barrier to entry for new firms in that market who have no patents to trade. *See* Lemley, *Reconceiving Patents*, *supra* note 53, at 142-43, 147-48. The uses and effects of such patent portfolio swapping have been especially well documented in the U.S. semiconductor industry. *See generally* Peter C. Grindley & David J. Teece, *Managing Intellectual Capital: Licensing and Cross-Licensing in Semiconductors and Electronics*, CAL. MGMT. REV., Winter 1997, at 8; Bronwyn H. Hall & Rosemarie Ham Ziedonis, *The Patent Paradox Revisited: An Empirical Study of Patenting in the U.S. Semiconductor Industry, 1979-1995*, 32 RAND J. ECON. 101 (2001).

payment of $X, or enough money to cover expense Y).[94] A poor choice as to either feature reduces a bounty's effectiveness at encouraging the desired result, making these features the best focus in assessing whether a proposed bounty is likely to succeed.

Two recent patent reform proposals suggest a payment to one who shows that an invention is not patentable. This payment is not shared with others who may benefit from the elimination of the invalid patent and thus counteracts directly the free rider problem that *Blonder-Tongue* creates. Professor Thomas proposes a bounty implemented at the patent examination stage, before a patent has been granted.[95] The Thomas bounty elegantly solves some problems, but it runs aground because of its timing choice. This timing problem, in turn, creates substantial difficulties for determining the proper amount of the award. Professor Kesan proposes a one-way fee-shifting rule in favor of a successful patent challenger; although not a bounty in name, this fee-shifting rule is a bounty in fact.[96] The Kesan rule, although it improves on the Thomas bounty by shifting to the patent litigation stage, falters in its choice of the amount of the award. I discuss each proposal in turn.

A. The Thomas Examination-Stage Bounty

The core of the Thomas proposal is a cash reward, taxed against the patent applicant, for one who provides the Patent Office with information not already identified by the Office that demonstrates that it should not grant a patent.[97] Specifically, after creating its own list of relevant prior art references, but before examining[98] the patent application's compliance with all the patentability criteria, the Patent Office would publish the application along with a list of the prior art it had identified.[99] Potential "informants" would then have an opportunity to alert the Patent Office to the

94. *Black's*, for example, defines "bounty" as "[a] premium or benefit offered or given, esp. by a government, to induce someone to take action or perform a service." BLACK'S LAW DICTIONARY 180 (7th ed. 1999).

95. *See* Thomas, *Proposal for Patent Bounties*, *supra* note 3, at 340-52.

96. *See* Kesan, *supra* note 3, at 787-97.

97. *See* Thomas, *Proposal for Patent Bounties*, *supra* note 3, at 342.

98. "Examination" is the patent law term for the Patent Office's determination whether an application claims a patentable invention. *See* 35 U.S.C. § 131 (2000) (directing that "an examination . . . be made of the application and the alleged new invention"). Viewed from the applicant's perspective, the process is known as "prosecution." *See* MUELLER, *supra* note 7, at 377 (defining "prosecution" as "[t]he process of obtaining a patent, which involves filing a patent application in the USPTO and responding to any rejections or objections made by the agency").

99. Thomas, *Proposal for Patent Bounties*, *supra* note 3, at 342.

existence of additional prior art information: "Informants would be required to provide a copy of [the newly] disclosed references, a short explanation of their relevance, and a fee."[100] The fee imposed on informants would help both to pay for the administration of the program and to prevent "reference flooding."[101] Once examination began, if the Patent Office rejected "any claim in the application over noncumulative prior art submitted by an informant, then the applicant would be fined and the informant paid."[102] Multiple informants who supply helpful prior art would split the bounty.[103] Professor Thomas limits his proposal "to software and business method applications," and at the same time observes that "[n]othing prevents the expansion of this proposal to other sorts of inventions."[104]

The Thomas examination-stage bounty has several virtues. Chief among them is that it would reward information submissions by the very people who are more likely than Patent Office examiners to recognize whether the applicant's claimed invention actually amounts to an advance over the state of the art—namely, the applicant's competitors.[105] The applicant's competitors also have far more incentive than any patent examiner to see that an invalid patent does not issue, for the simple reason that otherwise it would wrongly constrain their options for competing against the patent recipient down the road. Another of the proposal's virtues is that, by taxing the bounty against the applicant, this new mechanism would encourage applicants to invest more in ensuring the patentability of the applications they file.[106] The proposal also describes both a number of problems in administrative design—such as the need to prevent collusive, bounty-defeating side deals between applicants and potential informants; the need to protect employee informants against employer retaliation; and the need to head off satellite litigation over bounty-related decisions—and some practical solutions for these problems.[107]

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100. *Id.*
101. *Id.* at 344.
102. *Id.* at 342.
103. *Id.* at 342 n.285.
104. *Id.* at 344.
105. *Id.* This information advantage that competitors enjoy over patent examiners is simply a by-product of the competitors' intimate familiarity with the technology to which the patent application pertains. Professor Kesan discusses this information advantage, and the reasons it probably cannot be eliminated by spending more on traditional patent examination inputs, as the basis for his own reform proposals. *See* Kesan, *supra* note 3, at 765-67, 776-77.
106. Thomas, *Proposal for Patent Bounties*, *supra* note 3, at 343.
107. *Id.* at 343, 349-52.

Not withstanding these virtues, the proposed examination-stage bounty is flawed as to the basic question of timing. Specifically, the patent examination stage is too early a time to award a bounty. This is so because third parties rarely know at the examination stage whether the technology that a patent application describes—and that a resulting patent would help to control—is commercially significant.[108] Under the Thomas approach, patent applications would attract bounty hunters according to the ease of turning up additional prior art references rather than by the commercial importance of the invention.[109] But it is the commercially significant inventions that genuinely threaten large yet avoidable social costs if controlled by wrongly granted patents,[110] and thus it is the patents on those inventions that are worth the trouble to scrutinize.[111] As a result, the Thomas bounty seems to divert resources away from more productive uses toward increasing the scrutiny applied to applications that history will often show to have been worthless. Professor Thomas acknowledges the difficulty of ascertaining an invention's commercial significance this early in its life,[112] which is when patenting occurs,[113] but he does not pursue the implications of this fact for any bounty system that is implemented at the patent examination stage.

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108. *See supra* notes 28-31 and accompanying text.

109. *See* Lemley, *Rational Ignorance*, *supra* note 8, at 1525 n.112 ("[I]f the [Thomas] bounties encourage prior art submitters to pick 'low-hanging fruit' by submitting art to invalidate obviously worthless patents, they may increase the cost of the system with little corresponding benefit.").

110. *See supra* notes 83-84 and accompanying text.

111. As Professor Merges notes, in an ideal world "patent applications should be subject to differing levels of scrutiny depending on how much social cost they entail. Applications for patents that would be very costly to society . . . ought to be examined more closely than those for minor improvements, gadgets, or novelties." Merges, *Six Impossible Patents*, *supra* note 6, at 596-97. Both our inability to foretell the future and the longstanding Patent Office custom of subjecting all patent applications to roughly the same level of scrutiny prevent us from implementing this ideal. *Id.* at 597-98.

112. Thomas, *Proposal for Patent Bounties*, *supra* note 3, at 325. Thomas states:

> The task of identifying the marketplace worth of innovations appears quite difficult to achieve in practice. The invention that seems the most capable is not always the marketplace winner, and technological capabilities may change dramatically over the twenty-year patent term. The result is a longstanding Patent Office policy of conducting an equally comprehensive prior art search for each submitted application.

Id. (footnotes omitted).

113. "Patents are usually filed early in the development phase, and the inventor often has little idea whether or not the technology will 'pan out.'" Merges, *Six Impossible Patents*, *supra* note 6, at 597.

One could, of course, modify the Thomas bounty mechanism to ameliorate this basic timing problem. For example, the Patent Office could (1) identify the characteristics that best predict whether a patent application covers a technology that will be commercially significant and (2) limit the bounty to applications having those characteristics. If, for instance, some firms have a substantially better track record than other firms at translating their patented inventions into commercial successes, applications assigned to those firms alone could be exposed to the bounty mechanism.[114] Alternatively, if some aspects of the patent applications themselves predict more likely post-grant commercial significance,[115] such as citation to a threshold number of prior art patents owned by a common assignee (which suggests a desirable improvement on a proven technology), those applications could be exposed to the bounty mechanism.[116] Perhaps some hybrid

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114. Implementing this particular approach would likely prove quite difficult. First, there are numerous line-drawing problems: What counts as sufficient commercial success to put a particular invention on the "has a better track record" side of the scale? What overall success rate is the baseline for comparison when assessing whose success rate is sufficiently better to warrant exposure to the bounty? How much better must that success rate be to warrant exposure to the bounty? How far back in time do we look? How soon after the prior patent was granted should the commercial success have occurred? Second, once the lines are drawn, there are measurement problems: How is commercial success on past inventions measured? Units sold? Dollars earned? Must the applicant in question have practiced the prior patent's technology itself, or does licensing the prior patent to another also count? Third, because the foregoing analysis results in a penalty—exposure of one's applications to the bounty mechanism—one must expect that firms will resist cooperating in any necessary fact-gathering process.

115. *See* Allison et al., *supra* note 28, (manuscript at § II.A.1.b, on file with author). The authors explain:

> Self citations are citations made to other patents also owned by the same assignee during prosecution. Litigated patents cite more prior art owned by the same assignee than non-litigated patents. The empirical result supports our intuition—when patent owners acquire numerous patents on a given technology it suggests that the technology is more valuable to them.

Id.

116. To the extent the patent applicant could manipulate the triggering indicia in the application, this approach is also likely to engender resistance or evasion by patentee firms. Indeed, it is the likelihood of this sort of manipulation by skilled patent prosecutors that leads Professors Allison and Tiller to conclude, in their recent empirical study of business method patents, that altering patent prosecution rules for different technological domains is likely to do little more than drive up the cost of patent prosecution. *See* John R. Allison & Emerson H. Tiller, *The Business Method Patent Myth*, 18 BERKELEY TECH. L.J. 987, 1021 & n.108 (2003). Allison and Tiller state:

> [T]reating different technologies differently places too great a premium on ex ante definitions, such that the definitional scheme will be at least

of these approaches would work better still. Even the best predictors, however, will tag false positives (i.e., applications that cover worthless technologies and that are exposed to bounty hunters) and false negatives (i.e., applications that cover commercially significant technologies but that are not exposed to bounty hunters). The complexity of the limiting mechanisms also suggests that the Patent Office would have to spend a great deal to create and deploy them, thereby reducing the bounty program's net benefit. This timing-amelioration game may not be worth the candle.

The awkward choice to award a bounty at the examination stage disrupts, in turn, Professor Thomas' choice of a bounty metric. Although he "posits no definitive figure as to the optimal amount of the patent bounty,"[117] he does express a decided preference "for setting the bounty to a sum certain."[118] The lower bound he suggests for this sum certain is the "prevailing market rate[] for a prior art search," enhanced to build in a hedge against the bounty hunter's risk of failure.[119] He also describes a number of possible guideposts by which to measure the bounty. One is the average cost of getting a patent, including both attorney fees and Patent Office fees.[120] Another is "the average amount spent [by the Patent Office] on prior art gathering and review costs for each patent application."[121] A third guidepost is the range of fixed-sum awards that federal agencies make under a number of bounty programs.[122]

> partially defeated because of the significant transaction costs associated with attorney efforts to opt into or out of a definition by carefully tailoring invention descriptions and patent claims. [Note 108] Although this will not always be successful, it can be done, and undoubtedly will be done if a significant premium is placed on whether an invention is defined as a business method.

Id.

117. Thomas, *Proposal for Patent Bounties*, *supra* note 3, at 345.

118. *Id.* at 346. He also suggests that, in the interest of prompting "applicants to perform thorough prior art searches," the fixed-sum bounty could be enhanced "by a fixed amount" in the instance where an informant submits invalidating prior art from "a discrete number of publicly available databases, journals, and other common information sources" defined in advance by the Patent Office. *Id.* at 347.

119. *Id.* at 345-46.

120. *Id.* at 345. For a sense of the requisite Patent Office fees, see 35 U.S.C. § 41(a) (2000) (prescribing fees). For estimates of average patent prosecution costs, see ECONOMIC SURVEY, *supra* note 78, at 78-79 tbl.17d, 81 tbl.18b, 86-92 tbl.21 (entries on patent prosecution attorney fees).

121. Thomas, *Proposal for Patent Bounties*, *supra* note 3, at 346.

122. *Id.*

What all the guideposts that Professor Thomas proposes have in common—indeed, what any bounty set at a sum certain reflects—is a break from the touchstone that the bounty should vary directly with the commercial significance of the invention claimed in the patent.[123] Thomas thus concludes, quite correctly, that the "many bounty systems [that] base the amount of the award upon the payoff to the government,"[124] such as False Claims Act payouts and SEC and IRS bounties,[125] use "an award structure of little use to the Patent Office."[126] If, however, one begins from the premise that the underlying invention's commercial significance is what drives the relative benefit of eliminating a wrongly granted patent on that invention, then disconnecting the bounty's size from the invention's commercial value condemns the bounty to a fate worse than that of a broken watch, which is, at least, right twice a day. A sum certain bounty approximates the commercial value of the invention in question, if ever, only by accident.

The market significance of the underlying invention should play a major role in determining which patents generate bounties for the firms that invalidate them. If the invention is commercially valuable, an invalid patent on it imposes high social costs. If the invention is commercially insignificant, an invalid patent on it imposes trivial social costs. Eliminating the invalid patents with high social costs is worth the effort, whereas eliminating the invalid patents with trivial social costs is not. The Thomas bounty, because it takes no account of the underlying invention's market significance, would produce less social benefit than a more focused bounty regime.

B. The Kesan Fee-Shifting Rule

The core of the Kesan proposal is a one-way fee-shifting rule in favor of an interested party who shows that an invention is not patentable, either in a pre-grant opposition proceeding in the Patent Office or in a post-grant court case.[127] Specifically, Professor Kesan proposes that "if a patent were to be entirely or partially invalidated or revoked in a litigation or opposition proceeding, the plaintiff or patentee would have to pay all or a part of

123. *See supra* note 112.

124. Thomas, *Proposal for Patent Bounties*, *supra* note 3, at 346.

125. *Id.* at 341-42, 346 & n.300.

126. *Id.* at 346.

127. Kesan, *supra* note 3, at 787, 795-97. Professor Lemley has also suggested, without detailed discussion, that a one-way fee-shifting rule in favor of alleged infringers would help reduce the social costs of wrongly granted patents. *See* Lemley, *Rational Ignorance*, *supra* note 8, at 1530; Lemley, *Reconceiving Patents*, *supra* note 53, at 146.

the defendant's fees or the third party opponent's fees."[128] And, according to Kesan, the grounds for the challenger's victory should make a difference. On the one hand, the challenger's fees would be taxed against the patentee "when a patent is revoked or invalidated based on certain categories of prior art that are reasonably discoverable by a patentee's diligent prior art search."[129] On the other hand, the challenger's fees would not be taxed against the patentee "where a patent is invalidated based on the sales or other acts of third parties that may not be discoverable when conducting a prior art search."[130] Professor Kesan does not call his fee-shifting rule a "bounty," nor does he frame it as a solution to the incentive problem facing patent challengers after *Blonder-Tongue*. He does, however, tip his hat to the Thomas bounty proposal,[131] and furthermore supports his fee-shifting proposal by observing that it "creates incentives [for alleged infringers] not to settle prematurely if they believe their invalidation case is strong, because their litigation costs may be borne by the patentee."[132]

The Kesan fee-shifting rule for successful patent challengers, like Professor Thomas's proposed bounty for helpful informants, would encourage patent applicants to invest more in ensuring the patentability of the applications they file. Indeed, the proposed fee-shifting rule is limited to cases where invalidity is "based on prior art that should have been discovered by [the patentees] through a reasonable prior art search" precisely to encourage "patentees to conduct a thorough prior art search before enforcing their patent in court, and at the outset when filing for [a] patent."[133] And, like the Thomas bounty, the Kesan rule spurs the patentee's competitors, who are more likely than the Patent Office to have the best information

128. Kesan, *supra* note 3, at 787. Professor Kesan also mentions in passing that, "if the plaintiff obtained any monopoly profits based on a patent that was subsequently invalidated in litigation, those profits could be disgorged based on an unjust enrichment theory." *Id.* He does not, however, pursue the matter further. The mechanism I propose, by contrast, actually uses the patentee's past profits to determine the amount of the bounty. *See infra* Part III.

129. Kesan, *supra* note 3, at 787.

130. *Id.* at 787-88. For concise discussions of the Patent Act's leading categories of prior art publications, sales, and other invalidating activities, see MUELLER, *supra* note 7, at 94-112; and Margo A. Bagley, *Patently Unconstitutional: The Geographical Limitation on Prior Art in a Small World*, 87 MINN. L. REV. 679, 692-704 (2003).

131. Kesan, *supra* note 3, at 793 n.133.

132. *Id.* at 795.

133. *Id.*; *see also id.* at 796 ("Fee-shifting in these circumstances creates an incentive for the patentee to conduct a diligent prior art search prior to enforcing her patent rights.").

about the state of the relevant prior art, to act on information that invalidates the patent.

This fee-shifting proposal also improves on the Thomas bounty by transferring the award from the patent examination stage to the patent litigation stage.[134] The fact that the patentee has sued the alleged infringer is a strong indication that the patent covers a commercially significant technology.[135] Patent litigation is, after all, quite expensive.[136] The patentee's willingness to endure it, even if only for a time, suggests that the technology plays some genuine role in the market. By linking the opportunity to earn a bounty directly to the existence of litigation, Professor Kesan focuses the reward for invalidating wrongly granted patents on the subset of patents that threaten high enough social costs to be worth the added scrutiny. The timing is right.

This bounty's attorney fees metric, however, does not take full advantage of the benefit provided by the shift from examination to litigation. This is so because an alleged infringer's attorney fees, although they vary as a function of the amount at stake in a case, vary in a much narrower range than does the amount at stake. For example, the estimated patent litigation cost data from the American Intellectual Property Law Association's most recent biennial survey show that when the amounts at risk in litigation increased from "less than $1 million at risk" to "more than $25 million at risk" (i.e., a more than twenty-five-fold increase), the median estimated litigation cost through discovery increased from $290,000 to $2,500,000 (i.e., less than a ten-fold increase).[137] Similarly, for the more than twenty-five-fold increase in the amount at risk, the median estimated litigation cost from the start of the case through any appeal increased from $500,000 to $3,995,000 (i.e., only an eight-fold increase).[138] The cost estimates reported in this survey include all costs, not merely attorney fees.[139] Using these total cost estimates as a guide to likely attorney fee

134. At least, it shifts the bounty in part. As applied to a new pre-grant opposition proceeding, which does not exist under current law, the Kesan proposal would involve patent examination.

135. *See supra* notes 28-31 and accompanying text. A litigation threat sufficiently pointed to ground an alleged infringer's declaratory judgment action against the patentee is just as strong an indication that the patent covers a commercially important technology, assuming the patentee acted on competent legal advice about the case law governing declaratory judgment jurisdiction. *See infra* Part V.B.1.

136. *See supra* note 78.

137. ECONOMIC SURVEY, *supra* note 78, at 93-94 tbl.22.

138. *Id.*

139. *Id.* app., pt. IV.

awards, it appears that the amount of the alleged infringer's attorney fees in the case, when compared to the amount at risk in the case, is a rather crude measure of the commercial significance of the underlying technology.

Setting the bounty at the alleged infringer's attorney fees is problematic for another reason. An award of attorney fees systematically undercompensates the alleged infringer by failing even to attempt to cover the indirect costs of defending the infringement suit. These indirect costs, though perhaps harder to quantify, are nonetheless substantial. They include such things as the cost of employee time diverted from forward-looking, productive activities (e.g., designing or marketing a new product or process) toward backward-looking, costly activities (e.g., helping lawyers understand the technology, gathering documents for discovery, preparing to be and being deposed, testifying at trial).[140] The failure to compensate for lost employee research and development time is especially troubling, given that the goal of the patent system is to promote innovation.

Professor Kesan's pro-challenger fee-shifting rule improves on the Thomas bounty proposal by shifting the time the bounty is awarded to the litigation stage. However, by always setting the bounty equal to attorney fees, rather than a more direct measure of the underlying technology's commercial significance, it still falls short. A better bounty remains to be constructed.

IV. A LITIGATION-STAGE BOUNTY ADEQUATELY REWARDS THE DEFEAT OF COMMERCIALLY SIGNIFICANT PATENTS

Paying a successful patent challenger a cash bounty that need not be shared with others who benefit from the patent's invalidation directly counteracts the free rider problem that the nonmutual issue-preclusion rule creates. Designing such a bounty presents two challenges. The first is to pick the best time to award it, and the second is to pick the proper amount to award.

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140. *See* Jerry R. Selinger, *Prelitigation Considerations and Strategies*, *in* PATENT LITIGATION STRATEGIES HANDBOOK 3, 10 (Barry L. Grossman & Gary M. Hoffman eds., 2000) [hereinafter PATENT LITIGATION] (discussing indirect patent litigation costs); *see also* COOTER & ULEN, *supra* note 48, at 376 (discussing "costs to everyone involved in passing through the stages of a legal dispute").

The "best" timing and the "proper amount" turn on the basic behavior one wants to encourage by providing a bounty—in this instance, challenges to the validity of patents on commercially significant technologies, which challenges are fought to the finish. The foregoing analysis of the Thomas and Kesan proposals suggests that litigation is the best time in the patent life cycle to offer a bounty to successful challengers.[141] The analysis also suggests that the award should be determined by a close proxy for the commercial significance of the technology that the patent purports to control.[142] I propose a litigation-stage bounty in an amount equal to the net profits the patentee has earned up to the date of judgment by practicing the technology that the patent purports to cover. This proposal draws support from a patent litigation bounty program with which we already have nearly twenty years' experience—namely, the 180-day semi-exclusivity period provided to the first generic drug maker who invalidates a drug patent.[143]

A. Reward the One Who Defeats a Patent in Litigation

The bounty regime proposed here would apply in patent litigation only.[144] A patent challenger who obtains a judgment that voids a patent claim on specified grounds, whether in a patent infringement suit against the patent challenger or a declaratory judgment action against the patentee, would receive a cash bounty for doing so, paid by the patentee. The trial court would determine the amount of the bounty, according to the rule described in the next section, as part of the post-verdict proceedings that are common to patent litigation.[145] If multiple patent challengers were to join together in the same suit to defeat the patent, the bounty would be theirs to

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141. *See supra* notes 108-126 and accompanying text.

142. *See supra* notes 137-140 and accompanying text.

143. *See infra* Part III.C.

144. My focus here is on patent litigation in the federal courts. The same bounty would apply, with minor modifications necessary to track the fora's respective procedural rules, in U.S. International Trade Commission litigation to bar importation of infringing materials, *see* 19 U.S.C. § 1337(a)(1)(B) (2000), and U.S. Court of Federal Claims litigation to adjudicate infringement claims brought against the United States, *see* 28 U.S.C. § 1498(a) (2000).

145. *See* Donald R. Dunner, *Appeals to the Federal Circuit*, *in* PATENT LITIGATION, *supra* note 140, at 547, 568 (discussing motion practice under Federal Rule of Civil Procedure 50). About two-thirds of patent cases are tried to juries. *See* Moore, *supra* note 80, at 366-67, 384. If the alleged infringer voids the patent claims on summary judgment or after a bench trial, the trial court will have the opportunity to consider the bounty question before entering a formal judgment in the case. *See* FED. R. CIV. P. 52 (bench trial), 56 (summary judgment), 58 (entry of judgment).

divide as they please.[146] Finally, in the event the patentee were to appeal from the judgment, the bounty could be secured by a supersedeas bond,[147] much as an infringement damages award is secured when an alleged infringer appeals from an adverse judgment.[148]

The courts can void a patent claim on a number of grounds. Some patent-defeating grounds relate to the adequacy of the written disclosure that the patent provides,[149] while others relate to whether the invention is a sufficient advance over the prior art.[150] These grounds, and still others besides, are generally referred to as "validity" theories.[151] In addition to these validity theories, the courts can declare that an entire patent (and not merely one or more of its separately numbered claims) is unenforceable due to the patentee's deceptive conduct in prosecuting the application before the Patent Office.[152] Thus a natural question would be, for a bounty that operates at the litigation stage, which of these grounds for voiding a patent should entitle the attacker to a reward?

A wrongly granted patent imposes at least some undesirable social costs no matter what caused it to issue in error, and whether or not the patentee could have avoided prompting an erroneous grant in a given case. One might thus argue that a patentee should be liable to pay a bounty to a successful patent challenger when a patent claim is voided on *any* ground, including one that the patentee could not have prevented even with extraordinary care. This "strict liability" approach, however, would sacrifice too much of the benefit derived from the public disclosure of inventions[153] for the sake of eliminating all wrongly granted patents, which is ultimately an unattainable goal.[154] We should instead choose the bounty-triggering

146. One supposes the challengers would divide the bounty according to the same method by which they shared the cost of litigation, most likely their respective liability exposures in the case. Their decision on this point, however, should not affect the way the bounty operates.

147. *See* FED. R. CIV. P. 62(d); FED. R. APP. P. 8(a).

148. *See* Dunner, *supra* note 145, at 566.

149. These disclosure requirements are set forth in 35 U.S.C. § 112, ¶ 1 (2000).

150. This consideration embraces questions of both novelty, 35 U.S.C. § 102, and obviousness, 35 U.S.C. § 103.

151. *See* MUELLER, *supra* note 7, at 269-70, 295-96.

152. *Id.* at 282-84 (discussing unenforceabilty under the "inequitable conduct" doctrine).

153. *See supra* note 87 and accompanying text.

154. *Cf.* Merges, *Six Impossible Patents*, *supra* note 6, at 599 ("[E]ven though a good deal of the prior art that can invalidate a patent is publicly available, much is not. . . . If no amount of pre-filing search could have turned up this evidence, it is harsh and inefficient to punish a patent applicant when it comes to light.").

grounds for voiding a patent in a way that both rewards definitive patent challenges and encourages patent applicants to take more care in their dealings with the Patent Office, rather than driving them from the patent system altogether.

The guiding principle for this proposal is that a patentee should be liable to pay the bounty where the court voids a patent claim on a ground that the patentee could have prevented by diligently and candidly researching, drafting, and prosecuting its patent application.[155] The patent applicant, no less so than other market participants, should avoid injuring others (in this instance, by prompting the grant of an invalid patent), or face liability. The precise contours of the diligence required should be defined by enumerating, in the implementing statute, the grounds for voiding a patent that trigger payment of the bounty. This enumeration would enhance predictability and thus foster better planning than leaving the courts to develop a "reasonable care" standard case by case.

Both Professors Thomas and Kesan focus their proposals on rewarding people who bring forward invalidating prior art that the patentee could have identified through a reasonably diligent search.[156] To be sure, structuring the bounty this way would encourage patent applicants to take more care in searching the prior art. Professor Kesan emphasizes this link between a bounty and the patentee's diligence, stating that a reward for a

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155. For purposes of this proposal, diligent prosecution requires that an applicant do more than dump a bale of prior art references on the Patent Office. An applicant should not benefit from having cited a prior art reference to the patent examiner unless the applicant explains in detail, in writing, how the reference relates to the claimed invention and why it is not invalidating.

156. *See* Thomas, *Proposal for Patent Bounties*, *supra* note 3, at 347; Kesan, *supra* note 3, at 787-88, 795. It is interesting to note, in this connection, that a patent applicant, although required to disclose to the Patent Office the prior art of which she is aware, is under no obligation to perform a prior art search of her own. *See* Am. Hoist & Derrick Co. v. Sowa & Sons, Inc., 725 F.2d 1350, 1362 (Fed. Cir. 1984) (noting that "an applicant for patent . . . has no duty to conduct a prior art search"); Thomas, *Proposal for Patent Bounties*, *supra* note 3, at 314; R. Polk Wagner, *Reconsidering Estoppel: Patent Administration and the Failure of* Festo, 151 U. PA. L. REV. 159, 214 n.189 (2002).

As a practical matter, the available empirical evidence indicates that successful patent invalidity theories usually rely on prior art references that the Patent Office did not have before it when considering the invention's patentability. *See* Allison & Lemley, *supra* note 80, at 208 tbl.1 (indicating that of 138 successful validity challenges studied, 26.8% were based on § 102 prior art and 42.0% were based on obviousness); *id.* at 233 (reporting that, "[i]n the cases where patents were actually held invalid, defendants disproportionately relied upon uncited prior art (1.9 uncited references on average, compared with 0.9 cited references)").

successful patent challenger should be "restrict[ed] . . . to those cases where there is clear fault, i.e., the plaintiff is attempting to enforce a patent that he would have realized is invalid had he conducted a diligent prior art search."[157] Their approach is thus consistent with my own.

Neither of their proposals, however, applies the underlying logic of encouraging patent applicants to take adequate care in applying for a patent to the other grounds for voiding a patent claim (or an entire patent) that involve matters within the patentee's control in the exercise of reasonable care. Experience indicates that patent challengers routinely defeat patent claims with theories that are not based on prior art. A number of these non-prior art theories involve matters as to which, with due diligence, a party can avoid inviting improvident grants from the Patent Office.

In one of the few recent empirical studies to offer detailed data on this point, the authors found that

> [t]he five most popular grounds of invalidity that defendants asserted, as measured by those issues actually decided by the courts, are obviousness (asserted in 160 out of 300 cases), section 102 prior art (asserted in 91 out of 300 cases), section 102 non-prior art (71 out of 300 cases), best mode (45 out of 300 cases), and enablement/written description (36 out of 300 cases).[158]

In other words, three of the five most popular invalidity grounds that alleged infringers asserted did not rely on prior art, and combined (152 out of 300 cases), these other grounds rival the frequency of the most popular one (obviousness, which is based on prior art). And although this particular study did not include data about the frequency with which alleged infringers urge unenforceability due to inequitable conduct before the Patent Office,[159] another recent study indicates that patent challengers raise an unenforceability defense in an appreciable percentage of cases.[160] In short,

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157. Kesan, *supra* note 3, at 796.

158. Allison & Lemley, *supra* note 80, at 210.

159. *Id.* at 195.

160. *See* Moore, *supra* note 80, at 380, 389-90 & tbl.4 (reporting that 1209 patent cases were decided by the factfinder between 1983 and 1999, and that in these cases, the issue of enforceability was addressed for 530 (32%) of the 1676 disputed claims). Professor Moore does not expressly distinguish between the two different enforceability theories: inequitable conduct before the Patent Office and patent misuse. Patent misuse, in contrast to inequitable conduct, "focuses on the manner in which the patentee has exploited her issued patent." MUELLER, *supra* note 7, at 288. And, unlike inequitable conduct, misuse can be purged and the patent in question restored to enforceability. *Id.* at 290

accused infringers routinely rely on theories beyond those based on prior art to void the patent in whole or in part.

The patentee's ability to have avoided prompting the grant of an invalid or unenforceable patent should be the key determinant in picking bounty-eligible grounds for voiding a patent. Unenforceability due to inequitable conduct before the Patent Office is, according to this criterion, the strongest ground for awarding a bounty. Intentionally deceptive conduct—the *sine qua non* of inequitable conduct[161]—is completely avoidable. Demonstrated inequitable conduct surely merits a bounty.[162]

A patentee can also readily avoid invalidity based on the rules governing the adequacy of the patent's written disclosure. These rules require, in brief, that the patent (1) actually describe the invention set forth in a given patent claim, (2) enable persons of ordinary skill in the art to make and use the claimed invention, and (3) state the mode of carrying out the invention, if any, that the patentee regards as the best.[163] The courts have applied these written disclosure rules with great sensitivity to the particular technology at issue in a given case, resulting in a body of law that pragmatically tracks the needs of people working in different technological domains.[164] Compliance with these requirements, especially the "best mode" requirement, is squarely within the patent applicant's control.

A patentee can also readily avoid invalidity based on the so-called "loss of right" aspects of the novelty requirement. These "loss of right" rules bar a patent on an invention that the applicant (1) sold, used in public, or described in a printed publication more than one year before filing

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& n.83. Because a misuse judgment does not eliminate a patent from the market, it is not as fitting a basis for awarding the bounty proposed here as is an inequitable conduct judgment.

161. *See* MUELLER, *supra* note 7, at 286-87 (discussing "intent to deceive" element of inequitable conduct).

162. Providing a bounty to one who shows a patent to be unenforceable due to inequitable conduct before the Patent Office may require some adjustment to existing attorney fee-shifting rules, inasmuch as such a result is one of the few things that justifies a fee award in favor of a prevailing alleged infringer. *See* Cambridge Prods. Ltd. v. Penn Nutrients, Inc., 962 F.2d 1048, 1050-51 (Fed. Cir. 1992) ("In the case of awards to prevailing accused infringers . . . 'exceptional cases' are normally those of bad faith litigation or those involving fraud or inequitable conduct by the patentee in procuring the patent."); Lemley, *Rational Ignorance*, *supra* note 8, at 1530 & n.135.

163. *See* 35 U.S.C. § 112, ¶ 1 (2000); MUELLER, *supra* note 7, at 65-90.

164. *See generally* Burk & Lemley, *supra* note 15 (discussing technology-sensitive application of written disclosure doctrines in such fields as computer software and biotechnology).

the application,[165] (2) abandoned,[166] or (3) patented in a foreign country outside a one-year grace period.[167] The case law implementing the "loss of right" rules is admittedly complex, but no more so than the case law governing the determination that one is liable for infringing a patent.

A patent applicant can, with a diligent prior art search, readily avoid invalidity based on most prior art-based aspects of the novelty requirement. Printed publications and patents together constitute an important category of prior art.[168] Periodical literature has long been indexed by subject matter in widely available reference works that provide paper titles and abstracts.[169] And text-based computer search technology makes it easier than ever for a patentee to find pertinent prior art publications and patents.[170]

The ease of searching published indices and electronic databases, and the resulting fairness of a bounty when a patentee has failed to uncover such readily findable references, also highlights the unfairness of a bounty in other contexts. The Patent Act has long made foreign patents and publications just as potent as U.S. patents and publications at defeating patentability.[171] In the context of the proposed bounty, it may be appropriate to limit bounty-triggering invalidity theories to those based on patents and publications written in English (the language of the U.S. patent system) and the primary language of the patent applicant (if other than English), on the ground that it is unreasonable to demand that a patent applicant spend

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165. 35 U.S.C. § 102(b).

166. 35 U.S.C. § 102(c).

167. 35 U.S.C. § 102(d); *see also* MUELLER, *supra* note 7, at 103-15 (discussing "loss of right" provisions).

168. MUELLER, *supra* note 7, at 96-97.

169. *See generally* H. ROBERT MALINOWSKY, REFERENCE SOURCES IN SCIENCE, ENGINEERING, MEDICINE, AND AGRICULTURE (1994) (listing indices). For example, the index known as *Engineering Index Monthly* began publishing in 1906, *id.* at 119, *Chemical Abstracts* began in 1907, *id.* at 67, *Applied Science & Technology Index* began in 1958, *id.* at 27, *Biological Abstracts* began in 1927, *id.* at 52, and *Index Medicus* began in 1960, *id.* at 189.

170. For example, the computer database known as *Biosis* has replaced *Biological Abstracts*, and the *Medline* database has replaced *Index Medicus*. On these databases, which contain article titles and abstracts, one can perform both keyword searches and topical searches. All U.S. utility patents issued in 1976 or thereafter are fully text-searchable at the Patent Office's website. They can also be retrieved using the Patent Office classification codes.

171. *See* 35 U.S.C. § 102(a), (b) (defining novelty-defeating prior art to include subject matter "patented or described in a printed publication in this *or a foreign country*" at the relevant time, albeit with different triggering dates) (emphasis added).

large sums of money translating arguably relevant prior art references from one or more foreign languages.

The Patent Act also defines as prior art any subject matter that was known or used by third parties in the United States as of certain dates, without regard to whether the subject matter was reduced to a written form suitable for indexing or text-based searching.[172] Again, it may be sound, as a way to define the diligence we think it is reasonable to expect of patent applicants, to rule out a bounty for an invalidity theory based on third-party public knowledge or use of the invention. Still other types of information and activities are defined as prior art even though the patent applicant almost certainly would *not* have known about them prior to filing its own application.[173] A successful invalidity theory based on this type of prior art should not trigger a bounty because a reasonably diligent search would not likely bring it to light. Finally, any obviousness theory[174] that is based on a piece of prior art from a category of art that is beyond the scope of what patent applicants would find using reasonable diligence (e.g., publications not in English or the applicant's primary language) should not trigger a bounty in favor of a successful challenger. Thus, for example, a successful obviousness attack that is built on a reference in a foreign language unknown to the patent applicant would not trigger the bounty, any more than would a successful novelty attack built on that obscure foreign language reference.

The foregoing assessment of which invalidity theories merit a bounty for the patent challenger, and which do not, is meant to be illustrative, not exhaustive. Like the proposals made by Professors Thomas and Kesan, this proposal roots the merit of a bounty directly in the ease with which a patentee can, in the exercise of reasonable care, avoid inviting the Patent Office wrongly to grant a patent. Unlike the Thomas and Kesan proposals, however, this bounty mechanism is triggered by invalidity theories well beyond those based on prior art alone.

B. Set the Reward by the Patentee's Past Profits

The purpose of moving the bounty from the patent examination stage to the litigation stage is to maximize the net benefit of the bounty regime by forging a direct connection between the commercial significance of a technology and the size of the bounty one earns for invalidating a patent

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172. *See* 35 U.S.C. § 102(a), (b).

173. *See* 35 U.S.C. § 102(e), (g); MUELLER, *supra* note 7, at 116-19, 122-29.

174. The nonobviousness requirement is set forth in 35 U.S.C. § 103. For a concise summary of this requirement, see MUELLER, *supra* note 7, at 131-37.

that purports to cover it. Indeed, in the context of this proposal, the one bounty metric that we can rule out from the start is a sum certain, which would almost always be either too low or too high.[175] Ruling out this one metric, however, still leaves a number of others from which to choose.

The bounty's size should vary directly with the commercial significance of the technology that the patentee contends is covered by the asserted patent claim. As noted above, in analyzing Professor Kesan's fee-shifting proposal, the cost of defending a patent infringement allegation is positively correlated with one's liability exposure.[176] Setting the bounty at the alleged infringer's attorney fees in all cases, however, is quite a rough cut, given the far smaller range within which fees vary relative to variation in liability exposure. Two more finely tuned proxies appear promising. The bounty could be set at the damages amount that the patentee demands. Alternatively, the bounty could be set at the patentee's profit from practicing the technology set forth in the asserted patent claim. Both approaches have pros and cons. On balance, however, the patentee's past profit is less open to strategic manipulation and is thus the preferred metric.

1. The Patentee's Damages Demand Is Too Easily Manipulated

The standard measures for compensatory damages in a patent case are clearly linked to the commercial significance of the underlying technology. The Patent Act entitles a prevailing patentee to an award of "damages adequate to compensate for the infringement, but in no event less than a reasonable royalty for the use made of the invention by the infringer."[177] The standard methods for determining the patentee's compensatory damages are a lost profits analysis and a reasonable royalty analysis.[178] Both turn, in part, on the market value of the technology.

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175. *See supra* notes 117-126 and accompanying text.

176. *See supra* notes 137-139 and accompanying text.

177. 35 U.S.C. § 284. Depending upon the circumstances, a prevailing patentee may also be entitled to additional awards, *see* MUELLER, *supra* note 7, at 329-32, but those damages enhancements are not material to the analysis here.

178. MUELLER, *supra* note 7, at 317. According to the Court of Appeals for the Federal Circuit:

> There are two methods by which damages may be calculated under [35 U.S.C. § 284]. If the record permits the determination of actual damages, namely, the profits the patentee lost from the infringement, that determination accurately measures the patentee's loss. If actual damages cannot be ascertained, then a reasonable royalty must be determined.

Hanson v. Alpine Valley Ski Area, Inc., 718 F.2d 1075, 1078 (Fed. Cir. 1983). There is no need here for a comprehensive discussion of these damages determination methods.

In carrying out a lost profits analysis, one determines the patentee's lost revenue by multiplying the number of sales the patentee lost to the alleged infringer by the patentee's historical, pre-infringement price.[179] These sales and pricing data link the result directly to the market value of the technology at issue. In carrying out a reasonable royalty analysis, the courts use a more open-textured "hypothetical negotiation" approach.[180] The most common framework for organizing this hypothetical negotiation is the *Georgia-Pacific* fifteen-factor analysis,[181] named for the case that first employed it.[182] Of the fifteen factors included in this analysis, four take stock of the technology's commercial significance from different perspectives: "[t]he royalties," if any, "received by the patentee for the licensing of the patent in suit"; "th[e] existing value of the invention to the [patentee] as a generator of sales of his non-patented items"; "[t]he established profitability of the product made under the patent[,] its commercial success[,] and its current popularity"; and "[t]he utility and advantages of the patent property over the old modes or devices, if any, that had been used for working out similar results."[183] Thus, like the lost profits analysis, the conventional reasonable royalty analysis links the resulting damages directly to the market value of the technology at issue.

The patentee's damages demand thus appears on the surface to be a good metric for the size of the litigation-stage bounty proposed here. Moreover, using this damages demand as the bounty metric avoids inject-

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What follows is thus a simplified discussion of these methods that highlights the way they appear to be good proxies for the commercial significance of the technology the patent purports to cover.

179. MUELLER, *supra* note 7, at 322; Barry L. Grossman et al., *Patent Infringement Damages*, *in* PATENT LITIGATION, *supra* note 140, at 527, 530.

180. *See* MUELLER, *supra* note 7, at 326-29; Grossman et al., *supra* note 179, at 534-35.

181. *See* MUELLER, *supra* note 7, at 327-29; Grossman et al., *supra* note 179, at 536-37. The U.S. Court of Appeals for the Federal Circuit, which hears all appeals in cases arising under the patent laws, *see* 28 U.S.C. § 1295 (2000), continues to endorse reliance on the *Georgia-Pacific* factors in determining a reasonable patent royalty. *See, e.g.*, Micro Chem., Inc. v. Lextron, Inc., 317 F.3d 1387, 1393 (Fed. Cir. 2003) ("Factors relevant in a reasonable royalty determination using this [hypothetical negotiation] method include those set out in *Georgia-Pacific*."); Unisplay, S.A. v. Am. Elec. Sign Co., 69 F.3d 512, 517 n.7 (Fed. Cir. 1995) ("A comprehensive list of relevant factors in determining a reasonable royalty is set out in *Georgia-Pacific*.").

182. Georgia-Pacific Corp. v. United States Plywood Corp., 318 F. Supp. 1116, 1120 (S.D.N.Y. 1970) (listing fifteen factors relevant to patent royalty negotiation), *modified and aff'd*, 446 F.2d 295 (2d Cir. 1971).

183. *Id.* (factors 1, 6, 8, and 9).

ing a wholly new issue into the litigation, which is already quite complex. Even in cases where the court has bifurcated the liability and damages phases of the trial, as it is empowered to do under Federal Rule of Civil Procedure 42(b),[184] the parties likely have engaged in thorough pretrial discovery on the damages issues—including the patentee's bottom-line damages demand and the methodology and evidence used to support it.[185] As a result, if the alleged infringer were to succeed in voiding the patent in the liability trial, the court would still have the information it required to determine the actual amount of the bounty due from the patentee.

But the patentee's damages demand, despite the foregoing points in its favor, does not pass final muster as a metric for a litigation-stage bounty. The disqualifying fact is the ease with which a patentee could manipulate his damages demand to avoid paying a bounty at all. Suppose the potential bounty has been set equal to the patentee's damages demand. A patentee who wished to sue on its patent without risking a bounty payment to the alleged infringer could simply forego making any damages demand at all, asking instead for injunctive relief alone.[186] It is well settled that a permanent injunction "is a standard part of the final judgment in a patent case."[187] And a patentee with an injunction in hand can, as a general mat-

184. *See* 8 JAMES W. MOORE ET AL., MOORE'S FEDERAL PRACTICE § 42.20[4][a] (3d ed. 2003) (listing factors courts consider in deciding whether to bifurcate issues for separate trial). Although courts continue to observe the general principle that bifurcation "is the exception, not the rule," Real v. Bunn-O-Matic Corp., 195 F.R.D. 618, 620 (N.D. Ill. 2000), it is equally true that "bifurcation of complex patent trials has become common," Ciena Corp. v. Corvis Corp., 210 F.R.D. 519, 521 (D. Del. 2002). *See also* MANUAL FOR COMPLEX LITIGATION (THIRD) § 33.62 (1995) (suggesting bifurcation of liability and damages in patent cases); Steven S. Gensler, *Bifurcation Unbound*, 75 WASH. L. REV. 705, 725 (2000) (observing that "[b]ifurcation is also common in," among other things, "patent litigation").

185. "Despite the possibility of bifurcated discovery . . . most courts favor comprehensive discovery on all issues, even when the trial is divided. [Bifurcated discovery] frequently lead[s] to increased motion practice regarding what should be produced during each wave of discovery." John E. Kidd et al., *Pretrial Motion Practice*, *in* PATENT LITIGATION, *supra* note 140, at 333, 367. *See generally* F & G Scrolling Mouse, L.L.C. v. IBM Corp., 190 F.R.D. 385, 390-93 (M.D.N.C. 1999) (discussing factors to weigh in deciding whether to bifurcate discovery).

186. The Patent Act broadly empowers the courts to provide injunctive relief. *See* 35 U.S.C. § 283 (2000). The choice whether to seek damages for past infringement, an injunction against future infringement, or both, is the patentee's alone. *See* Tegal Corp. v. Tokyo Electron Am., Inc., 257 F.3d 1331, 1340-41 (Fed. Cir. 2001) (discussing patentee's freedom to elect its remedy).

187. MUELLER, *supra* note 7, at 309; *see also* Richardson v. Suzuki Motor Co., 868 F.2d 1226, 1247 (Fed. Cir. 1989). For a discussion of the few cases denying a permanent

ter, set the licensing price at whatever level he chooses.[188] Bargaining in the shadow of this eventuality, a patentee could use this threat of possible future exclusion from the market to extract a settlement from the alleged infringer that provides relief comparable to a damages award covering past infringement.[189] The alleged infringer, for his part, would not be motivated to resist the patentee by a bounty because the absence of a damages demand takes the bounty off the table.

Even if a patentee were to reject this "injunction only" tactic for avoiding the bounty, other tactics would be nearly as effective. The patentee could, for example, pick as his first defendant an alleged infringer with relatively lower liability exposure. The alleged infringer's lower exposure would result in a correspondingly lower damages demand from the patentee, thereby reducing the size of the bounty that the patentee put at risk by bringing suit. The alleged infringer's reduced exposure, combined with the smaller (i.e., less attractive) bounty, would make it more likely, all other things being equal, that the parties would settle the case rather than fight it to the finish. The patentee, repeating the process to garner a number of licensees, would then be in a stronger bargaining position when approaching a new group of potential licensees with higher liability exposure.[190] This "thin the herd" tactic, like the "injunction only" tactic, can frustrate a bounty based on the patentee's damages demand.

By foregoing a formal damages demand altogether, or by choosing alleged infringers strategically, a patentee can readily evade a bounty that is measured by his damages demand. A better metric would not turn on ei-

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injunction after a finding of patent infringement, see ROBERT P. MERGES & JOHN F. DUFFY, PATENT LAW AND POLICY: CASES AND MATERIALS 1062-64 (3d ed. 2002).

188. *See* Brulotte v. Thys Co., 379 U.S. 29, 33 (1964) ("A patent empowers the owner to exact royalties as high as he can negotiate with the leverage of that monopoly."); Carter-Wallace, Inc. v. United States, 449 F.2d 1374, 1383 (Ct. Cl. 1971) ("[A]s a general rule and absent any overriding unlawful conduct, patentees can charge for their patented products and licenses whatever the market will bear.").

189. A patentee could not use this tactic if his patent has expired (or is close to expiring) and thus only past damages are at stake. Similarly, a patentee could not use this tactic if an alleged infringer has no interest in continuing to use the technology that the patent purports to cover.

190. The patentee's bargaining position would be improved for both formal and practical reasons. As a formal matter, the existence of licensees under a patent is evidence (however meager) that the claimed invention is not invalid for obviousness. *See* MUELLER, *supra* note 7, at 148. As a practical matter, the Nth potential licensee has less reason to object to a royalty when it knows that (N-1) of its competitors are already paying the royalty; the royalty becomes, in effect, a common cost of doing business, rather than a unique competitive disadvantage.

ther the type of relief that a patentee requests or an alleged infringer's liability exposure. The patentee's past profit from practicing the patented technology is such a metric.

2. The Patentee's Past Profit Resists Manipulation

The profit that a patentee earned by practicing the technology claimed in the patent, through the date of judgment, is the superior metric for a litigation-stage bounty. The patentee's past profit from practicing the technology varies directly with the technology's market significance. Unlike a damages demand, past profit does not turn on the relief a patentee requests or on the liability exposure of any particular alleged infringer; it thus resists the manipulations discussed above. And, though it appears on the surface to inject a new issue into already-complex litigation, the past profit metric would use much of the same data that supports a lost profits analysis of the patentee's actual damages—namely, the patentee's (a) historical price for the item in question, (b) costs in producing the item, and (c) unit sales of the item.[191] Similarly, in cases where the patentee seeks a reasonable royalty rather than lost profits, the parties will have exchanged dis-

191. *See id.* at 322. A past profits inquiry doubtless would require some additional data compared to a lost profits inquiry. For example, one would need to (a) know the patentee's total past sales, rather than simply sales from the period of alleged infringement; (b) know any net benefit the patentee received from earlier successful litigation on the patent (including the value of any injunction it obtained); (c) subtract from the patentee's past revenues not only the incremental costs associated with a given level of production, but also the fixed costs of being in production at all (including the costs of obtaining the patent under attack); and (d) adjust the decrement from past revenues to provide for a modest profit, which the patentee would likely have earned even without the shadow of a patent hanging over the market. Such data and adjustments, however, represent minor variations on the lost profits theme.

The objective of the past profits inquiry is, of course, to arrive at a genuine profits estimate, not to play an accounting game of the sort that the recording industry has long inflicted on artists in their royalty contracts. *See generally* Corrina Cree Clover, Note, *Accounting Accountability: Should Record Labels Have a Fiduciary Duty to Report Accurate Royalties to Recording Artists?*, 23 LOY. L.A. ENT. L. REV. 395 (2003) (discussing recent royalty recovery cases artists have brought against recording companies, and the arcana of standard recording contract royalty terms). Given how common profits-based damages measures are across all domains of intellectual property, both lawyers and judges are well-equipped to discern the substantive issues involved in calculating a patentee's past profits. *See* SCHECHTER & THOMAS, *supra* note 53, § 9.6.2.2 (profits measures for copyright damages); *id.* § 22.2.2 (profits measures for patent damages); *id.* § 24.4 (profits measures for trade secret damages); *id.* § 31.5.2 (profits measures for trademark damages).

covery about any gains the patentee has realized from the disputed technology.[192]

The past profits inquiry would, to be sure, require an apportionment analysis where the patented technology at issue is but a small part of the profit-generating item, e.g., the proverbial patented wiper blade on a luxury sedan. Infringement remedies case law provides a long-established "entire market value rule" for use in determining whether a patentee is entitled to recover lost profits based on the sale of a combination of patented and unpatented parts: a patentee cannot recover lost profits based on the sale of an item combining patented and unpatented features unless "the patent-related feature is the 'basis for customer demand.'"[193] Put another way, to justify including unpatented features in the basis for determining the patentee's recovery, "the unpatented components must function together with the patented component in some manner so as to produce a desired end product or result."[194] One could apply an inverse rule in the context of the proposed bounty, casting on the patentee the burden of demonstrating that the profits that appear to be attributable to its use of the patented technology have some other cause. If the patentee failed to prove that the unpatented components do not function together with the patented component in any manner to produce a desired end product or result, the bounty would be calculated using the entire market value of the patent-dependent product.

The past profit metric, in addition to tracking the commercial significance of the technology the patent purports to cover, roots the bounty in the common-sense norm that one who disregards applicable standards of conduct to secure an undeserved advantage should disgorge any resulting profit.[195] In the patent context, we want to encourage patent applicants to take reasonable care to avoid prompting the grant of an invalid patent.[196] An applicant who flouts this standard and obtains an improvident patent

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192. *See supra* note 183 and accompanying text.

193. Rite-Hite Corp. v. Kelley Co., 56 F.3d 1538, 1549 (Fed. Cir. 1995) (en banc) (quoting State Indus. v. Mor-Flo Indus., 883 F.2d 1573, 1580 (Fed. Cir. 1989)); *see also* 7 CHISUM, *supra* note 23, § 20.03[1][c][iii], at 20-143 to 20-148 (discussing Federal Circuit's "entire market value rule" jurisprudence); Eric E. Bensen, *Understanding the Federal Circuit on Patent Damages for Unpatented Spare Parts*, 12 FED. CIR. B.J. 57, 65-71 (2002) (detailing history of "entire market value rule," including its roots in apportionment case law applying predecessor patent damages statute).

194. *Rite-Hite*, 56 F.3d at 1550.

195. *See generally* COOTER & ULEN, *supra* note 48, at 233-34 (discussing disgorgement).

196. *See supra* notes 153-174 and accompanying text.

casts about itself a mantle of protection from competition that it should not have, thereby inflating any profit it earns from practicing the invention. Would-be competitors are deterred from adopting what turns out, upon adequate scrutiny, to be an unpatentable invention. A bounty set at the patentee's profit discourages applicants from prompting the grant of an invalid patent by making it worthless for them to do so.[197]

Finally, a past profits bounty would serve as a bulwark against anti-competitive collusion between a patentee and an alleged infringer. As Professor Thomas and others have observed, there is substantial cause for concern at the prospect of collusive agreements that preserve an invalid patent by suppressing information that could void the patent.[198] For example, a firm with potentially invalidating prior art may be able to strike a self-protective deal with the patentee:

> Upon encountering an infringement charge, the competitor can privately disclose the prior art reference to the patentee. So long as sufficient supracompetitive profits exist to go around, the patentee ordinarily possesses incentives to suppress the prior art by means of a favorable license.[199]

A past profits bounty, although it would do nothing to diminish a patentee's desire to strike this collusive bargain, would sharply reduce the patentee's means for doing so. If the bounty were in place, the patentee

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197. *Cf.* POSNER, *supra* note 37, at 130-31 (discussing role of restitution damages in deterring opportunistic breach of contract).

198. *See* Thomas, *Proposal for Patent Bounties*, *supra* note 3, at 335-37; Hovenkamp et al., *supra* note 46, at 1722. Hovenkamp states:

> [T]he uncertain scope and validity of IP rights may encourage a collusive settlement, serving both to remove the uncertainty and to permit the two firms to share monopoly profits. For example, the owner of a market-dominating patent in infringement litigation will continue to earn monopoly profits if it prevails but be no more than one of many competitors if it loses. In such a case, a settlement agreement that forms a cartel with the infringement defendant may be the optimal choice for the parties. It will not necessarily be optimal for society, however: Such collusion is inefficient if there is any significant chance that the patentee would have lost the suit.

Id. (footnote omitted); *see also* Miller, *supra* note 20, at 890-91. The risk of collusion prompts Professor Thomas to stress the need for applicant and informant anonymity in the examination-stage bounty he proposes. *See* Thomas, *Proposal for Patent Bounties*, *supra* note 3, at 343, 349-50.

199. Thomas, *Proposal for Patent Bounties*, *supra* note 3, at 335. Professors Ghosh and Kesan have offered an illuminating formal model of the bargaining space for an agreement of this type. *See* Ghosh & Kesan, *supra* note 8, at 1229-35.

would need to offer the alleged infringer at least as much to stay quiet as the alleged infringer stood to gain by voiding the patent in court—namely, the size of the bounty, discounted by the alleged infringer's likelihood of success. The patentee's past profit from practicing the underlying technology would thus anchor the negotiations in any attempted collusive deal.

A past profits bounty cannot, of course, make collusion unprofitable in all cases. Specifically, there may be cases where the patentee's estimated future profits under the patent are large enough (and certain enough) to allow for a cut to a would-be challenger that is more attractive than a bounty equal to past profits. As a theoretical matter, the only sure way to prevent patent-preserving collusion between the patentee and alleged infringer would be to offer successful patent challengers a bounty equal to the greater of (a) the patentee's past profits or (b) the estimated future profit that the patentee would earn for the remainder of the patent's life if the patent were not voided.[200] If the bounty were structured in this way, an alleged infringer, rather than cutting a deal with the patentee for part of a sufficiently large estimated future profit, would try to capture the whole of that estimated profit in court.

Such a forward-looking bounty metric, however, is an ideal that cannot be implemented due to the uncertainties involved in estimating the future profits figure. An established technology's prospects for continued long-term commercial success are only slightly less difficult to predict than an entirely new technology's prospects for any success. For example, the technology set forth in a newly voided patent claim could be replaced the following month or year by an unforeseen, completely displacing technology.[201] Or some newly discovered negative health effect of the technology in question could stop the market in its tracks.[202] The court charged with determining a bounty measured by estimated future profits could not simply ignore these possibilities, especially where the remaining term of the patent (had it survived) was considerable. On the other hand, trying to take these vagaries into account would surely make the inquiry too highly speculative.[203] The past profits bounty, although it would not prevent col-

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200. *Cf.* Thomas, *Proposal for Patent Bounties*, *supra* note 3, at 335 (collusion depends on there being enough "supracompetitive profits . . . to go around").

201. For example, the transistor's displacement of the thermionic valve (also known as the vacuum tube). *See* WEBSTER'S NEW WORLD DICTIONARY OF SCIENCE 656 (David Lindley & T. Harvey Moore eds., 1998) (entry for "transistor").

202. For example, the sedative thalidomide's demise upon being linked to birth defects. *See id.* at 644 (entry for "thalidomide").

203. *Cf.* Brooktree Corp. v. Advanced Micro Devices, Inc., 977 F.2d 1555, 1581

lusion aimed at preserving a sufficiently large and certain future profit, would prevent collusion in many cases, and without involving the courts in undue speculation.

The past profit metric, of the three candidate metrics that vary directly with the market significance of the technology that the asserted patent purports to cover, is the one best suited to secure the desired results.

3. A Past Profits Bounty Requires a Statutory Minimum Bounty Amount

The past profit metric, which measures the bounty by the profit that a patentee earned from practicing the technology claimed in the patent, is well suited to a litigation-stage bounty. This metric, however, will not catch all cases in which the underlying technology is commercially significant. A statutory minimum bounty would ameliorate this problem.

A patentee may, for example, assert a patent that it has profited from not by practicing the technology claimed therein, but by licensing the technology to others. Such royalty revenue could, of course, be defined as part of the past profit metric without doing much violence to the notion of 'practicing the technology' as that phrase is meant here. Alternatively, a patentee may promptly recognize the market value of the technology in its patent and sue on the patent soon after it issues, before having profited very much from practicing the technology claimed in the patent.[204] In the extreme case, a patentee may sue an alleged infringer on the very day the patent issues.[205] In such cases, a bounty set at the patentee's past profit would be small or nonexistent. Again, one could attempt to stretch the notion of past profit to embrace profits earned from practicing a technology that was *or later became* covered by the patent in question. This may be a

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(Fed. Cir. 1992) (affirming district court's rejection of patentee's claim for future lost profits in case involving semiconductor chips for color video displays, noting "the uncertainties of future pricing, future competition, and future markets, in this fast-moving field"). As noted above, ongoing empirical research may enhance our ability to predict which patents are likely to yield high future profits and which are not. *See supra* note 28. Despite this enhanced predictability of patent value, however, I think that an estimate of future supracompetitive profits is too speculative a metric for the bounty I propose.

204. Amazon's case against B&N was just such a case. Amazon sued B&N just 23 days after the one-click patent was formally issued by the Patent Office. Amazon.com, Inc. v. Barnesandnoble.com, Inc., 73 F. Supp. 2d 1228, 1231 (W.D. Wash. 1999).

205. *See* John R. Thomas, *On Preparatory Texts and Proprietary Technologies: The Place of Prosecution Histories in Patent Claim Interpretation*, 47 UCLA L. REV. 183, 201 & n.103 (1999) (listing recent patent infringement cases brought on the day the patent in suit issued).

stretch too far, however, in the sense that the bounty would extend to profits that the patentee made at a time when the patent did not yet exist and thus could not have been casting a harmful shadow on the market.

Finally, a patentee might sue on a patent that he neither licenses nor practices, simply to stop another firm from using the technology.[206] Perhaps, for example, the new technology renders the patentee's existing product or service obsolete, and the patentee wants to run out the value of his existing production facility without any competition from the new technology.[207] Whatever the reason for the suit, a patent that has never been practiced or licensed simply deprives a past profit metric of any traction.

The foregoing scenarios, none of which is far fetched, suggest the need for a minimum bounty measure, a floor below which the successful patent attacker's bounty would not fall. Using as a model the patent damages statute—which sets the floor for patent damages at "a reasonable royalty for the use made of the invention by the infringer"[208]—a statutory minimum bounty could be set at an alleged infringer's reasonable attorney fees. In effect, the bounty metric that Professor Kesan proposes to use in all cases[209] would instead be the statutory floor. This minimum bounty would, in situations where a past profits bounty is too small to encourage patent challenges, help ameliorate the free rider problem that undercuts an alleged infringer's incentive to obtain a definitive ruling on the validity issue.[210]

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206. For a discussion of a number of cases where patents were apparently used to suppress a new technology, see Kurt M. Saunders, *Patent Nonuse and the Role of Public Interest as a Deterrent to Technology Suppression*, 15 HARV. J.L. & TECH. 389, 392-96 (2002).

207. A patentee can enforce his patent against another even though he does not practice the claimed technology himself. As the Federal Circuit has explained,

> A patent is granted in exchange for a patentee's disclosure of an invention, not for the patentee's use of the invention. There is no requirement in this country that a patentee make, use, or sell its patented invention. *See Cont'l Paper Bag Co. v. E. Paper Bag Co.*, 210 U.S. 405, 424-30 (1908) (irrespective of a patentee's own use of his patented invention, he may enforce his rights under the patent).

Rite-Hite Corp. v. Kelley Co., 56 F.3d 1538, 1547 (Fed. Cir. 1995) (en banc).

208. 35 U.S.C. § 284 (2000).

209. *See* Kesan, *supra* note 3, at 787-88.

210. One could also attempt to ameliorate the free rider problem with an approach quite separate from any bounty mechanism. Specifically, beginning from the premise that parties who share a mutual interest in seeing a questionable patent invalidated may have trouble making binding commitments to one another to fund a definitive patent challenge,

C. Existing Reward Systems Suggest Success for this Bounty

Federal law already provides numerous examples of bounty programs that offer rewards to those who expose misconduct that harms the public, including a number with rewards that grow as the size of the public harm exposed grows. Professor Thomas, in the context of his bounty proposal, helpfully discusses these statutes in some detail.[211] It is sufficient here simply to note that the success of these programs shows the basic merit of harnessing private interest by offering carefully drawn cash rewards to those who expose public harms.

The litigation-stage, past profits bounty I propose draws support not only from reward programs outside the patent field, but also from an important prototype bounty for patent challengers that was first enacted in 1984. This bounty program, which applies only in the context of pharmaceutical patents, shows both the promise and the perils in trying to counteract the free rider problem that undercuts patent challenges with a bounty for successful patent challengers.

Today, almost half of drug prescriptions are filled with generic rather than name-brand products.[212] The consumer cost savings are dramatic: "[d]uring 2001, brand-name pharmaceuticals sold for an average of $72 per prescription, compared with $17 for their generic equivalent,"[213] i.e., a 76% average savings. It was not always so. Before the enactment of the Drug Price Competition and Patent Term Restoration Act of 1984,[214] also known as the Hatch-Waxman Amendments, a firm that wanted approval to sell a generic version of a name-brand drug had to submit its own set of

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one could, for antitrust purposes, treat a joint defense agreement among a group of patent challengers as akin to a joint research and development agreement. Such a joint research agreement could receive more lenient antitrust treatment. *See* Gene M. Grossman & Carl Shapiro, *Research Joint Ventures: An Antitrust Analysis*, 2 J.L. ECON. & ORG. 315, 316, 321 (1986). Full development of this alternative is, however, beyond the scope of this paper.

211. Thomas, *Proposal for Patent Bounties*, *supra* note 3, at 341-42, 346. For a comprehensive, critical review of the more important of these federal bounty programs, such as the False Claims Act and RICO, see Pamela H. Bucy, *Private Justice*, 76 S. CAL. L. REV. 1 (2002).

212. FEDERAL TRADE COMMISSION, GENERIC DRUG ENTRY PRIOR TO PATENT EXPIRATION: AN FTC STUDY, at i (2002) [hereinafter GENERIC DRUG STUDY].

213. Brian Urevig, Note, *Hatch-Waxman—Thoughtful Planning or Just Piling On: A Consideration of the Federal Trade Commission's Proposed Changes*, 4 MINN. INTELL. PROP. REV. 367, 369-70 (2003).

214. Pub. L. No. 98-417, 98 Stat. 1585 (codified as amended in various sections of 15, 21, 28, and 35 U.S.C.).

the exhaustive safety and efficacy data already provided by the name-brand firm who pioneered the drug.[215] By 1984, as a result, "the FDA estimated that there were approximately 150 brand-name drugs whose patents had expired for which there was no generic equivalent."[216] Generic drugs accounted for less than one fifth of prescription drug volume at that time.[217]

Congress enacted the Hatch-Waxman Amendments to make the regulatory landscape more amenable to new entry by generic drug makers, while providing name-brand drug makers with some relief for patent life effectively lost in lengthy FDA safety-and-effectiveness review.[218] On the generic entry side of the ledger, Hatch-Waxman's key innovation was the Abbreviated New Drug Application ("ANDA"), which has allowed generic drug makers to seek FDA approval for bioequivalent drugs without the need to duplicate the research that provided the name-brand company's exhaustive safety and efficacy data.[219]

The ANDA process, as well as its interaction with any patent protection the name-brand drug maker enjoys on the product for which generic approval is sought, is quite complex.[220] We need only focus, however, on

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215. *See* GENERIC DRUG STUDY, *supra* note 212, at 3-4.

216. *Id.* at 4. "Today, nearly 100% of the top-selling drugs with expired patents have generic versions available, versus only thirty-six percent in 1983." David A. Balto, *Pharmaceutical Patent Settlements: The Antitrust Risks*, 55 FOOD & DRUG L.J. 321, 325 (2000).

217. GENERIC DRUG STUDY, *supra* note 212, at i.

218. *Id.* at 4-5.

219. *Id.* at 5. The primary ANDA provision has been 21 U.S.C. § 355(j) (2000). In December 2003, Congress amended the ANDA provision. *See* Medicare Prescription Drug, Improvement, and Modernization Act of 2003, Pub. L. No. 108-173, §§ 1101(a)(2), 1102(a)(1), 117 Stat. 2066, 2448-52, 2457-61 (amending 21 U.S.C. §§ 355(j)(2), (5), (8)). Congress did so to prevent further anticompetitive abuses of the sort described below. *See infra* notes 234-240 and accompanying text.

220. For impressively concise summaries of the ANDA process and its interaction with patent law, see any one of the decisions in Andrx Pharms., Inc. v. Biovail Corp., 276 F.3d 1368, 1370-71 (Fed. Cir. 2002); Mylan Pharms., Inc. v. Thompson, 268 F.3d 1323, 1325-27 (Fed. Cir. 2001); or Mova Pharm. Corp. v. Shalala, 140 F.3d 1060, 1063-65 (D.C. Cir. 1998). For comprehensive descriptions, accompanied by helpful analyses of anticompetitive abuses of the generic drug approval process that occurred prior to the December 2003 amendments to the ANDA provision, see Balto, *supra* note 216; Alfred B. Engelberg, *Special Patent Provisions for Pharmaceuticals: Have They Outlived Their Usefulness?*, 39 IDEA 389 (1999); Hovenkamp et al., *supra* note 46, at 1749-63; Julia Rosenthal, *Hatch-Waxman Use or Abuse? Collusive Settlements Between Brand-Name and Generic Drug Manufacturers*, 17 BERKELEY TECH. L.J. 317 (2002); and Urevig, *supra* note 213.

one feature of this regime—namely, the reward that has been given to the first generic drug maker who establishes the salability of a product that the name-brand firm's patent does not control (because the patent is either void or too narrow).

From 1984 through 2003, a generic drug maker who filed an ANDA before the patent covering the drug in question expired was required to include a certification stating either "the date on which such patent will expire,"[221] or "that such patent is invalid or will not be infringed by the manufacture, use, or sale of the new drug for which the [ANDA] is submitted."[222] If the ANDA filer merely certified the patent's expiration date, the FDA would delay the effective date of its approval until that expiration date.[223] If, however, the ANDA filer certified that its proposed generic product would not result in patent infringement, or that the patent itself was invalid, the patentee (who is entitled to notice of the certification[224]) had forty-five days within which to bring suit against the generic drug maker to resolve their dispute about the scope or validity of the patent.[225]

Prior to the amendments to the ANDA provision enacted in December 2003,[226] the first ANDA filer who included a patent-challenging certification also stood to receive an important reward—namely, a 180-day period during which the only two firms with authority to sell the drug would be the name-brand firm and the first ANDA filer.[227] This 180-day period, which was not subject to any forfeiture mechanism within the ANDA provision itself, would begin to run in the first ANDA filer's favor upon the earlier of two events: the ANDA filer's "first commercial marketing of the drug," or a court decision "holding the patent which is the subject of the [ANDA] certification to be invalid or not infringed."[228] During this "Edenic moment of freedom from the pressures of the marketplace,"[229] a generic drug maker could sell its product at a price near that of the name-brand drug maker (and well above its marginal production cost), thus gain-

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221. 21 U.S.C. § 355(j)(2)(A)(vii)(III).
222. 21 U.S.C. § 355(j)(2)(A)(vii)(IV).
223. 21 U.S.C. § 355(j)(5)(B)(ii).
224. 21 U.S.C. § 355(j)(2)(B), *amended by* § 1101(a)(1), 117 Stat. at 2448.
225. 21 U.S.C. § 355(j)(5)(B)(iii), *amended by* § 1101(a)(2), 117 Stat. at 2449-50. The Patent Act's definition of infringement was enlarged to include the filing of an ANDA with the requisite patent-challenging certification. *See* 35 U.S.C. § 271(e)(2) (2000).
226. § 1102, 117 Stat. at 2457-60 (modifying the 180-day bounty provision).
227. 21 U.S.C. § 355(j)(5)(B)(iv), *amended by* § 1102(a)(1), 117 Stat. at 2457-58.
228. *Id*.
229. Mova Pharm. Corp. v. Shalala, 140 F.3d 1060, 1064 (D.C. Cir. 1998).

ing market share among price-sensitive consumers and reaping a substantial return during a six-month duopoly.[230] The 180-day duopoly period has been, in short, a litigation-stage bounty for an early ANDA filer who demonstrated that a patent was either void or too narrow and thus no barrier to an equally effective generic product.

Industry players who supported the Hatch-Waxman Amendments quite consciously framed this bounty provision to counteract the free rider problem that undercuts patent challenges. Alfred Engelberg, who was the Generic Pharmaceutical Industry Association's patent counsel during the formulation and passage of Hatch-Waxman,[231] reports that

> [t]he entire purpose of the 180-day exclusivity provision, at the time it was drafted, was to insure that one generic competitor would not get a free ride on the litigation effort of another generic competitor until the party who had borne the cost and risk of litigation had a fair opportunity to recover its litigation costs.[232]

Semi-exclusivity is, in his words, a "'bounty' for challenging patent validity, infringement or enforceability."[233] The Hatch-Waxman Amendments thus recognized and sought to remedy the free rider problem that undercuts definitive patent challenges.

How successful has this bounty provision been? The record from 1984 through 2003 is mixed. This is so because some name-brand and generic drug makers colluded, in unforeseen ways, to manipulate the bounty provision in a manner that prevented or delayed other generic drug companies from entering the market.[234] The opportunity for competition-defeating

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230. *See* Engelberg, *supra* note 220, at 416. Engelberg states:

> The wholesale price of a generic drug which is available from a single source is likely to be seventy percent or more of the price of the branded product. In contrast, when a generic drug is available from many sources, the wholesale price is likely to be thirty percent or less of the name-brand price.

Id. The other generic drug makers are kept off the market because, as a baseline rule, one cannot enter the drug sales market without FDA permission. *See* 21 U.S.C. § 355(a) ("No person shall introduce or deliver for introduction into interstate commerce any new drug, unless an approval of an application filed pursuant to subsection (b) or (j) of this section is effective with respect to such drug.").

231. Engelberg, *supra* note 220, at 389 (author's biographical information).

232. *Id.* at 423.

233. *Id.* at 391.

234. *See Mova Pharm. Corp.*, 140 F.3d at 1067 (discussing possibility of collusive dealing designed to prevent entry by other generics); GENERIC DRUG STUDY, *supra* note

collusion arose from the fact that the first ANDA filer who received the 180-day period of semi-exclusivity could keep it from beginning to run without violating the letter of the ANDA statute—either by agreeing not to bring its generic product to market at all, or by settling its infringement suit with the name-brand drug maker before the patent was adjudged to be void or too narrow. Prior to the 2003 amendments to the 180-day semi-exclusivity provision, the longer it took for the first ANDA filer's semi-exclusivity period to begin to run, the longer all other ANDA filers would necessarily be denied FDA approval to enter the market.[235]

Public and private antitrust enforcement actions have targeted the anti-competitive agreements between name-brand and generic drug makers that blocked entry by other generics.[236] A comprehensive Federal Trade Commission study[237] and academic commentary[238] have likewise targeted the harms to competition, and thus to consumers, from manipulation of the then-existing 180-day semi-exclusivity rule. The antitrust litigation and accompanying scrutiny appeared to chasten drug makers, who began to steer clear of agreements that used the semi-exclusivity period to block generic entry.[239] At the same time, one should note, many generic drug

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212, at 25-37 (discussing collusive settlement agreements that stalled entry by other generics); Balto, *supra* note 216, at 331-35 (discussing collusive agreements); Joseph F. Brodley & Maureen A. O'Rourke, *Patent Settlement Agreements*, ANTITRUST, Summer 2002, at 53, 54 (same); Engelberg, *supra* note 220, at 416-17 (same); Rosenthal, *supra* note 220, at 320-28 (same); Urevig, *supra* note 213, at 380-85 (same).

235. *See* GENERIC DRUG STUDY, *supra* note 212, at 57 (describing basic opportunities for collusion).

236. *See id.* at vii & n.11 (public enforcement actions). The Sixth Circuit recently held that it was a per se violation of the Sherman Act for a name-brand drug maker and a generic drug maker to enter an interim infringement litigation settlement agreement that obliged the name-brand drug maker to pay the generic drug maker $10 million per quarter so long as the generic drug maker did not market its FDA-approved generic drug. *In re* Cardizem CD Antitrust Litig., 332 F.3d 896, 906-09 (6th Cir. 2003). Other courts have rejected the per se approach in favor of a "rule of reason," or similarly nuanced, analysis. *See* Valley Drug Co. v. Geneva Pharms., Inc., 344 F.3d 1294, 1304-06, 1311-12 (11th Cir. 2003); *In re* Ciprofloxacin Hydrochloride Antitrust Litig., 261 F. Supp. 2d 188, 255-57 (E.D.N.Y. 2003).

237. *See* GENERIC DRUG STUDY, *supra* note 212, at 25-37 (discussing settlement agreements that "had the potential to delay the triggering of the first generic applicant's 180-day exclusivity for some period of time, and thus to delay FDA approval of any subsequent eligible applicants"); *id.* at 57-63 (discussing anticompetitive risks arising from structure of the 180-day semi-exclusivity provision).

238. *See supra* note 220 (citing academic commentaries).

239. *See* GENERIC DRUG STUDY, *supra* note 212, at 63 (reporting that, "[b]etween April 1999 (shortly after FTC investigations in this area became public) and the end of

companies that received 180-day semi-exclusivity periods timely entered the market without colluding with the patentee name-brand drug maker.[240]

Congress, recognizing that entry-blocking agreements kept some generic drug makers out of the market, has—as part of its addition of a prescription drug benefit to the Medicare program—put the 180-day semi-exclusivity portion of the ANDA statute on a "use it or lose it" footing, thus foreclosing anticompetitive agreements of the type already seen. Specifically, the 180-day bounty is made "subject to"[241] a new set of forfeiture rules. The central forfeiture rule provides that "[t]he 180-day exclusivity period [for the first ANDA applicant] shall be forfeited by a first applicant if a forfeiture event occurs with respect to that first applicant."[242] The new rules also define six "forfeiture event[s]," each of which suggests that the first ANDA applicant is not genuinely interested in marketing a generic version of the drug in question.[243] By terminating the first ANDA applicant's 180-day duopoly period if the applicant betrays the provision's underlying goal of inducing challenges to improvidently granted, or narrow, pharmaceutical patents, these new forfeiture rules should make the ANDA bounty provision more effective at facilitating the earliest practicable arrival of competition from generic drug makers.

The ANDA statute's checkered history could lead one to conclude that a litigation-stage bounty is far too likely to result in anticompetitive manipulation to risk making such a bounty generally available. Indeed, Professor Thomas holds up the 180-day semi-exclusivity reward for drug patent challenges (as it existed from 1984 through 2003) as a cautionary tale,

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the period covered by [its] study [i.e., January 2001], brand-name companies and first generic applicants have not entered agreements similar to the [collusive] interim agreements challenged by the FTC").

240. *Id.* at viii, 60-62.

241. Medicare Prescription Drug, Improvement, and Modernization Act of 2003, Pub. L. No. 108-173, § 1102(a)(1), 117 Stat. 2066, 2457 (amending 21 U.S.C. § 355(j)(5)(B)(iv) (2000)).

242. § 1102(a)(2), 117 Stat. at 2458-60 (creating new 21 U.S.C. § 355(j)(5)(D)).

243. These scenarios are as follows: (1) the first applicant's failure to market the generic drug promptly after receiving a favorable court ruling on the name-brand drug maker's patent infringement claim, or after the patent owner ceases asserting that the patents cover the drug in question; (2) the first applicant's withdrawal of its ANDA; (3) the first applicant's withdrawal of its patent-challenging certification from the ANDA; (4) the first applicant's failure to obtain tentative FDA approval for the ANDA within 30 months after filing; (5) the first applicant's entering into an agreement with the name-brand drug maker (or the patent owner, or another generic drug maker) that violates the antitrust laws; and (6) the first applicant's running out the clock until all the patents preventing generic marketing of the drug expire. *See id*.

concluding that it "tended to bar rather than promote the availability of generic drugs."[244] And Mr. Engelberg, one of Hatch-Waxman's chief architects, has argued that the semi-exclusivity provision has done so much harm to drug competition that it should be repealed.[245]

I take a different view. The Federal Trade Commission's exhaustive study "suggest[s] that, in and of itself, the 180-day exclusivity provision generally has not created a bottleneck to prevent FDA approval of subsequent eligible generic applicants."[246] And during the last few years, as courts and regulators have targeted anticompetitive abuses of the Hatch-Waxman Amendments, the proportion of patent-challenging ANDAs has increased from about 12% (during most of the 1990s) to about 20% (from 1998 to 2000).[247] Shorn of its earlier flaws, as it now exists, the semi-exclusivity rule can continue to induce generic drug makers to identify and challenge improvidently granted patents that inflict high social costs by blocking competition. This pharmaceutical-specific bounty also indicates that a generally applicable litigation-stage bounty, if framed carefully to avoid creating any new opportunities for collusion between a patentee and a patent challenger, would increase the number of definitive challenges to patents on commercially significant technologies.

D. The Uneasy Case for Rewarding a Noninfringement Defense

The bounty created by the ANDA statute raises an interesting question about the reach of the litigation-stage bounty that I have proposed here. This general bounty would be available to any patent challenger who successfully demonstrates that a patent claim (or a whole patent) is void, and thus eliminates any effect that patent claim has on the market.[248] The 180-day semi-exclusivity period, by contrast, is available not only to one who proves a patent's invalidity, but also to one who establishes that the proposed generic product does not infringe the patent.[249] One might wonder, then, whether the litigation-stage bounty proposed here should also be available to the first firm that demonstrates that a given product or process falls outside the scope of a given patent claim. The question is a close one.

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244. Thomas, *Proposal for Patent Bounties*, *supra* note 3, at 337.
245. Engelberg, *supra* note 220, at 423-25.
246. GENERIC DRUG STUDY, *supra* note 212, at viii.
247. *Id.* at 10.
248. *See supra* Part IV.A.
249. *See* 21 U.S.C. § 355(j)(5)(B)(iv) (2000), *amended by* Medicare Prescription Drug, Improvement, and Modernization Act of 2003, Pub. L. No. 108-173, § 1102, 117 Stat. 2066, 2457-58.

On balance, I think the better view is to limit the bounty to demonstrations that a patent claim is void.

The basic justification for giving a bounty to one who voids a patent is that the issue-preclusion rules make it too hard for the challenger who undertakes this costly task to reap the benefits of its investment. Once the patent claim has been eliminated entirely from the market, other competitors are also free to enter without fear of infringing that claim, thus undercutting a challenger's ability to recoup its litigation costs. This substantial free rider problem calls for a substantial solution: to induce patent validity challenges, the bounty allows the attacker to appropriate an unshared benefit of a successful invalidity attack. Infringement challenges, by contrast, do not present as prominent a free rider problem.

An alleged infringer's successful noninfringement defense is generally given nonmutual issue-preclusive effect.[250] The alleged infringer who

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250. *See* Pfaff v. Wells Elecs., Inc., 5 F.3d 514, 518 (Fed. Cir. 1993). The court stated:

> Here, the district court and both parties agree that the claim interpretation of the [earlier] Indiana case . . . controls in this case. They are correct. The prior claim interpretation has issue-preclusive effect in the present case insofar as it was necessary to the judgment of noninfringement in the previous case.

Id.; *see also* Molinaro v. Fannon/Courier Corp., 745 F.2d 651, 655 (Fed. Cir. 1984) (affirming summary judgment of no infringement on the ground that "the [patent] claim asserted here is the same as that the scope of which was determined in earlier litigation where the receivers accused here were held not to infringe that claim"); Hemphill v. Procter & Gamble Co., 258 F. Supp. 2d 410, 415-16 (D. Md. 2003) (according issue-preclusive effect to claim construction ruling from earlier case that resulted in summary judgment of no infringement); Abbott Labs. v. Dey, L.P., 110 F. Supp. 2d 667, 669-71 (N.D. Ill. 2000) (according issue-preclusive effect to claim construction ruling from earlier case that resulted in post-verdict JMOL of no infringement), *rev'd on other grounds*, 287 F.3d 1097 (Fed. Cir. 2002).

The courts have been unsettled on whether an adverse ruling on the meaning of a patent claim term should be given issue-preclusive effect in a subsequent case if that ruling did *not* result in an adverse judgment from which the patentee could have appealed (either because the parties settled the case, or because the patentee won the case notwithstanding the adverse interpretation of its patent claim). An early Federal Circuit decision rejects issue-preclusion under these circumstances. *See* Jackson Jordan, Inc. v. Plasser Am. Corp., 747 F.2d 1567, 1577 (Fed. Cir. 1984). More recent trial court decisions, however, split over the question in light of the Supreme Court's intervening decision in *Markman v. Westview Instruments*, 517 U.S. 370 (1996), according to which the interpretation of a patent claim term presents a question of law for the court. *Compare* Kollmorgen Corp. v. Yaskawa Elec. Corp., 147 F. Supp. 2d 464 (W.D. Va. 2001) (denying issue-preclusive effect to claim construction ruling in previous case, which parties had settled), *and* Graco Children's Prods., Inc. v. Regalo Int'l, L.L.C., 77 F. Supp. 2d 660

proves noninfringement, however, has a much easier time appropriating the benefit of this successful defense than one who successfully voids a patent.

First, a party who wants to rely on a noninfringement defense that was successfully urged by a different alleged infringer in a previous case must still demonstrate, as a factual matter, that its accused product or process does not infringe the asserted patent claim. Although it may be possible for this newer entrant to avoid liability on summary judgment,[251] the factual issues underlying this new infringement question may require a trial.[252] When such a trial occurs, the newer entrant is paying its own way, not taking a free ride. Second, the beneficiary of a successful noninfringement defense still remains somewhat secure from competition in that the asserted patent claim, even if a bit narrower than before, still casts a shadow in the marketplace.[253] This continuing shadow, to the extent it deters others from entering the market, helps the successful noninfringement defendant appropriate a return on its litigation costs. In short, definitive determinations of a patent's scope, as distinct from its validity, do not pose as severe a free rider problem and thus do not demand a bounty solution.

(E.D. Pa. 1999) (same), *with* TM Patents, L.P. v. IBM Corp., 72 F. Supp. 2d 370 (S.D.N.Y. 1999) (according issue-preclusive effect to claim construction ruling in previous case, notwithstanding parties' settlement of the previous case). The Federal Circuit recently denied issue-preclusive effect to claim construction rulings from a prior case where the patentee had settled that prior case before final judgment was entered. *See* RF Del., Inc. v. Pac. Keystone Techs., 326 F.3d 1255, 1260-61 (Fed. Cir. 2003). In doing so, the Federal Circuit did not cite or discuss *Markman*, *Jackson Jordan*, or the split in the district courts. *See id.*

Recent commentaries lean heavily in favor of denying preclusive effect to a trial court's claim interpretation ruling unless it results in an extant judgment against the patentee. *See* James P. Bradley & Kelly J. Kubasta, *Issue-preclusion as Applied to Claim Interpretation*, 10 TEX. INTELL. PROP. L.J. 323 (2002); Rachel Marie Clark, Note, *Collateral Estoppel of Claim Interpretation After* Markman, 86 MINN. L. REV. 1581 (2002); Timothy Le Duc, Note, *The Application of Collateral Estoppel to* Markman *Rulings: The Search for Logical and Effective Preclusion of Patent Claim Constructions*, 3 MINN. INTELL. PROP. REV. 297 (2002).

251. *See, e.g.*, *Hemphill*, 258 F. Supp. 2d at 416-18 (granting summary judgment of no infringement).

252. *See, e.g.*, *Pfaff*, 5 F.3d at 518-20 (reversing summary judgment of no infringement due to genuine fact issues, notwithstanding preclusive effect of earlier claim construction ruling).

253. Put another way, a successful noninfringement defense brings about a smaller reduction in the social costs inflicted by a too-broadly asserted patent. This smaller reduction in costs merits a smaller reward.

V. THE LIKELY OBJECTIONS TO A LITIGATION-STAGE BOUNTY ARE UNPERSUASIVE

The bounty I propose is a straightforward solution to the free rider problem that undermines firms' incentives to invest in generating a particular type of information good—namely, a court ruling on whether an asserted patent claim is void. A proposal of this type, which calls for a fundamental change in the basic framework that structures patent litigation, is bound to prompt a variety of objections. In what follows, I respond to the objections that I conclude are the most likely to be made.

A. "This Bounty Is Too Anti-Patent"

One group of likely objections clusters around the notion that the litigation-stage bounty proposed here is "too anti-patent." The short answer, of course, is that the proposal is not anti-patent, but anti-invalid-patent. If one scrutinizes the two likely variants of this notion a bit further, it is plain that they trade on mistakes about why firms obtain patents, how thoroughly the Patent Office examines applications, and how readily patent applicants can improve the quality of the applications they file and thus avoid carelessly imposing high social costs.

1. "This bounty too strongly discourages people from obtaining patents."

One likely variant of the "too anti-patent" objection is that the proposed bounty will discourage too many people from obtaining patents at all. "Firms," the objector opines, "will see patent protection as having been substantially weakened—or, even worse, as having been converted into a minefield that can result in the loss of one's profits—and thus will abandon the patent system." This criticism takes it as given that the only reason applicants obtain patents is to enforce them in court (or threaten to do so) to exclude competitors from using a technology. The available evidence suggests, however, that this is only one of myriad reasons that people obtain patents, and it may not be the most common or important one.[254]

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254. The simple fact is that the vast majority of patents are neither litigated nor, it would appear, licensed. *See* Lemley, *Rational Ignorance*, *supra* note 8, at 1497, 1500-08. As Professor Lemley has observed, "the traditional incentive story," according to which patentees "use [their] patents either to exclude competitors from the market or to obtain licensing revenue . . . is not only incomplete, but dramatically so." *Id.* at 1500-01; *see also* Lemley, *Reconceiving Patents*, *supra* note 53, at 142-44 (describing uses for patents other than suing or licensing).

The scholarly literature increasingly reflects the many uses that patents have beyond simple litigation and licensing. Recent commentaries have noted that applicants may obtain patents to signal a start-up's quality to venture capital financiers, or serve as collateral for a loan that finances further research; to credibly publicize information about one's research and development activities to competitors, capital markets, or potential employees; to bolster one's image among consumers as an industry leader; to build a patent portfolio that deters infringement suits by others, or can be swapped with other industry players in royalty-free cross licenses; to reduce the number and complexity of contracts needed to transfer an invention between firms; and to track the productivity of employees engaged in research and development efforts.[255] None of these reasons for obtaining patent protection depends for its success on the patentee actually suing on its patent, or even threatening to do so. But only such patentee suits (or threats, which would ground jurisdiction for an accused infringer's declaratory judgment suit) would expose the patentee to the risk of paying the bounty if the patent were voided.

A litigation-stage bounty thus would not discourage one from obtaining a patent if one's purpose for doing so were something other than using it to sue infringers. The bounty would, however, strongly discourage a patentee from suing on a patent if it had not invested adequate resources in ensuring that the patent could withstand an attack on its validity or enforceability. And that is good.

2. *"A patentee should not be forced to insure the Patent Office's work."*

The other likely variant of the "too anti-patent" objection is that it is unfair to require a patentee to, in effect, insure the work of the Patent Office with its own profits. "If the Patent Office, the expert agency charged with deciding the question, mistakenly thought an application was patentable," the objector opines, "the patentee should not have to disgorge its profits for that mistake." This criticism overestimates how thoroughly the Patent Office reviews applications and underestimates an applicant's

255. This list is adapted from discussions in Bartow, *supra* note 48, at 2-3, 8-10; Paul J. Heald, *A Transaction Costs Theory of Patent Law*, 12-13, 21-22, 24-25, *at* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=385841 (posted Apr. 2003); Lemley, *Rational Ignorance*, *supra* note 8, at 1504-06; Lemley, *Reconceiving Patents*, *supra* note 53, at 142-44; and Clarissa Long, *Patent Signals*, 69 U. CHI. L. REV. 625, 636-37, 641, 646-54 (2002).

power to greatly improve the quality of its application with more vigorous use of resources that are available at relatively low cost.

The Patent Office examines applications with what is, in essence, a quick look. A patent examiner spends an average of less than twenty hours total on an application.[256] However long this low level of review has existed, it is not likely to change in the short term. The superficiality of patent examination is not, moreover, a mere matter of resource constraints: even if the Patent Office were to invest far more in reviewing applications, its review would still suffer from a basic knowledge deficit compared to that which well-informed inventors and their competitors possess.[257] Unlike these parties, the Patent Office is not actually innovating on the leading edge of technological change in a given field.[258] This structural disadvantage helps explain why the courts are empowered to engage in plenary review of patent validity and enforceability in the context of patent litigation, where the adversarial process harnesses the knowledge and experience of one of the patentee's competitors to thoroughly vet the invention's patentability. The Patent Office's quick look should not immunize a patentee from bounty liability when it seeks to exclude others from the market with a wrongly granted patent that it could have avoided with diligent and candid research, drafting, and prosecution.

The fundamental fairness of imposing a bounty on a patentee who seeks to exclude others from the market with a wrongly granted patent is all the more plain when one considers the resources that potential applicants can consult at relatively low cost.[259] Indeed, the once-quaint notion that the Patent Office, rather than the applicant, should take primary responsibility for identifying the relevant prior art and articulating the precise way in which the claimed invention constitutes an advance over that

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256. *See, e.g.*, Lemley, *Rational Ignorance*, *supra* note 8, at 1500.

257. *See supra* note 105 and accompanying text.

258. *See* Merges, *Six Impossible Patents*, *supra* note 6, at 605. Merges states:

> To some extent, the ideal outside [patentability] search firm—the one with the lowest cost of acquiring relevant information—would be a firm with access to all the information available to firms that operate in the same industry as the patent applicant. Indeed, because at least some of this information is considered a trade secret, the truly ideal search firm is an *actual* competitor of the patent applicant.

Id.

259. The AIPLA reports that the median price charged for a "utility patent novelty search, analysis, and opinion" in 2003 was $1,500, and the 75th percentile price was $2,500. ECONOMIC SURVEY, *supra* note 78, at 87 tbl.21. This median investment could be tripled without hitting the $5,000 mark.

art now borders on the lunatic.[260] Corporate research and development departments now account for the great majority of patenting activity in the United States.[261] These firms and their patent counsel, whether in-house or in outside law firms, can afford to maintain high-quality technical databases and other reference materials by spreading the costs of such materials over many prosecution projects. The litigation framework should encourage them to do so. Solo inventors, for their part, have greater access than ever before to vast public library collections of current scientific and technical information, as well as electronic databases with word-search capabilities to help locate the most relevant resources.[262] Given that patent applicants know better than anyone else precisely what it is they have developed or invented, it makes good sense to restructure the litigation framework so that applicants experience more pressure to ensure that issued patents are valid, at least as to patents they plan to enforce in court or for which they plan to demand royalties.

3. "A patentee cannot tell, at the prosecution stage, which applications are worth the extra investment."

The propriety of encouraging definitive patent challenges and thus, in turn, desirable patent applicant behavior raises an interesting side objection, one that turns my critique of the Thomas examination-stage bounty's timing back on the bounty proposed here. If patent examination is too early a time for firms in a given market to discern which applications cover commercially significant technologies and thus merit further scru-

260. Admittedly, vesting this responsibility primarily in the Patent Office may have made sense in 1836, when the Office was first created. At that time, unlike today, most inventors worked alone rather than in corporate research departments. *See* Merges, *One Hundred Years*, *supra* note 3, at 2215-16 ("In 1885, only 12 percent of patents were issued to corporations. Slightly more than 100 years later, the proportions had completely reversed: by 1998, only 12.5 percent of patents were issued to independent inventors.") (footnotes omitted). Public libraries, where they existed at all, did not likely stock up-to-date scientific or technical periodicals. Research libraries at universities were far less numerous, and less open to general public use, than they are today. *See generally* ARTHUR T. HAMLIN, THE UNIVERSITY LIBRARY IN THE UNITED STATES ch. 2 (1981) (describing the state of university libraries from the Revolutionary War period to 1876, the year of the Philadelphia Centennial Exposition). As a result, the Patent Office collection of its own issued patents, technical periodicals, and models (which, at that time, were required to be submitted) would likely have been far superior to the information base available to the average inventor or the average patent lawyer. This is not true any longer. Indeed, the opposite is likely true.

261. *See* John R. Allison & Mark A. Lemley, *Who's Patenting What? An Empirical Exploration of Patent Prosecution*, 53 VAND. L. REV. 2099, 2117 (2000).

262. *See supra* notes 169-170 and accompanying text.

tiny, then, one may ask, is it not also too early for applicants to discern which applications merit additional investments in ensuring patentability? After all, a litigation rule designed to promote greater care by patent applicants will not be effective if applicants cannot reliably distinguish matters that call for more care from those that do not. This concern largely dissolves, however, when one considers the information asymmetry that favors patent applicants in this context.

First, the patent applicant usually has a bundle of information that outside firms lack regarding the likely commercial significance of the technology that the patent purports to cover, as well as the incentive to make its investments in obtaining patent protection as effectively as possible. It is thus not too early for the applicant to identify, at least roughly, which applications require more internal scrutiny and care. Specifically, the applicant has ready access to information about the originating firm's supporting assets and activities (research on complementary technologies, product development budgets, marketing and distribution plans, etc.), and outside firms likely do not. These variables affect a technology's prospects for success in the market. If a bounty is designed to focus the energy of potential challengers on patents that actually prove to be commercially significant, applicants can use their own inside information to take greater care with the patent applications that are more likely to be enforced down the road.[263] A litigation-stage bounty is not open to the timing objection raised against the Thomas bounty, for that objection turns on third parties' (relative) ignorance, not a patent applicant's ignorance, about a technology's likely market value. In other words, shifting the bounty to the litigation stage defers action until third parties are at least as well informed about the technology's fate in the market as the patent applicant was at the examination stage.

Second, the opportunity for *ex parte* patent reexamination greatly reduces any remaining concern about the instances where patent applicants mistakenly underinvest in the investigation and prosecution of patents that they will want to enforce when, for example, unforeseen market developments occur. Any party, including the patent owner, can request that the Patent Office reexamine a patent on the ground that prior art raises "a sub-

263. An examination-stage bounty, by contrast, focuses the energy of potential challengers on the patent applications that are easier to defeat (whether or not they cover commercially significant technologies), and thus pressures applicants to spread their investments in greater care over the full range of applications (both those that are more likely to prove commercially significant, and those that are less likely to do so).

stantial new question of patentability affecting any claim of the patent."[264] During the past decade, the Patent Office has granted reexamination requests quite liberally: the Patent Office received an average of about 360 (median of about 375) reexamination requests annually from 1991 to 2001, and granted an average of about 91% (median of about 92%) of these requests.[265] If a litigation-stage bounty is put in place, a patentee who wants to enforce a patent, and is concerned that the patent may not have been examined adequately at the outset, can use reexamination to strengthen the patent without exposing it to the bounty. This procedure thus gives patentees a way to make continuing investments in the care with which they obtain patent protection based on up-to-date information about the commercial significance of the underlying technologies.

B. "This Bounty Is Too Pro-Litigation"

Another group of likely objections clusters around the notion that the bounty proposed here is "too pro-litigation." The proposed bounty, to be sure, would provide a prize that could not be won except by obtaining a court judgment that a patent is void. More court judgments would result. The fundamental premise of the bounty proposed here, however, is the qualitative judgment that we suffer from an undersupply of a type of beneficial information—definitive proof that a patent is void—that we cannot readily obtain in any other way. These additional court judgments would help eliminate the likely higher social costs imposed by wrongly granted patents,[266] leading to a net benefit.

1. "This bounty invites people to become professional patent attackers."

One might object that the creation of a prize that is awarded in litigation will induce people to set aside more socially productive activities to become, as it were, professional patent attackers. The Article III case-or-

264. 35 U.S.C. § 303(a) (2000). Congress recently amended the reexamination statute to overrule legislatively the Federal Circuit's decision in *In re Portola Packaging, Inc.*, 110 F.3d 786 (Fed. Cir. 1997), according to which prior art that was in the patent prosecution history during the original examination could not be the basis for granting reexamination. As a result, for reexamination requests received after November 2, 2002, a substantial new question of patentability can arise even where no new prior art has been discovered. *See* MUELLER, *supra* note 7, at 219 (explaining effect of this amendment).

265. These data are derived from Patent Office annual reports. The Patent Office does not report separate grant rates for reexamination requests filed by patentees and requests filed by third parties. Over the past ten years, patentees have filed an average of 43% (median of 43%) of the requests.

266. *See supra* notes 83-84 and accompanying text.

controversy requirement, however, should prevent this result, for only those who have a genuine interest in the technology that the patent purports to cover will be able to bring suit.

Under current case law, the courts will not review the patent's validity or enforceability unless the patentee has sued or threatened suit *and* the alleged infringer has already engaged in purportedly infringing acts or taken concrete steps toward doing so.[267] As a result, a party who desired to earn the bounty, but who had no real interest in practicing the technology claimed in the patent, would be unable to use a declaratory judgment action to seek the bounty.[268] In addition, a party who desired to earn the bounty, but who had no genuine basis upon which to fear an infringement suit by the patentee, would likewise be unable to use a declaratory judgment action to seek the bounty.[269] A litigation-stage bounty is, in fact, far less likely than an examination-stage bounty (which has no case-or-controversy requirement) to spark the creation of a class of rent-seeking patent bounty hunters.

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267. The Declaratory Judgment Act does not relieve a plaintiff alleged infringer from satisfying the case-or-controversy requirement. *See* Aetna Life Ins. Co. v. Haworth, 300 U.S. 227, 239-41 (1937). The Federal Circuit's test for determining whether declaratory judgment jurisdiction exists in a patent case is thus as follows: "First, the defendant's conduct must have created on the part of the plaintiff a reasonable apprehension that the defendant will initiate suit if the plaintiff continues the allegedly infringing activity. Second, the plaintiff must actually have either produced the device or have prepared to produce that device." Goodyear Tire & Rubber Co. v. Releasomers, Inc., 824 F.2d 953, 955 (Fed. Cir. 1987).

268. *See, e.g.*, Jervis B. Webb Co. v. S. Sys., Inc., 742 F.2d 1388, 1398-99 (Fed. Cir. 1984) (vacating trial court's invalidity judgment due to lack of declaratory judgment jurisdiction where alleged infringer failed to present any evidence that it ever produced, or took steps to produce, items of the type covered by the patent claims in question).

269. *See, e.g.*, Phillips Plastics Corp. v. Kato Hatsujou Kabushiki Kaisha, 57 F.3d 1051, 1053-54 (Fed. Cir. 1995) ("The offer of a patent license does not create an actual controversy. . . . The 'reasonable apprehension of suit' test requires more than the nervous state of mind of a possible infringer; it requires that the objective circumstances support such an apprehension.") (rejecting jurisdiction); Shell Oil Co. v. Amoco Corp., 970 F.2d 885, 888-89 (Fed. Cir. 1992) (rejecting declaratory judgment jurisdiction where party initiated meeting with patentee to obtain agreement that its planned activity would not infringe a patent and then sued when patentee would not agree that the planned activity fell outside patent, on the ground that "[t]he Declaratory Judgment Act was intended to protect threatened parties, not to drag a non-threatening patentee into court"); *see also* EMC Corp. v. Norand Corp., 89 F.3d 807, 811-12 (Fed. Cir. 1996) (reviewing cases on "reasonable apprehension of suit" requirement).

2. *"This bounty simply weighs too heavily against patent litigation settlement."*

Finally, one might object that, by making it so much more attractive for an alleged infringer to fight a patent case to the finish, a litigation-stage bounty too strongly discourages litigation settlements. Settlement is, of course, a social good in the typical contract or tort suit. Rather than continue to waste gains from trade by paying lawyers to fight, the parties find a way to allocate those gains by agreement and end their dispute. The innumerable statements in the cases that public policy favors settlement over continued litigation make some sense when limited to typical contract and tort matters. Patents, however, are not contracts or tort rights. They are nationwide rights that affect the behavior, potentially, of every firm in the country, as well as many outside it.

When parties dispute the existence of a valid and enforceable patent claim in court, they are not merely haggling over gains from trade in which they alone have an interest. They are, instead, helping to determine an issue of considerable public interest in the very forum that the patent laws designate for a thorough airing of the technology's patentability. This is why the Supreme Court, when confronted with lower court practices that tend openly to disfavor full adjudication of patent validity issues, has criticized or overturned these practices.[270] A litigation-stage bounty, by promoting the definitive resolution of patent challenges, similarly vindicates the public interest in eliminating from the market both wrongly granted patents and the high social costs they impose.

VI. CONCLUSION

The Patent Office grants invalid patents at a high rate. And invalid patents impose high social costs. It is thus quite troubling that patent litigation's basic framework has, at least since the Supreme Court's decision in *Blonder-Tongue*, tilted decisively against definitive court tests of patent validity and enforceability. The issue-preclusion rules force a patent challenger who successfully voids a patent claim to share that success with all other parties, including its competitors. It is not surprising that, in the face

270. *See* Cardinal Chem. Co. v. Morton Int'l, Inc., 508 U.S. 83 (1993) (overturning Federal Circuit's practice of routinely vacating invalidity judgment where the case could be decided on noninfringement grounds); Sinclair & Carroll Co. v. Interchemical Corp., 325 U.S. 327, 330 (1945) (decrying lower court practice of refusing to reach validity issues where cases could be resolved on narrower infringement grounds).

of this free rider problem, many firms decide to settle rather than fight. We have, in short, an undersupply of patent challenges.

A bounty that only the successful patent challenger enjoys counteracts the free rider problem that *Blonder-Tongue* creates. Indeed, the basic reasoning that supports providing such an unshared reward is the same basic reasoning that supports the existence of the patent system itself. The timing and size of the bounty will, of course, determine its ultimate effectiveness.

An examination-stage bounty would be too early, before third parties could reliably assess the underlying technology's commercial significance. It would thus divert resources toward eliminating patent applications that were not worth the trouble. A litigation-stage bounty, by contrast, is properly timed to focus third-party fire on patents that cover commercially significant technologies and thus, if void, impose the highest avoidable social costs. Among the available metrics for determining the appropriate size of the bounty, the most suitable is the patentee's profit from practicing the technology set forth in the patent. It both tracks the market significance of the underlying technology and resists patentee manipulation.

Our experience with the litigation-stage bounty for drug patents, which speeds entry by generic drug makers and competitive pricing for consumers, indicates that a generally applicable litigation-stage bounty will speed the removal of wrongly granted patents and their ill effects from the market. It is past time to create one.

AGAINST IMMUNITY FOR UNILATERAL REFUSALS TO DEAL IN INTELLECTUAL PROPERTY: WHY ANTITRUST LAW SHOULD NOT DISTINGUISH BETWEEN IP AND OTHER PROPERTY RIGHTS

By Simon Genevaz †

ABSTRACT

The antitrust unilateral refusal to deal doctrine raises vexing issues as regards the preservation of *ex ante* incentives to invest and the scope of the right to exclude from one's property. The Federal Circuit recently chose to give intellectual property owners immunity for unilaterally refusing to deal, thereby creating a distinction between intellectual property and other property rights for the application of antitrust law. This Article argues against the immunity rule for unilateral refusals to deal in intellectual property and considers whether the rule of reason should be applied in all unilateral refusal to deal cases, regardless of the type of property involved. The immunity rule overlooks the notion that intellectual property laws aim at putting intangible and tangible property on equal footing and distorts the application of antitrust principles by refusing to inquire into the intent for refusing to deal when intellectual property is at issue. In addition, application of the immunity rule causes important under-deterrence problems. This Article argues in favor of the application of the rule of reason and contends that, although exercise of intellectual property rights is a presumptively valid business justification for refusing to deal, plaintiffs should be able to rebut this presumption by undermining the causal link between the intellectual property and the refusal. This requires an inquiry into intent that is consistent with antitrust principles and preserves legitimate intellectual property claims.

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Any views or opinions in this Article are solely those of the author.

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TABLE OF CONTENTS

I. INTRODUCTION

In a time when intellectual property (IP) laws cover assets that are crucial to competitiveness in key markets of the "digital economy,"[1] the scope of legal difference between intellectual property[2] and other property rights is still unclear. This raises an important question in the antitrust context: when a conduct is condoned under intellectual property laws but would, in the traditional property sense, be illegal under antitrust laws, should it be immune from liability? The issue is particularly delicate in the area of unilateral refusals to deal. When sanctioned as an antitrust offense, a unilateral refusal to deal directly eliminates or reduces the right to exclude. Consequentially, courts have defined antitrust liability for unilaterally refusing to deal as an exception to the general principle that one is free to refuse to deal.[3] But if one assumes that intellectual property and other property rights should enjoy similar treatment, then the circumstances giving rise to antitrust liability for unilateral refusals to deal in tangible property should equally apply to the field of intellectual property. This is, however, not true currently. To the contrary, the Federal Circuit's decision in *Xerox*,[4] established an IP-specific rule of quasi-immunity for unilateral refusals to deal by patentees and copyright owners under § 2 of the Sherman Act.[5]

In the *Xerox* case, CSU, an independent service provider (ISO), filed a suit on the basis of Xerox's refusal to sell parts to them unless they were also end-users of the copiers.[6] Xerox objected to the monopolization claim by claiming protection of its patents and copyrights.[7] The *Xerox* court refused to inquire into the intellectual property owner's intention underlying the refusal to deal as long as the refusal is not extended beyond the patent or copyright's statutory grant.[8] There is therefore no room for antitrust liability when the excluder merely exercises his exclusionary rights under

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1. Robert P. Merges, *Who Owns the Charles River Bridge? Property and Competition in the Software Industry* (Apr. 2, 1999) at 2, *available at* http://www.law.berkeley.edu/institutes/bclt/pubs/merges/criver.pdf (last visited Apr. 19, 2004).

2. Although I will use the generic term "intellectual property," the analysis conducted in this Article is focused on patents and copyrights.

3. United States v. Colgate & Co., 250 U.S. 300, 307 (1919) ("In the absence of any purpose to create or maintain a monopoly [a] private business [may] freely exercise his own independent discretion as to parties with whom he will deal.").

4. *In re* Indep. Serv. Orgs. Antitrust Litig. v. Xerox Corp., 203 F.3d 1322 (Fed. Cir. 2000).

5. *Id*. at 1325-26.

6. *Id.* at 1324.

7. *Id.*

8. *Id.* at 1327-28.

the copyright and patent laws, and *Xerox* establishes a rule of per se legality.[9] The Federal Circuit's solution thus sets forth a novel test of legality of unilateral refusals to deal specific to intellectual property that is separate and distinct from the test applicable to other types of property.

The First and the Ninth Circuits, called upon to rule on similar issues, had set forth different rules before *Xerox*. In *Data General*,[10] the defendant, Grumman, who provided independent repair services to minicomputer owners, raised an antitrust counterclaim in defense of an infringement suit brought by Data General.[11] The defendant argued that Data General refused to license its diagnostic software to third party maintainers (TPMs). The First Circuit held that "while exclusionary conduct can include a monopolist's unilateral refusal to license a copyright, an author's desire to exclude others from use of its copyrighted work is a *presumptively valid business justification* for any immediate harm to consumers."[12] The Ninth Circuit later applied this rule in *ITS v. Eastman Kodak* ("*Kodak II*"),[13] where it deemed the presumption rebuttable by evidence that the intellectual property claim was a pretext.[14] Thus the presumption of legality can be defeated by proof of an anticompetitive intent on the part of the intellectual property owner in refusing to license.

The contrast between these precedents and *Xerox*, (i.e., between treating the exercise of intellectual property rights as a rebuttable business justification for an otherwise objectionable conduct on one hand and treating it as a per se immunity from antitrust liability on the other) muddles the distinction between intellectual property and other property rights. While the rebuttable presumption approach comports with the unilateral refusal to deal doctrine as applied to tangible properties,[15] the *Xerox* per se immu-

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9. *See, e.g.*, Jonathan I. Gleklen, *Per Se Legality for Unilateral Refusals to License IP Is Correct as a Matter of Law and Policy*, THE ANTITRUST SOURCE, (July 2002), *available at* http://www.arnoldporter.com/pubs/files/Legality.pdf (last visited Apr. 19, 2004); HERBERT HOVENKAMP ET AL., IP AND ANTITRUST: AN ANALYSIS OF ANTITRUST PRINCIPLES APPLIED TO INTELLECTUAL PROPERTY LAW 13-16 (2002).

10. Data Gen. Corp. v. Grumman Systems Support Corp., 36 F.3d 1147 (1st Cir. 1994).

11. *Id*. at 1155 & n.8.

12. *Id.* at 1187. (emphasis added)

13. Image Technical Servs., Inc. v. Eastman Kodak Co., 125 F.3d 1195 (9th Cir. 1997) [hereinafter *Kodak II*].

14. *Id.* at 1219 ("Neither the aims of intellectual property, nor the antitrust laws justify allowing a monopolist to rely upon a pretextual business justification to mask anticompetitive conduct.").

15. *See* Aspen Skiing Co. v. Aspen Highlands Skiing Corp., 472 U.S. 585 (1985); Verizon Communications Inc. v. Law Offices of Curtis V. Trinko, 124 S. Ct. 872 (2004).

nity rule sets intellectual property apart in the application of the Sherman Act.

The academic debate on this matter falls into two camps: (1) the proponents of the *Xerox* rule take a utilitarian view of intellectual property and fight for minimal antitrust intervention;[16] and (2) the opponents, on the other hand, believe that antitrust law has a role to play in regulating market behaviors even when intellectual property rights are involved.[17] The pro-*Xerox* camp maintains that subjecting intellectual property owners to antitrust liability would discourage them from pursuing innovative activities, thereby undermining the system of incentives as set forth by the intellectual property laws. This argument, however, relies on false assumptions for three reasons: (1) it wrongly assumes that the intellectual property laws give the right holders a "legal monopoly;"[18] (2) it wrongly assumes that the acquisition of monopoly power is the only way to appropriate revenues deriving from inventions and original works;[19] and (3) it erroneously assumes that antitrust liability would necessarily have overall adverse effects on incentives to innovate.[20]

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16. *See, e.g.*, Gleklen, *supra* note 9; Peter M. Boyle et al., *The Antitrust Law at the Federal Circuit: Red Light or Green Light at the IP-Antitrust Intersection?*, 69 ANTITRUST L.J. 739 (2002); James C. Burling et al., *The Antitrust Duty to Deal and Intellectual Property Rights*, 24 J. CORP. L. 527 (1999).

17. *See, e.g.*, Jeffrey K. MacKie-Mason, *Antitrust Immunity for Refusals to Deal in (Intellectual) Property Is a Slippery Slope,* THE ANTITRUST SOURCE (July 2002), *available at* http://www-personal.umich.edu/~jmm/papers/JMM%20Slippery%20Slope.pdf (last visited Apr. 19, 2004); Douglas A. Melamed & Ali M. Stoeppelwerth, *The CSU Case: Facts, Formalism and the Intersection of Antitrust and Intellectual Property Law*, 10 GEO. MASON L. REV. 407 (2002).

18. *See, e.g.*, Burling et al., *supra* note 16, at 535 ("[T]hus the patent laws create a monopoly in the 'discovery' for the inventor who spent the time and resources necessary to create the invention. The monopoly owner is thereby insulated from the competitive exploitation of his patented art.").

19. *See, e.g.*, Lawrence Summers, The New Wealth of Nations, Remarks at the Hambrecht & Quist Technology Conference (May 10, 2000), *available at* http://www.ustreas.gov/press/releases/ls617.htm (last visited Apr. 19, 2004). Summers argues that a grant of monopoly power is necessary to encourage production:

> [T]he only incentive to produce anything is the possession of temporary monopoly power—because without that power the price will be bid down to marginal cost and the high initial fixed costs cannot be recouped. So the constant pursuit of that monopoly power becomes the central driving thrust of the new economy.

Id.

20. *See, e.g.*, Gleklen, *supra* note 9, at 7 ("[T]he problem with the 'sacrifice of profits' test is that it inappropriately focuses on static efficiency . . . and ignores the long-term effects of a rule requiring licensing upon incentives to innovate . . . .").

I contend that there is no sound reason to treat intellectual property differently from other forms of property in this context, and that all unilateral refusals to deal should be evaluated with the same legal standard. This Article discusses and explores the appropriate standard, for both tangible assets and intellectual property, and concludes that such a standard should embody a rule of reason. Part II of this Article explains why intangible and tangible property rights should be deemed equivalent in analyzing refusals to deal for antitrust purposes. Part III exposes the anticompetitive effects that refusals in the intellectual property context can potentially foster, arguing that such anticompetitive effects are no less harmful than what we see in other property contexts. Part III demonstrates why the rule of reason is a better approach for courts to take in intellectual property cases.

II. INTELLECTUAL PROPERTY AND OTHER PROPERTY RIGHTS ARE EQUIVALENT FOR PURPOSES OF UNILATERAL REFUSALS TO DEAL DOCTRINE

Intellectual property laws aim to put intangible assets on an equal footing with their tangible counterparts[21] so that creators and innovators may appropriate the revenues flowing from their creative endeavors.[22] A rule of per se legality for unilateral refusals to deal in the intellectual property context contradicts this purported goal. Part A of this section shows that, as a matter of policy, treating intellectual property and other property equally is more likely to foster long-term benefits to social welfare as compared to the per se immunity treatment. Part B demonstrates that, as a matter of law, a rule of per se legality lacks legal support.

A. A Wrong Policy Judgment: the Economic Case for Treating Intellectual Property and Other Property Rights as Equals

Certain commentators distinguish intellectual property from tangible property by applying micro-economic analysis of monopolistic market situations to patents and copyrights, simply assuming that possession of

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21. Cont'l Paper Bag Co. v. E. Paper Bag Co., 210 U.S. 405, 425 (1908) (stating that "patents are property, and entitled to the same rights and sanctions as other property").

22. *See, e.g.*, WILLIAM M. LANDES & RICHARD A. POSNER, THE ECONOMIC STRUCTURE OF INTELLECTUAL PROPERTY LAW 374 (2003) ("Information is a scarce good, just like land. Both are commodified—that is made excludable property—in order to create incentives to alleviate their scarcity."); HOVENKAMP ET AL., *supra* note 9, at 1-2 ("[I]ntellectual property in the United States is fundamentally about incentives to invent and create. Both the Constitution and judicial decisions seem to acknowledge the primacy of incentive theory in justifying intellectual property.").

intellectual property confers market power.[23] Others highlight the dynamic efficiency rationale underlying the necessity of intellectual property protection and suggest that the perspective of *ex post* duties to deal will destroy *ex ante* incentives.[24] These analyses, however, are not specific to intellectual property. They can be equally effectively applied to evaluating monopoly power derived from exploiting tangible property rights. Intellectual property is just a form of property, and should be treated as such. The policy arguments in favor of unfettered intellectual property rights are either misguided or advanced at such generality that no clear conclusions can be drawn. Instead, a proper understanding of dynamic efficiency under the antitrust law would suggest an equivalent treatment of intellectual property and other property rights in the context of unilateral refusals to deal.

1. Intellectual Property Rights Are "Normal" Property Rights

There is a common misconception that the legal grant of intellectual property protection automatically confers a legally protected monopoly.[25] While a patent entails certain exclusionary rights, these rights do not equate with a monopoly, i.e., a power over price. A typical monopolistic scenario would have one seller and many buyers, or a producer of a unique good or service with no substitutes in the marketplace. When no substitutes exist on the market, intellectual property rights can potentially confer just as much market power and competitive advantages to their owner as would tangible assets. Therefore, equating intellectual property rights with monopoly power confuses the distinct concepts of property and monopoly.[26]

To the contrary, intellectual property grants do not automatically confer monopoly power onto their owners.[27] The acquisition of market power

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23. *See* Edmund W. Kitch, *Elementary and Persistent Errors in the Economic Analysis of Intellectual Property*, 53 VAND. L. REV. 1727, 1732 (2000) [hereinafter Kitch, *Elementary Errors*].

24. *See* Richard M. Brunell, *Appropriability in Antitrust: How Much is Enough?*, 69 ANTITRUST L.J. 1, 4 (2001).

25. *See, e.g.*, Burling et al., *supra* note 16, at 535; LANDES & POSNER, *supra* note 22, at 374; Kitch, *Elementary Errors*, *supra* note 23, at 1729-38.

26. *See, e.g.*, LANDES & POSNER, *supra* note 22, at 374 (Supposing "there is an inherent tension between intellectual property law, because it confers 'monopolies,' and antitrust law, which is dedicated to overthrow monopolies . . . was a mistake. At one level it is confusion of a property right with a monopoly.").

27. *See* HOVENKAMP ET AL., *supra* note 9, at 4-8 ("The intellectual property laws do not purport to confer any monopoly, however, but only the right to exclude others from producing the good, expression or symbol covered by the intellectual property interest. This right is a property right that is not different in principle from other property rights.").

depends on market conditions for the products embodying the intellectual property rights. For example Edmund Kitch points out that "it is impossible to analyze a market for a single patent. It is only possible to analyze a market for a product that embodies the patent."[28] This is because a patent is unique. Only the product embodying the patented invention is produced and supplied to the market, with varying prices and quantities depending on supply and demand. To optimize the value of a patent, the owner would have to charge more when the patent contributes more to the value of the final product. Thus, whether a particular patent confers monopoly power in the economic sense is an empirical question rather than a legal one.[29]

The source of confusion between intellectual property protection and monopoly power perhaps stem from the requirement of novelty or originality before the rights attach. At first sight, it may be difficult to see how an invention, or original form of expression could have any substitute. Arguably, the originality or novelty requirements ensure that innovative products are to emerge from the intellectual property rights.[30] But in reality, various patents can cover the same end functionality. Even subscribers of the incentive theory according to which granting *ex post* exclusion fosters *ex ante* incentives to innovate acknowledge that intellectual property rights tend to foster duplicative inventions: the reward attracts too many players, inducing redundant and wasteful R&D efforts in developing alternative ways to obtain the same functional result.[31] The scope of novelty thus leaves the door open to "rivalrous inventions." Before a patent application is issued as a valid patent, the applicant must disclose the invention in sufficient detail so as to enable persons ordinarily skilled in the art to make the invention.[32] The disclosed details can, in turn, induce research efforts to "invent around" the patent.[33] In a way, the law itself encourages the creation of substitutes, which potentially constrict the inventor's market power.

Finally, products embodying patents, although innovative, do face competition in the marketplace because substitutes may exist. In the beginning of a patent's life, the "newly obsolete technology" continues to

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28. Edmund W. Kitch, *Patents: Monopolies or Property Rights?*, 8 RES. IN L. & ECON. 31, 37 (1986) [hereinafter Kitch, *Patents*].

29. Kitch, *Elementary Errors*, *supra* note 23, at 1731.

30. See 17 U.S.C. § 102(a) (2003), for originality requirements in copyrights, and 35 U.S.C. § 102 (2003), for novelty requirements in patents.

31. *See* William Fisher, *Theories of Intellectual Property*, *in* NEW ESSAYS IN THE LEGAL AND POLITICAL THEORY OF PROPERTY, 168, 182-83 (Stephen R. Munzer ed., 2001).

32. *See* 35 U.S.C. § 112.

33. LANDES & POSNER, *supra* note 22, at 295.

exist in parallel with the new technology brought to bear by the patent, and competes with it.[34] Furthermore, the limited patent life-span creates an incentive for patent holders to set their prices at a competitive level in order to discourage entry of other firms making similar products or offering similar services.[35] If the patent holder went too far and set his prices too high, at supra-competitive levels, he may end up losing market positions after the patent expires. It is therefore incorrect to assume that patents necessarily confer monopoly power to their owners. Many other factors are at play and out of the controls of the patent holders.

2. Dynamic Efficiency Does Not Warrant Per Se Legality for Unilateral Refusals to Deal in Intellectual Property

An essential purpose of the grant of intellectual property protection is to confer privative rights of certain intellectual assets to enable innovators and creators to appropriate revenues generated based on their intellectual output. This future appropriation is what fosters the *ex ante* incentive to innovate.[36] Economic analyses dispute the idea that the concentration of market power is the best way to ensure an optimal appropriation. Kenneth Arrow suggests that a monopolist has less incentive to innovate than a firm in a competitive industry.[37] Comparing this monopolist with a competitive firm Arrow concludes that since a competitive firm's incentive is the cost-reduction for its product, its incentive to innovate will always exceed that of the monopolist.[38] Central to Arrow's analysis is the idea that although new entrants can appropriate all returns on new products that displace existing products, monopolists holding the same innovation would earn only the difference between the increased return and the existing return on its present output.[39] Accordingly, the competitive firm's return will be higher than the monopolist's.

A monopoly is, therefore, not a necessary corollary to having intellectual property rights. This simple conclusion can be used to reassess dy-

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34. Kitch, *Patents*, *supra* note 28, at 34.

35. *Id.*

36. *See* KENNETH J. ARROW, *Economic Welfare and the Allocation of Resources For Invention*, *in* ESSAYS IN THE THEORY OF RISK-BEARING 144, 157-58 (Julius Margolis ed., 1971).

37. *Id.*

38. *Id.* at 158.

39. *Id.* ("The preinvention monopoly power acts as a strong disincentive to further innovation."); *see also* JEAN TIROLE, THE THEORY OF INDUSTRIAL ORGANIZATION 392 (1988), (describing this as the "replacement effect" that "[t]he monopolist gains less from innovating than does a competitive firm because the monopolist 'replaces himself' when he innovates whereas the competitive firm becomes a monopoly").

namic efficiency arguments in two ways. First, it suggests that antitrust liability may affect the defendant and its rivals in ways that do not result in an overall decrease in incentives to innovate in the relevant industry. Adapting this conclusion to a realistic market situation where a dominant producer faces fringe rivals, Jonathan Baker suggests that antitrust liability for monopolization will adversely affect the dominant firm's incentive to innovate in most cases. Antitrust liability will, at the same time, raise fringe firms' incentives.[40] Thus the dominant firm may rather adopt a strategy of accommodation than try to deter rivals' innovation.[41] When the dominant firm innovates less and its fringe rivals innovate more, the net effect on the market is generally unclear.[42] Baker nevertheless advocates for a liability rule against intellectual property holders based on the Supreme Court's jurisprudence on refusals to deal.[43] He therefore implies that intellectual property and other property rights should be treated equally. When competition in innovation results in a "winner-takes-all" award, even strong antitrust enforcement is unlikely to discourage innovation.[44] But, even in the absence of a disproportionate reward, antitrust liability may be a useful deterrent for opportunistic behaviors in collaborative or complementary relationships between dominant firms and fringe rivals (i.e., when the dominant entity takes advantage of its position to effectively monitor its rivals and impede their success by, for example, refusing to license its intellectual property).[45] This makes sense in cases

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40. Jonathan B. Baker, *Promoting Innovation Competition Through the Aspen/Kodak Rule*, 7 GEO. MASON L. REV. 495, 511-12 (1999). In the absence of a liability rule the dominant firm's strategy is based on a simple cost/benefit analysis: if maintaining its market share is the optimal goal, then the dominant firm will invest in R&D to keep its competitive advantage up to a point where fringe firms are deterred from innovating and will simply imitate; if, however this deterrence strategy is too costly and/or risky (because the chances for success are low), the dominant firm will simply let its fringe rivals be the primary source of innovation, take short-term profits, and let its position be challenged.

41. *Id.* at 512.

42. *Id.* ("As a matter of economic theory, it is impossible to say for certain whether enforcement of the antitrust prohibition against monopolization, which might restrict the conduct of a dominant firm, will on balance enhance or reduce aggregate industry innovation in general.").

43. *Id.* at 508 ("The *Aspen*/*Kodak* rule promotes the ends of antitrust laws by fostering rivalry in industries with a dominant firm where innovation competition is effectively 'winner-take-all' and where fringe rivals are in a collaborative or complementary (as well as competitive) relationship with the dominant firm.").

44. *Id.* at 514-15.

45. *Id.* at 519-20.

where a previous course of dealing existed and was stopped for no valid business reason, as was the case in *Xerox*,[46] *Kodak II*,[47] or *Aspen*.[48]

Second, since liability for unilateral refusals to deal is rare,[49] the application of antitrust law would impose a limited constraint on intellectual property owners' courses of action. Ian Ayres and Paul Klemperer suggest that marginal limitations on intellectual property owners' market power are likely to reduce the deadweight loss resulting from unconstrained price increase by patentees, the increase in social welfare being greater than the reduction in the monopolist's profits.[50] Indeed, the question is not whether monopoly power fosters incentives to innovate, but rather is whether incentives to innovate in the industry at issue are sufficiently sensitive that liabilities for unilateral refusals to deal would induce a significant decrease of incentives to invest in R&D.[51] In other words, the issue is, if one accepts that the intellectual property laws are based on a trade-off between competition and innovation, whether the reestablishment of competition as dictated by the Sherman Act deters innovation to such an extent as to undermine the policies underlying the intellectual property laws.

Ayres and Klemperer suggest that policy makers should be aware that profits derived from the last increment of monopoly pricing are disproportionately small compared to the social costs such pricing inflicts.[52] In the context of the patent system, Ayres and Klemperer suggest that small re-

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46. *In re* Indep. Serv. Orgs. Antitrust Litig. v. Xerox Corp., 203 F.3d 1322 (Fed. Cir. 2000).

47. *Kodak II*, 125 F.3d 1195, 1214 (9th Cir. 1997).

48. Aspen Skiing Co. v. Aspen Highlands Skiing Corp., 472 U.S. 585 (1985).

49. United States v. Colgate & Co., 250 U.S. 300, 307 (1919); Verizon Communications Inc. v. Law Offices of Curtis V. Trinko, LLP, 124 S. Ct. 872, 879 (2004).

50. Ian Ayres & Paul Klemperer, *Limiting Patentees' Market Power Without Reducing Innovation Incentives: The Perverse Benefits of Uncertainty and Non-Injunctive Remedies*, 97 MICH. L. REV. 985, 990 (1999).

51. This was articulated by Chris Sprigman, Presentation at the Department of Justice Antitrust Division and Federal Trade Commission Hearing on Competition and Intellectual Property Law and Policy in the Knowledge Based Economy, Strategic Use of Licensing: Is There Cause for Concern About Unilateral Refusals to Deal? (May 1, 2002), *available at* http://www.ftc.gov/opp/intellect/detailsandparticipants.htm#May%2010) (last visited Apr. 19, 2004).

52. Ayres & Klemperer, *supra* note 50, at 987 ("[T]he insight that the last bit of monopoly pricing provides disproportionately small profits in comparison to its social cost should be of continuing independent concern to policymakers seeking an optimal enforcement regime.").

strictions on the patentee's market power are efficient as the loss of incentives is negligible relative to the increase in social welfare.[53]

Nevertheless, their conclusion applies only in cases where there is high (or sufficiently high) price elasticity in the market, when every increment of price reduction results in a corresponding increase of demand and sales. When price elasticity is low (i.e., when consumer demand does not correlate with the price levels), then the reduction in monopoly price has few consequences on deadweight losses, although it does greatly diminish incentives to innovate. Because different industries have different market structures and price elasticity, the validity of Ayres and Klemperer's conclusion varies from industry to industry.

In sum, dynamic efficiency arguments are highly indeterminate and industry-dependent.[54] There are many valid and forceful arguments against the notion that a regime of antitrust liability applicable to unilateral refusals to deal would annihilate incentives to innovate. An innovator in competition indeed may have higher incentives to innovate than a monopolist.[55] And marginal limitations on patentees' market power may actually increase social welfare,[56] which in practice may undercut the necessity for antitrust immunity for intellectual property owners who have unilaterally refused to deal. Therefore, courts should review IP-related refusals according to their particular market conditions.

B. Immunity For Unilateral Refusals to Deal in Intellectual Property Lacks Legal Support

The illegality of a refusal to deal may be proved by a plaintiff using either: (1) the so-called "intent" test, which is the traditional analysis of monopolization under Section 2 of the Sherman Act; or (2) the essential facilities doctrine.[57]

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53. *Id.* at 990 ("Because the last bit of monopoly overcharging is so disproportionately damaging, restricting the patentee's monopoly power a small amount is likely to increase social welfare. The benefit of reducing the deadweight loss of supra-competitive pricing is likely to outweigh the costs of a slightly lower incentive to innovate.").

54. *See* Brunell, *supra* note 24, at 4.

55. *See* Arrow, *supra* note 36.

56. Ayres & Klemperer, *supra* note 50, at 987.

57. For sake of clarity I will distinguish Sherman Act claims of monopolization, or the so-called "intent test" from essential facility claims. As stated by the 10th Circuit, "the dichotomy, though in part illusory, is a useful analytical tool." Aspen Highlands Skiing Corp. v. Aspen Skiing Co., 738 F.2d 1509, 1520 (10th Cir. 1984). The overlap between the essential facilities doctrine and the intent test is real but the classification, imperfect as it may be, clarifies the law.

1. Intellectual Property and Other Property Rights Are Equivalent for Purposes of Monopolization Claims

Despite the general principle that one has the freedom to choose the counterpart of one's deals,[58] a unilateral refusal to deal may still violate the antitrust law against monopolization if the refusal is made by a monopolist without a valid business justification.[59] Supporters of weak antitrust enforcement in the intellectual property context tend to rely on the statutes, policies and case-law to suggest a near-absolute right to exclude others in the hands of intellectual property owners.[60] Yet the statutes and case-law actually point to the opposite direction. A careful reading of intellectual property laws shows that immunity runs contrary to congressional intent. In addition, Supreme Court cases over the past century advise an equivalent treatment of intangible and tangible property for unilateral refusals to deal.

a) The Patent and Copyright Acts: Setting Intellectual Property and Other Property on Equal Footing

i) Intellectual Property Owners' Right to Exclude is a Qualified Prerogative

The Patent and the Copyright Acts grant the right owners broad rights to exclude.[61] But nothing in the acts extends the exclusionary rights beyond the scope of ownership rights in tangible property. Moreover, the Supreme Court has stated that "repeals of the antitrust laws by implication from a regulatory statute are strongly disfavored and have only been found in cases of plain repugnancy between the antitrust and the regulatory provisions."[62] The question is therefore whether the exclusionary rights of

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58. *See* United States v. Colgate & Co., 250 U.S. 300, 307 (1919).

59. *See* Aspen Skiing Co. v. Aspen Highlands Skiing Corp., 472 U.S. 585, 595-96, 604-05 (1985).

60. *See, e.g.*, Gleklen, *supra* note 9.

61. *See* 35 U.S.C. § 154(a)(1) (2000) ("[Patentees are authorized] to exclude others from making, using, offering for sale, or selling the invention throughout the United States."); 17 U.S.C. § 106(1)-(3) (1994). The language of the statute reads:

> [T]he owner of a copyright under this title has the exclusive rights to do and to authorize [reproduction of] the copyrighted work in copies or phonorecords; [preparation of] derivative works based upon the copyrighted work; [distribution of] copies or phonorecords of the copyrighted work to the public by sale or other transfer of ownership, or by rental, lease, or lending.

17 U.S.C. § 106(1)-(3).

62. United States v. Philadelphia Nat'l Bank, 374 U.S. 321, 350-51 (1963).

intellectual property, granted under the Patent and Copyright Acts, plainly contradict antitrust principles.

The Supreme Court has held that the exclusionary rights attached to tangible or intangible property are the "essence" of the grant of ownership.[63] For example, *Continental Paper Bag* stated that exclusion of competitors "is the very essence of the right conferred by the patent as it is the privilege of *any owner of property* to use or not to use it, without question of motive."[64] Similar language can be found in cases referring to the exclusionary component the ownership rights to tangible property.[65]

Though a central attribute of *any* form of private property, the right to exclude is never absolute. It never included the right to monopolize markets in an anticompetitive way. On the contrary, all exclusionary rights are qualified, existing "*only to the extent* that they serve a socially-acceptable justification."[66] When it comes to intellectual property, courts do recognize the fact that though intellectual property is not privileged regarding antitrust enforcement, antitrust laws do not negate intellectual property owners' right to exclude.[67] To date, many efforts to analyze the intersection of antitrust duties to deal and intellectual property laws have stopped there, where commentators concluded that intellectual property laws confer a legal monopoly and that the antitrust laws have no business interfering with the exercise of that right.[68] Part II.A. demonstrated that this conception is flawed and incomplete. But even assuming that a given intellectual property grant does not have any substitute and bestows its owner monopoly power in the market for the goods or services embodying the innovation, it still does not entitle the patentee to exclude rivals in an anticompetitive way, in derogation of antitrust principles.

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63. *See* Dawson Chemicals Co. v. Rohm & Haas Co., 448 U.S. 176, 215 (1980) ([T]he "essence of a patent grant is the right to exclude others from profiting by the patented invention."); *see also* Stewart v. Abend, 495 U.S. 207, 229 (1990) ("[A] copyright owner has the capacity arbitrarily to refuse to license one who seeks to exploit the work.").

64. Cont'l Paper Bag Co. v. E. Paper Bag Co., 210 U.S. 405, 429 (1908) (emphasis added).

65. *See, e.g.*, Kaiser Aetna v. United States, 444 U.S. 164, 176 (1979) ("[O]ne of the most essential sticks in the bundle of rights that are commonly characterized as property [is] the right to exclude others.").

66. JOHN G. SPRANKLING, UNDERSTANDING PROPERTY LAW § 1.03(A), at 4 (2000) (emphasis in original).

67. *See, e.g.*, Intergraph Corp. v. Intel Corp., 195 F.3d 1356, 1362 (Fed. Cir. 1999).

68. *See, e.g.*, Burling et al., *supra* note 16, at 535.

ii) Distinguishing Monopolization From Patent Misuse

Defendants in patent infringement suits often raise the patent misuse defense. This defense argues "that the patent owner has over-reached and tried to do more than legitimately is authorized by the patent monopoly."[69] In *Xerox,* the Federal Circuit explicitly drew a parallel between antitrust claims against patentee's refusals to deal and the law on patent misuse.[70] The court then implicitly conflated the antitrust challenge with patent misuse.[71] The court undertook both of these readings so that it could properly immunize intellectual property owners' refusals to deal from Section 2 of the Sherman Act, thus setting intellectual property apart from other property rights regarding antitrust law. Neither of these readings of the law are sound.

First, equating antitrust claims to the treatment of refusals to license patents under patent misuse law effectively renders patentees' refusals to deal immune from antitrust regulation, because the 1988 amendment of the Patent Act expressly shields refusals to license or use patent rights from misuse claims. The amendment added the following italicized elements to U.S.C. Section 271(d):

> [N]o patent owner otherwise entitled to relief for infringement . . . shall be denied relief or deemed guilty of misuse or illegal extension of the patent right by reason of having done one or more of the following: . . . (4) *refused to license or use any rights in the patent.*[72]

Standing alone, the statute is unclear as to what "illegal extension of the patent right" means. The clause sounds all-encompassing, which led commentators to construe it as including antitrust claims.[73] Such a construction, however, contradicts Supreme Court case-law. To prove that a unilateral refusal to deal is monopolization, one must demonstrate (1) monopoly power and (2) exclusionary conduct. The latter has been defined as "the willful acquisition or maintenance of [monopoly] power as distin-

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69. ARTHUR R. MILLER & MICHAEL H. DAVIS, *in* INTELLECTUAL PROPERTY: PATENTS, TRADEMARK, AND COPYRIGHTS IN A NUTSHELL § 8.7, at 141 (3d ed., 2000). Patent misuse was defined by the Supreme Court as "attempts to broaden the physical or temporal scope of the patent monopoly" in *Blonder-Tongue Lab., Inc. v. Univ. of Ill. Found.*, 402 U.S. 313, 343 (1971).

70. *In re* Indep. Serv. Orgs. Antitrust Litig. v. Xerox Corp., 203 F.3d 1322, 1326 (Fed. Cir. 2000).

71. *Id.* at 1327-28.

72. 35 U.S.C. § 271(d) (2000) (emphasis added).

73. *See, e.g.*, Gleklen, *supra* note 9, at 3.

guished from growth or development as a consequence of a superior product, business acumen, or historic accident,"[74] the exercise of power "to exclude competition,"[75] "exclude . . . from the right to trade,"[76] "driving competitors out of business,"[77] or "the willful acquisition or maintenance of [monopoly] power by anticompetitive or exclusionary means or for anticompetitive or exclusionary purposes."[78] These definitions do not include "illegal extension" of an exclusionary right. Leading Supreme Court unilateral-refusal-to-deal cases have sanctioned refusals to publish advertisements when an advertiser uses or intends to use its competitors to conduct parallel announcements,[79] a refusal of access to a privately owned mountain,[80] a refusal to provide power to local systems at wholesale in municipalities where the supplier had previously sold power at retail.[81] Illegally extending the scope of one's right to exclude is not the standard the Court uses for finding antitrust offenses in unilateral refusals to deal. Rather, *Aspen* makes it clear that what was impermissible was "a decision by a monopolist to make an important change in the character of the market."[82] In the absence of valid business reasons, the firm's effort to drive its competitors out of the market is evidentially significant.[83] But the refusal to deal in *Aspen*, removed from its circumstances, would have taken place within the scope of the defendant's exclusionary rights. It is thus the circumstances and the goal pursued by the defendant in refusing to deal that had made the refusal illegal. It is therefore unwarranted to read Section 271(d) as extending immunity for refusing to deal to the realm of antitrust.[84]

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74. United States v. Grinnell Corp., 384 US 563, 570-71 (1966).

75. United States v. United Shoe Mach. Corp., 110 F. Supp. 295, 342 (D. Mass. 1953).

76. Standard Oil Co. v. United States, 221 U.S. 1, 76 (1911).

77. Brooke Group Ltd. v. Brown & Williamson Tobacco Corp., 509 U.S. 209, 251 (1993).

78. Aspen Skiing Co. v. Aspen Highlands Skiing Corp., 472 U.S. 585, 596 (1985).

79. Lorain Journal Co. v. United States, 342 U.S. 143 at 148-49, 155 (1951).

80. *Aspen*, 472 U.S. at 585.

81. Otter Tail Power Co. v. United States, 410 U.S. 366 (1973).

82. *Aspen*, 472 U.S. at 604.

83. *Id.* at 608, 610 ("[T]he monopolist made a deliberate effort to discourage its customers from doing business with its smaller rival.").

84. Judicial opinions support this interpretation. *See, e.g.*, Grid Sys. Corp. v. Texas Instruments Inc., 771 F. Supp 1033, 1037 n.2 (N.D. Cal. 1991) ("On its face, section 271(d) relates only to the defense of patent misuse as a defense to an infringement claim. . . . [A] full reading of the legislative record reveals that Congress rejected the extension [into the area of antitrust] despite this articulate support.").

Second, the *Xerox* court seemed to mix misuse law and antitrust law when it stated that "we . . . will not inquire into [the patent holder's] motivation for exerting his statutory rights, even though his refusal to sell or license his patented invention may have an anticompetitive effect, *so long as that anticompetitive effect is not illegally extended beyond the statutory patent grant"*[85] (emphasis added). How is this test different from patent misuse? The court seems to have conflated patent misuse and unilateral refusal to deal as an antitrust offense since in the absence of a finding of "illegal extension of the patent grant," *i.e.*, misuse, it does not conduct an antitrust inquiry. This conflation continued in footnote 2 of the opinion, where the court admitted that "[h]aving concluded that Xerox's actions fell within the statutory patent grant, we need not separately consider [the plaintiff's] allegations of patent misuse and they are rejected."[86] In other words, antitrust claims and patent misuse claims were considered to be one and the same.

This conflation is *exactly* what Congress had refused in rejecting Bill 438, the predecessor to the 1988 Patent Misuse Reform Act. The Bill provided that a patent owner shall not be guilty of misuse or illegal extension of a patent unless such practices or actions violate the antitrust laws, and attempted to restrict the realm of the misuse doctrine to antitrust offenses. The rejection of the Bill manifested a congressional intent that, while the patent misuse doctrine and the antitrust laws may cover similar conduct, each set of rules was to be interpreted independently.[87] Therefore, the Federal Circuit's interpretation of the 1988 amendment brings to life an outcome that Congress sought to bury.

Finally, the Federal Circuit's holding made a finding of antitrust liability impossible when there is a patent grant at issue, a result that is wholly inconsistent with the 1988 amendment of Section 271(d).[88] This is because the courts would not conduct an antitrust refusal-to-deal analysis in patent cases unless they clearly identify misuse –the "illegal extension of the patent grant." But the amended Section 271(d)(4) clearly states that "no patent owner . . . shall be . . . deemed guilty of misuse . . . by reason of hav-

85. *In re* Indep. Serv. Orgs. Antitrust Litig. v. Xerox Corp., 203 F.3d 1322, 1327-28 (Fed. Cir. 2000).

86. *Id.* at 1328.

87. *See* Richard Calkins, *Patent Law: The Impact of the 1988 Patent Misuse Reform Act and Noerr-Pennington Doctrine on Misuse Defenses and Antitrust Counterclaims,* 38 DRAKE L. REV. 175, 196 (1988-89) ("Certain conclusions can be reached concerning Congress' rejection of Senate Bill 438. . . [O]ther than one narrow exception in the new law, misuse defenses will continue to be tested by public policy standards underlying the patent laws *rather than by antitrust standards.*" (emphasis added)).

88. *Xerox*, 203 F.3d at 1327-28.

ing . . . refused to license or use any rights in the patent."[89] In other words, the *Xerox* court conditions a finding of antitrust liability on an inquiry that the statute does not allow it to make.

b) Supreme Court Precedents Treat Intellectual Property and Other Property Rights as Equals

The Supreme Court has never explicitly addressed whether intellectual property and other property rights should be treated similarly in the antitrust unilateral-refusal-to-deal context. Supreme Court case-law, however, suggests that the right to exclude in intellectual property is similar in scope as the right to exclude in tangible property rights. Furthermore, in order to preserve dynamic efficiency, the Supreme Court's recent decision in *Trinko* required a showing of anticompetitive intent in antitrust challenges of unilateral refusals to deal.[90]

Several Supreme Court cases set forth the proper scope of exclusionary rights in the intellectual property context. First, the Court's holding in *Continental Paper Bag* suggests a parallel between the right to exclude in intellectual property and tangible property. Justice McKenna stated in dictum that "exclusion [from the use of a new patent] may be said to have been the very essence of the right conferred by the patent, as it is the privilege of any owner of property to use it or not to use it, without question of motive."[91] Cases like *Line Material*,[92] *Precision Instruments*,[93] and *United Shoe*,[94] further defined patents as exceptions from a freely competitive market.[95] Yet, none addressed allegations of illegal refusals to deal. Furthermore, "the language used in these cases reflected the Court's contemporaneous view of all forms of private property, not special rules for IP,"[96]

89. *See supra* note 72 and accompanying text.

90. Verizon Communications Inc. v. Law Offices of Curtis V. Trinko, LLP, 124 S. Ct. 872, 880 (2004).

91. Cont'l Paper Bag Co. v. E. Paper Bag Co., 210 U.S. 405, 429 (1908).

92. United Stated v. Line Material Co., 333 U.S. 287, 309-10 (1948) ("[I]t is crystal clear from the legislative history and accepted judicial interpretations of the Sherman Act that competition on prices is the rule of congressional purpose and that, where exceptions are made, Congress should make them. . . . The monopoly granted by the patent laws is a statutory exception to this freedom for competition.").

93. Precision Instruments Mfg. Co. v. Auto. Maint. Mach. Co., 324 U.S. 806, 816 (1945) ("[A] patent is an exception to the general rule against monopolies and to the right to access to a free and open market.").

94. United States v. United Shoe Mach. Corp., 247 U.S. 32, 57 (1918) ("[T]he right to exclude others from the use of the invention . . . within the field covered by the patent law is not an offense against the Anti-Trust Act.").

95. *See, e.g.*, Gleklen, *supra* note 9, at 5.

96. Melamed & Stoeppelwerth, *supra* note 17, at 413.

further suggesting that the scope of exclusionary rights is similar in intellectual property and tangible property. Because the Supreme Court case-law unequivocally establishes that the right to exclude in tangible property is qualified, the exercises of these rights may become illegal exclusionary conduct when undertaken by a monopolist to exclude competitors.[97] In light of these tangible-property cases and *Continental Paper Bag*, the exact same principles and qualifications apply to patent and other intellectual property laws.

Finally, does motivation behind the refusal matter? It is important to bear in mind that *Continental Paper Bag* was decided in 1908. The Supreme Court has since decided cases like *Aspen* and *Trinko*, which stand for the proposition that motivation does matter when a monopolist refuses to deal.[98] Furthermore, in *Trinko*, Justice Scalia stated in dictum that "[t]o safeguard the incentive to innovate, the possession of monopoly power will not be found unlawful unless it is accompanied by an element of anticompetitive *conduct*."[99] This statement contradicts the holding in *Xerox* that no inquiry will be made into intellectual property owners' motivation for refusing to deal, "even though his refusal to sell or license his patented invention may have an anticompetitive effect."[100] Therefore, dynamic efficiency concerns are not specific to intellectual property, and, in all cases, motivation is central to the finding of anticompetitive exclusion.

2. Intellectual Property and Other Property Rights are Equivalent for Purposes of the Essential Facilities Doctrine

The essential facilities doctrine originated from the *Terminal Railroad* case.[101] The Seventh Circuit later articulated the concept of "essentialness" by way of a four-part test in *MCI*.[102] Under the *MCI* test, it is illegal to refuse to grant access to a given facility if the access-seeker proves: "(1)

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97. *See* Lorain Journal Co. v. United States, 342 U.S. 143 (1951); Aspen Skiing Co. v. Aspen Highlands Skiing Corp., 472 U.S. 585 (1985).

98. *See Aspen*, 472 U.S. at 611 ("Ski Co. was not motivated by efficiency concern and . . . was willing to sacrifice short-run benefits and consumer goodwill in exchange for a perceived long-run impact on its smaller rivals."); Verizon Communications Inc. v. Law Offices of Curtis V. Trinko, LLP, 124 S. Ct. 872, 880 (2004) (refusing to sanction the refusal to deal at issue as anticompetitive because "the defendant's prior conduct sheds no light upon the motivation of its refusal to deal—upon whether its regulatory lapses were prompted not by competitive zeal but by anticompetitive malice").

99. *Trinko*, 124 S. Ct. at 879 (emphasis in original).

100. *In re* Indep. Serv. Orgs. Antitrust Litig. v. Xerox Corp., 203 F.3d 1322, 1327 (Fed. Cir. 2000).

101. Unites States v. Terminal R.R. Ass'n, 224 U.S. 383 (1912).

102. MCI Communications Corp. v. AT&T Co., 708 F.2d 1081 (7th Cir. 1983).

control of the essential facility by a monopolist; (2) a competitor's inability practically or reasonably to duplicate the essential facility; (3) the denial of the use of the facility to a competitor; and (4) the feasibility of providing the facility."[103] The essential facilities doctrine has been advanced by parties in intellectual property cases, although never successfully in the sense that it never helped to win the case. Meanwhile, the courts have never explicitly rejected this doctrine as applicable in the intellectual property context either. In *Intergraph,*[104] the plaintiff claimed Intel microprocessors, technical assistance and consumer benefits were essential facilities because they were necessary for Intergraph to compete in the workstation market.[105] Although the Federal Circuit did not review the essential facility claim on the merits of the "essentialness" standard, it did not exclude the possibility that the doctrine may be applied to intellectual property.[106] In *Aldridge*,[107] the plaintiff argued that Microsoft's Windows 95 operating system was an essential facility because any piece of software (in the case, disk cache programs, which are products designed to improve the speed at which a computer functions) that cannot function under Windows 95 would be useless to most computer owners.[108] The district court refused to brand Windows 95 as "essential" because the sole purpose of the plaintiff's product was to correct a flaw in the operating system.[109] In that sense, since the plaintiff's product was useful only if the operating system function inefficiently, and since Microsoft had solved the problem by improving Windows 95, deciding otherwise would have punished the manufacturer for upgrading its own product.[110] It would also have defined as essential a facility even if, although vital for the defendant, the facility was not essential for competition on the disk cache program market,[111] thus failing the first element of the *MCI* test.

Some scholars advocate a per se ban of applying the essential facilities doctrine to intellectual property cases.[112] Central to their suggestion is the

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103. *Id.* at 1132-33.

104. Intergraph Corp. v. Intel Corp., 195 F.3d 1356 (Fed. Cir. 1999).

105. *Id.* at 1356.

106. *Id.* at 1357-58 (refusing to apply the essential facilities doctrine in a situation where the two parties were not competitors).

107. David L. Adridge Co. v. Microsoft Corp., 995 F. Supp. 728, 751 (S.D. Tex. 1998).

108. *Id.* at 751.

109. *Id.* at 753-54.

110. *Id.* at 753.

111. *Id.*

112. *See, e.g.*, HOVENKAMP ET AL., *supra* note 9, at 13-16; *see also* Abbott B. Lipsky, Jr. & J. Gregory Sidak, *Essential Facilities,* 51 STAN. L. REV. 1187 (1999).

argument that the doctrine, if applied to intellectual property, would likely disrupt the system of incentives put in place by the intellectual property laws because intellectual property owners would be "ripped-off" by a duty to share.[113] It is indeed problematic that the intellectual property owners would be vulnerable of antitrust liability just when the ideas and innovations protected by patents or copyrights are most valuable and confer market power to their owners, simply because they become "essential" as well to the owners' competitors. There would be a significant threat to stifle innovation by forcing innovative firms to share their competitive advantage.

Yet such arguments overlook the fact that the essential facilities doctrine only applies to vertical relationships between an upstream market, where access to the facility at issue is supplied, and a downstream market. One cannot enter the downstream market without access to the facility, hence the facility's essentialness. The essential facilities doctrine generally applied would not make sense, as opposed to limiting it to vertical relationships, and would produce anticompetitive results.[114] The reason the doctrine is not applied to single market situations is to avoid, for tangible property, imposing restrictions on the use of assets conducive of competitive advantages. In a single market context, antitrust law rather seeks to encourage the acquisition/creation of such facilities.[115] The same rationale is applicable to intellectual property: antitrust law encourages innovation, and should not impose duties to share when the refusal is proper exercise of exclusionary IP-related privileges. On the other hand, imposing duties to share on downstream markets does not "rip-off" the owner of the facility because the innovator's legal reward is not altered in the primary market for the product embodying its intellectual property.[116]

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113. *See, e.g.*, Lipsky & Sidak, *supra* note 112, at 1219.

114. *See e.g.*, John Temple Lang, *The Principle of Essential Facilities in European Community Competition Law – The Position Since Bronner*, 1(4) J. NETWORK INDUSTRIES 375 (2000); Paul D. Marquart & Mark Leddy, *The Essential Facilities Doctrine and Intellectual Property Rights: A Response to Pitofsky, Patterson, and Hooks*, 70 ANTITRUST L.J. 847 (2003).

115. *See, e.g.*, Fishman v. Estate of Wirtz, 807 F.2d 520, 540 (7th Cir. 1986) ("The point of the essential facilities doctrine is that a potential market entrant should not be forced simultaneously to enter a second market, with its own large capital requirements.").

116. *Compulsory Licensing of Intellectual Property in European Community Antitrust Law*, Hearings on Refusals to License and Compulsory Licensing in the European Union, Canada and Australia before the DoJ/FTC 13 (May 22, 2002) (testimony of John Temple Lang) ("[I]f a license could be given for an input in a separate market, and this could be done without affecting the right owner's statutory monopoly in the market to which the right primarily and directly relates, a compulsory license may be ordered if the

Both policy and law demand an equivalent treatment of intellectual and tangible property in the context of unilateral refusals to deal. The rule applicable to intellectual property therefore should embody a rule of reason similar to the one applied to tangible property.

III. THE RULE OF REASON INQUIRY FOR UNILATERAL REFUSALS TO DEAL IN INTELLECTUAL PROPERTY AS A CHANNEL FOR OPTIMALITY

The per se legality rule for unilateral refusals to deal in intellectual property overlooks marginal costs that may offset marginal benefits and under-deters significant anticompetitive conduct. As previously described, unilateral refusals to deal are held to be illegal exclusionary behavior when they originate from monopolists, are likely to result in anticompetitive effects, and are without valid business justifications.[117] In reference to this general test, Part A of this Section examines the nature of potential anticompetitive harm inflicted by refusals to deal in intellectual property. Part B details the tests applicable in courts to uncover illegal refusals to deal in intellectual property under § 2 of the Sherman Act.

A. The Potential Harmful Effects of Unilateral Refusals to Deal in Intellectual Property

The *Xerox* holding grants absolute antitrust immunity throughout the scope of the patent. Even if we ignore the difficulties of defining such scope, it is unclear why the entire scope should be exempt from antitrust scrutiny. To assess the potential anticompetitiveness of a challenged refusal to deal in intellectual property, the analysis should rather focus on what the prospective licensee wants and ask whether his request really amounts to an appropriation of a reward to which only the intellectual property holder would normally be entitled.

When the firm under examination has market power, courts should consider two types of anticompetitive conduct: (1) whether exclusionary privileges are manipulated to leverage market power in markets unrelated to the patented or copyrighted product; (2) whether refusals to deal in intellectual property block rivals entry or to thwart their productive effort. If the answer to either of these questions is yes, then the conduct should not be shielded from liability because the intellectual property owner does not

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other requirements of the essential facilities principle are met.*"*), *available at* http://www.ftc.gov/opp/intellect/020522langdoc.pdf (last visited Apr. 19, 2004).

117. Aspen Skiing Co. v. Aspen Highlands Skiing Corp., 472 U.S. 585, 608 (1985).

purport to reap the reward to which he is legally entitled. Hence, in such cases, antitrust liability does not run counter to the incentive system put in place by the intellectual property law.

1. Monopoly Leveraging by Refusing to Deal in Intellectual Property

Patent or copyright owners may refuse to deal in order to extend their dominance in the market for the product embodying their intellectual property right into another market.[118] I illustrate this point by presenting typical forms of intellectual property leveraging. Next, I rationalize the illegality of refusals to deal when the IP owner leverages market power.

a) Typical Situations Where Market Power Gained Through Intellectual Property is Leveraged

In copyright law, courts have disapproved attempts to use copyrighted elements of a certain good to control the market for compatible products when compatibility requires access to the copyrighted expression.[119] This is a form of leveraging in which copyright owners take advantage of interoperability requirements and use the exclusionary rights inherent in the copyright grant to gain market power for components that are part of the same system as the product embodying the copyright, but that bear no relation to the protected creative expression.

In *Sega*,[120] Accolade, an independent video game developer and producer, abandoned its effort to secure a licensing agreement with Sega because the agreement would have required Sega to be the exclusive manufacturer of the games developed by Accolade.[121] Rather, Accolade chose to reverse-engineer Sega's game programs to discover the compatibility requirements of Sega's Genesis console:[122] Accolade's employees disassembled the copyrighted object code to discern the functional requirements for compatibility.[123] The court upheld that conduct as fair use and held that "not all copyrighted works are entitled to the same level of protection."[124] Ideas are not protected under copyright law, and to the extent

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118. Leveraging is the use of market power gained through natural or legal advantage—such as a patent or a copyright—to expand dominance into another market. *See* Times-Picayune Pub. Co. v. United States, 345 U.S. 594, 611 (1953).

119. *See, e.g.*, Sega Enters. Ltd. v. Accolade, Inc., 977 F.2d 1510 (9th Cir. 1992); Alcatel USA Inc. v. DGI Tech., Inc., 166 F.3d 772 (5th Cir. 1999).

120. *Sega*, 977 F.2d 1510.

121. *Id.* at 1514.

122. *Id.*

123. *Id.* at 1514-15.

124. *Id.* at 1524.

that a work is functional it may be lawfully copied.[125] Because the copying of protected data was necessary to reach the unprotected functional elements during the reverse engineering process, the court refused to hold Accolade guilty of infringement.[126] The court held that absolute protection of a copyrighted work, which means that copying as a way to accessing unprotected data would be prohibited, would allow the copyright holder to leverage monopoly power in the market: Sega would be able to block any competing game-cartridge manufacturer.[127]

In *Alcatel,*[128] the plaintiff (then DSC) produced and sold "switches," which are devices that route long-distance telephone calls to their destinations. These switches were controlled by copyrighted operating system software, which DSC did not sell but granted licenses for, with the express provision prohibiting copying or disclosing the software to third parties.[129] DGI, DSC's aspiring competitor in the market for "switch cards," which are devices used to expand switches' call-handling capacities, developed and marketed a "microprocessor card," which downloaded DSC's copyrighted software upon its installation on a switch.[130] To ensure compatibility with DSC's switches DGI had to test its own cards on a DSC switch, which required copying DSC's copyrighted operating system code.[131] Finding that a prohibition of such copying would prevent the emergence of any competing cards the court held that DSC's license agreement for its operating system constituted copyright misuse.[132]

These two cases, although decided on different grounds, illustrate the ways in which copyright owners may exploit their rights on one component in order to expand their control from that component to the entire system. Merges articulated a theory of "disproportionate leverage" in the misuse and fair use contexts[133] based on the idea that courts prohibit hold-

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125. 17 U.S.C. § 102(b) (1994) ("In no case does copyright protection for an original work of authorship extend to any idea, procedure, process, system, method of operation, concept, principle, or discovery, regardless of the form in which it is described, explained, illustrated, or embodied in such work.").

126. Sega Enterprises Ltd. v. Accolade, Inc., 977 F.2d 1510, 1527-28 (9th Cir. 1992).

127. *Id.* at 1526.

128. Alcatel USA Inc. v. DGI Tech., Inc. 166 F.3d 772 (5th Cir. 1999).

129. *Id.* at 777.

130. *Id.* at 778.

131. *Id.* at 793-94.

132. *Id.* at 793.

133. Merges, *supra* note 1. Arora later suggested application to the unilateral refusal to deal context. Ashish Arora, *Refusals to License: A Transaction Based Perspective* (Apr. 28, 2002), *available at* http://www.ftc.gov/opp/intellect/020501arora1.pdf (last visited Apr. 19, 2004).

ers of "small" property rights, such as copyrights, to leverage large markets.[134] Disproportionate or not, the message in those two cases above is that copyright owners cannot refuse access to their intellectual property when such access conditions the development of interoperable uncopyrighted elements of the same system.

By contrast, in the area of patents, under the *Xerox* rule, owners could integrate patented elements arbitrarily into their output so that they could refuse to deal with impunity. In *Aspen*, a case involving two companies that together controlled four ski areas in one resort, the Supreme Court denounced a refusal to continue a joint offering of an "all-Aspen" ticket by Ski Co., who controlled three out of the four areas, to the detriment of the Highlands Skiing Co., who only controlled one.[135] MacKie-Mason suggested that the *Xerox* rule, if endorsed by the Supreme Court, would hypothetically have had an impact on the outcome of this case had the defendant integrated a patented gear mechanism in its ski lifts. It seems that, in this hypothesis, the Federal Circuit's rule would indeed warrant an outcome opposite to the actual Supreme Court decision in *Aspen,* because the Federal Circuit refuses to inquire into a patentees' "subjective motivation for exerting [their] statutory rights, even though [their] refusal to sell or license [their] patented invention may have anticompetitive effect."[136] In the end, the Supreme Court found it illegal for Ski Co. to stop offering the all-Aspen ticket because it was not motivated by efficiency but rather by the perceived long-term impact of gaining monopoly power in the market.[137] The Supreme Court's holding hinged on efficiency arguments, which suggested that the All-Aspen ticket was a preferable option because it enhanced product quality (it added flexibility, expanded vista, etc) and enlarged the market.[138]

The *Aspen* Court did not consider *ex ante* incentives to acquire property. But imposing a duty to share non-natural resources might raise the concern that *ex ante* incentives to acquire them could be adversely affected. This concern was recently articulated in dictum by Justice Scalia in *Trinko.*[139] Why then should such concerns serve as an absolute shield for

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134. Merges*, supra* note 1, at 4.

135**.** Aspen Skiing Co. v. Aspen Highlands Skiing Corp., 472 U.S. 585, 589-93 (1985).

136. *In re* Indep. Serv. Orgs. Antitrust Litig. v. Xerox Corp., 203 F.3d 1322 (Fed. Cir. 2000).

137. *Aspen*, 472 U.S. at 608.

138. *Id.* at 605-07.

139. Verizon Communications Inc. v. Law Offices of Curtis V. Trinko, LLP, 124 S. Ct. 872, 879 (2004) ("Compelling . . . firms to share the source of their advantage is in some tension with the underlying purpose of antitrust law, since it may lessen the incen-

intellectual property owners against antitrust liability where similar use of tangible property is deemed illegal? The clash seems unavoidable, and remains even under MacKie-Mason's hypothetical: no matter how much incentive to innovate in the area of ski-lift gear mechanisms is required, consumers end up with the product and are vulnerable to supra-competitive pricing. Therefore, MacKie-Mason is probably correct in asserting that simply incorporating protected components in designs would be an easy way for firms to escape antitrust liability under the *Xerox* rule.[140]

The cases discussed above suggest that, under the *Xerox* rule, patentees and copyright owners may get away with leveraging market power in violation of antitrust principles. This result is not warranted by the policies behind the grant of intellectual property.

b) The Rationale for Illegality

In accordance with the policy considerations underlying grants of copyright and patent protection, such as patentees and copyright owners being allowed to appropriate the revenues stemming from their inventions or creations, refusals to deal should be deemed legal when they purport to protect the owner's lawful return. To prohibit property owners from "reap[ing] where they have sown"[141] is to negate their property rights, and is to incur the kind of cost that the antitrust principles seek to avoid.[142] Cases of alleged monopoly leveraging by unilateral refusals to deal should therefore turn on the scope of the reward to which the intellectual property owner is legally entitled. Under the intellectual property laws, this reward comes in the form of benefits flowing from exploitation of exclusive rights conferred by the innovation or creation.[143] Take the facts of *Xerox*, if the scope of a patent is not market control, but only control over an invention, then it does not follow that a patent on a copier's functional element should allow a monopoly on the market for repair-services.

In cases where an intellectual property owner/defendant claims protection of its intellectual property as a justification for a unilateral refusal to

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tive for the monopolist, the rival, or both to in-vest in those economically beneficial facilities.").

140. MacKie-Mason, *supra* note 17, at 7-8.

141. LANDES & POSNER, *supra* note 22, at 13.

142. *See, e.g.*, *Trinko*, 124 S. Ct. at 882 ("Mistaken inferences and the resulting false condemnations 'are especially costly, because they chill the very conduct the antitrust laws are designed to protect'." (citing Matsushita Elec. Indus. Co. v. Zenith Radio Corp., 475 U.S. 574, 594 (1986))).

143. *See* 35 U.S.C. § 154(a)(1) (2000) (patents); 17 U.S.C. § 106(1)-(3) (1994) (copyrights).

deal, plaintiffs should be able to show that demand for the product embodying the intellectual property is not the demand for intellectual property and a deal would not allow the plaintiffs to free-ride on the owner's innovation, and therefore would not threaten the owner's lawful return. Mark Patterson distinguishes between the "subject matter" of intellectual property and the end-product in which it is "materialized."[144] He argues that the Federal Circuit erred by confusing the scope of a patent (control over the invention), the relevant market for the products in which the asset embodying the patent competes (replacement parts), and the product itself.[145] It is the relevant market, the "economic monopoly," as opposed to the "patent monopoly," i.e., the control over the invention as defined in the patent claims, that matters for antitrust.[146] Patterson suggests that intellectual property owners should be required to support claims of intellectual property protection in refusal-to-deal cases by showing that the market power they acquired on the secondary market (e.g., the repair-service market) flows directly from their intellectual property.[147] In *Xerox*, in the presence of unpatented alternatives, the demand for Xerox's parts is a demand for patented assets. But in the absence of market alternatives it is simply a demand for replacement parts.[148] In the latter situation, the patent monopoly plays no role because it is not the patented characteristic that is desired.

On the other hand, the absence of market alternatives may simply be the result of a highly valuable patent. Then, the demand may come from the fact that the product is patented. But such arguments are misleading. In *Xerox* the reason why the ISOs needed Xerox's parts was not because these parts were patented, but because they were the only parts available to service Xerox's copiers. In using them to service Xerox copiers' end-users, the ISOs did not appropriate Xerox's legal reward, because the ISOs did not benefit from the invention, the end-users did. In refusing to deal with anyone but the end-users, Xerox necessarily imposed itself as the only service provider, since the ISOs had no access to parts.[149] Thus, Xerox foreclosed and monopolized a market unrelated to its intellectual

144. Mark R. Patterson, *When is Property Intellectual? The Leveraging Problem*, 73 S. CAL. L. REV. 1133 (2000).

145. *Id.* at 1155-56.

146. *Id.* at 1156.

147. *Id.* ("In order to be allowed to defend its leveraging by pointing to a legal right, Xerox should be required to show that it is in fact that legal right that is the source of its economic leveraging power.").

148. *Id.*

149. *In re* Indep. Serv. Orgs. Antitrust Litig. v. Xerox Corp., 203 F.3d 1322, 1324 (Fed. Cir. 2000).

property, using means that had nothing to do with the reward it was legally entitled to secure.

In the copyright context, the law makes a similar distinction between an idea and its expression, comparable to the distinction Patterson makes between a patent and an end-product. By refusing to call Accolade's reverse-engineering infringement, the court in *Sega* rejected an attempt to claim a legal right over unprotected aspects of the product. Therefore, the rationale for illegality seems to be based on the proposition that intellectual property owners must not use their property as a device to appropriate more than that to which they are legally entitled, consistent with a Lockean view that intellectual property serves to prevent parties from reaping profits where they have not sown.[150] This formulation of intellectual property rights is applicable to rivals who seek to free-ride on an innovator's efforts through copyright or patent infringement or misappropriation.[151] The same logic applies to intellectual property owners who purport to extend the reach of their entitlements.

2. *Interfering With Rivals' Production or Entry by Refusing to Deal In Intellectual Property*

In addition to monopoly leveraging, a market player can manipulate exclusionary privileges to block rivals' entry or expansion. But outside the leveraging context, the conduct takes place within what constitutes prima facie legal patent and copyright exploitation. Indeed, the whole point of granting a patent or a copyright is to enable the inventor or creator to freely exploit it. However, plaintiffs should be able to refute business justifications when the refusal-to-deal is intended to block entry or adversely affect rivals' production. The case-law suggests that this intent is not subjective but objective, testing when the rationale for the conduct at issue is anticompetitive, and excludes competitors in a way that furthers or maintains monopoly power.[152] Protecting valid intellectual property rights thus constitutes competition on the merits, but manipulating intellectual property rights to control or impede rivals' production, so as to preserve or extend a dominant position, would be considered anticompetitive and illegal.

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150. *See, e.g.*, Int'l News Serv. v. Associated Press, 248 U.S. 215, 239 (1915).

151. *See, e.g.*, *id.* at 240.

152. *See* Aspen Skiing Co. v. Aspen Highlands Skiing Corp., 472 U.S. 585, 602 (1985); *see also* United States v. Aluminum Co. of Am., 148 F.2d 416, 432 (1945) ("To read [the intent to monopolize requirement under section 2 of the Sherman Act] as demanding any 'specific' intent, makes nonsense of [the intent requirement], for no monopolist monopolizes unconscious of what he is doing.").

First, if the legal requirements for the granting of patents are loosely applied,[153] certain markets may potentially be flooded by patents, leading to more vulnerability for innovative firms in these markets. The current flood of patents in the semiconductors, biotechnology, and computer software industries creates patent thickets in the sense that new products in these industries are very likely to infringe the existing patents.[154] Accordingly, in a market where one or more firms control those patents that are necessary to make a certain product (e.g., a patented process), rivals could not create substitutes to the patentee's end-product absent access to the patented process. With such dependence, competitors are forced to either get a license or exit the market. The patentee is at a competitive advantage such that it can "holdup" rivals and impose high rates.[155] But the intellectual property holder may also refuse to deal, sue its rivals for infringement and be granted injunctive relief. In this case the rival's costs are *de facto* increased, either decreasing its profitability (and the quantity of its output) or simply be driven out of the market.

Setting an industry standard can also achieve a similar result because some standards require access to certain "essential" patents, in the sense that they are necessary to meet the standard's requirements. However, most standard-setting organizations require participants to agree to license all essential patents.[156] Nevertheless, they rarely sanction unreasonable licensing terms for fear of antitrust liability for price-fixing.[157] In most situations, patent holders are likely to exploit their bargaining power to impose high rates, which constitutes a type of fair use of their intellectual property rights. But one could also imagine patent holders setting prohibitive rates, which would increase costs to a point where rivals could not expect any reasonable profit, and where the rivals suffer consequences that are *de facto* similar to the effects of unilateral refusals to deal. This strategy could be all the more profitable if the standard works as a highly visible quality signal to consumers. This standard would in turn impede rivals' access, either driving them out of the market or forcing them to create a costly substitutive standard.

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153. Carl Shapiro, *Navigating the Patent Thicket: Cross Licenses, Patent Pools, and Standard Setting, in* INNOVATION POLICY AND THE ECONOMY 119 (Adam B. Jaffe et al. eds., 2000). Shapiro criticizes the PTO's admission of patents on business methods. *Id.* at 120 ("[The PTO] does indeed seem to have allowed a number of patents on ideas that would not appear offhand to meet the usual standards for novelty and nonobviousness.").

154. *Id.* at 119.

155. *Id.* at 125.

156. *Id.* at 128.

157. *Id.*

Standard setting might be used anticompetitively[158] in the particular context of markets characterized by strong network externalities,[159] such as the computer industry. Mark Lemley and David McGowan argue that standard-setting is particularly conducive to non-price predatory behavior in these settings because the price increases following a rival's exit from the market will discourage other companies from entering the market, largely because consumers will inevitably become reluctant to abandon the dominant standard.[160] This makes recouping the initial investment easier for those companies that remain in the market after the rival's exit.[161]

Finally, the *Aspen* refusal-to-deal used past collaboration to harm the only competitor in the market.[162] Jonathan Baker illustrated this anticompetitive effect in the intellectual property context in his rationalization of the Arrow model.[163] Baker is concerned that, in situations where a dominant firm and its fringe rivals are either engaged in collaborative relationships or are merely selling complementary products, the dominant firm will have the means to impede its rivals' innovations[164] by, for example, refusing to license its intellectual property. Collaboration enables the dominant firm to threaten to end its relationship with other firms, thus restricting access by producers of complementary products, be these mountains (as in *Aspen*) or patented parts for photocopiers (as in *Xerox*). The dominant firm might also reduce competition by creating incompatibilities.

B. The Test for Liability under the Rule of Reason

While there is no reason why a firm with monopoly power should not be entitled to claim the exercise of its intellectual property rights as a business justification for refusing to deal, plaintiffs should be allowed to challenge this defense by demonstrating that the intellectual property

158. Mark A. Lemley & David McGowan, *Could Java Change Everything? The Competitive Propriety of a Propriety Standard,* 3-4 THE ANTITRUST BULLETIN 715 (1998).

159. Network externalities are defined, in the context of the software market, as "the utility that a user derives from consumption of 'software' increases with the number of other agents consuming the good." Michael L. Katz & Carl Shapiro, *Systems Competition and Network Effects,* 8 J. ECON. PERSP. 93 (1994).

160. Lemley & McGowan*, supra* note 158, at 725.

161. *Id.*

162. Aspen Skiing Co. v. Aspen Highlands Skiing Corp., 472 U.S. 585, 608 (1985).

163. Baker, *supra* note 40. The Arrow model stipulates that firms in competitive markets have greater incentives to innovate than monopolists. *See* discussion *supra* Part II.A.2.

164. Baker, *supra* note 40, at 519.

claim is a pretext, or is constitutive of predatory behavior. Easy cases will be when plaintiffs are unable to rebut the presumption that the exercise of intellectual property rights to exclude by the right owner is valid. More difficult cases will require that plaintiffs demonstrate a net anticompetitive effect such that the lawful right to exclude cannot justify the exclusionary detriment caused by the refusal to deal.

In *Kodak I*, the Supreme Court employed the framework of analysis used in *Aspen* to impose a duty-to-deal with Kodak's direct rival and added the proviso that liability turned on whether a valid business justification could explain Kodak's actions.[165] No inquiry into the harm to competition was required at that stage.[166] This is what Baker called a "truncated rule" for liability.[167] The question of how to proceed when faced with a valid justification was left unanswered. Indeed, the Court did not have to face the issue for this particular case,[168] nor did it suggest a proper route of inquiry in dictum.

The framework set by the Supreme Court in *Kodak*,[169] *Aspen*,[170] and *Trinko*[171] and Court of Appeals decisions on unilateral refusals to deal in intellectual property[172] suggest a two-step analysis:

> (1) Monopoly power and exclusionary behavior without valid business justifications violate the Sherman Act. Business justifications are rebuttable upon a showing of anticompetitive intent.[173]
>
> (2) Excluding rivals from intellectual property is a presumptively valid business justification.

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165. Eastman Kodak Co. v. Image Technical Servs., Inc., 504 U.S. 451, 483 (1992) [hereinafter *Kodak I*].

166. Baker, *supra* note 40, at 496.

167. *Id*.

168. The Court did not face the issue since the assessment of Kodak's proffered business justification was sent back on remand to the lower court. *See Kodak,* 504 U.S. at 486.

169. *Id.*

170. Aspen Skiing Co. v. Aspen Highlands Skiing Corp., 472 U.S. 585 (1985).

171. Verizon Communications Inc. v. Law Offices of Curtis V. Trinko, 124 S. Ct. 872 (2004).

172. *See* Data Gen. Corp. v. Grumman Sys. Support Corp., 36 F.3d 1147, 1184 (1st Cir. 1994); *Kodak II*, 125 F.3d 1195, 1214 (9th Cir. 1997).

173. *See Aspen,* 472 U.S. at 608, 610-11 (demonstrating that, absent efficiency justifications, unilateral termination of a joint offering was sufficient evidence of intent to forsake short term profits to exclude a competitor and anticompetitively increase market shares in the long run).

I propose adding a third step to the above two-step analysis:

(3) The presumption of valid business justification in the second step can be rebutted: applying the rule of reason, the business justification is overturned when the anticompetitive effects of the exclusion from the intellectual property outweigh the pro-competitive ones, i.e., when the harm to competition outweighs the benefits, or if the harm could be avoided by using a less restrictive alternative. The inquiry should focus on the monopolist's intent in their refusal to deal in order to reveal whether the intellectual property justification is a façade. This is central to the question whether the refusal to deal can be considered exclusionary, engendering a net anticompetitive effect. Finally, in light of the recent emphasis put by the Supreme Court on the preservation of *ex ante* incentives in unilateral refusals-to-deal cases,[174] I address the expected effect of such a rule of reason on the incentives to innovate.

1. What Are Pretextual Intellectual Property Claims?

Intellectual property may be used as a pretext for monopolization in situations where the owner's purpose can be divorced from seeking appropriation of his lawful reward.[175] Intent is central to the legal inquiry,[176] whether the inquiry legitimizes behavior in a given market or invalidates it.[177] Following Patterson's guidelines,[178] plaintiffs can expose pretext by demonstrating that the refusal is not related to legitimate exploitation of intellectual property, or that the refusal in fact implements a price-discrimination scheme that does not aim at distinguishing between different valuators of intellectual property.

a) Pretext #1: When Refusals to Deal are Unrelated to Intellectual Property

Protection of intellectual property rights is a pretext when the refusal does not enable the owners to appropriate a return within the legal grant.

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174. *Trinko,* 124 S. Ct. at 872.

175. *Kodak II*, 125 F.3d at 1219.

176. *See Trinko,* 124 S. Ct. at 879-80.

177. The *Image Technical Servs. v. Eastman Kodak* holding is often read as imposing an inquiry into subjective motivation. But all that the court stated was that "[e]vidence regarding the state of mind of Kodak employees *may* show pretext." *Kodak II*, 125 F.3d at 1219 (emphasis added). Therefore, such investigation into subjective motivation is not necessarily the only analysis for pretextual intellectual property justifications.

178. Patterson, *supra* note 144 (Patterson argues that intellectual property owners claiming that market power obtained in a leveraged market is linked to their legal property should be required to show the causal link between their legal right and their leveraging power).

Copyright law limits the scope of protection to an author's expression, and does not protect the author's ideas.[179] In *Sega*,[180] the defendant's verbatim copying of copyrighted data was upheld by the Ninth Circuit as fair use based on this idea/expression dichotomy: copying copyrighted elements was necessary to access functional—and thus unprotectable—elements, which are necessary for interoperability. Applying this dichotomy to our debate, the copyright holder's entitlement does not extend to the right to use his intellectual property rights to prevent access to a business area that the copyright holder is not entitled to control.

Patent law does not recognize such a dichotomy; although an abstract idea is not patentable, "a new device by which it may be made practically useful is."[181] The line between an abstract idea and a new device embodying such an idea is blurry, and the distinction renders analysis of the scope of the patent grant more difficult. Following Patterson, the test for legality of refusals to deal is based upon the notion that the patent grant protects only the invention, and not the end-product embodying it.[182] According to Patterson, leveraging cases should turn on whether the use of the property sought by the prospective licensee is attached to the IP-protected elements.[183] But one can also state the issue in terms of the nature of the reward the IP owners have sought in refusing to deal.[184] For instance, in *Xerox*, since the benefits flowing from the innovative components in the spare parts would only benefit end-users, the refusal to deal did not really deny the ISOs access to intellectual property, but instead only denied them the access to the end-users who worked with these ISOs. The difference is that the ISOs received no additional revenue for using Xerox's patented parts, contrary to a situation where they would have been able to get unpatented parts from another manufacturer, while still demanding Xerox's patented parts. Why then would Xerox refuse to deal other than to foreclose the market for service? In *Kodak II*, this argument is even easier to make, since among the parts that Kodak had refused to sell to the ISOs,

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179. 17 U.S.C. § 102(b) (1994).

180. Sega Enters. Ltd. v. Accolade, Inc., 977 F.2d 1510 (9th Cir. 1992).

181. Rubber-Tip Pencil Co. v. Howard, 87 U.S. 498, 507 (1874).

182. Patterson, *supra* note 144, at 1134-35 ("[I]ntellectual property rights should provide special protection from the antitrust laws only when the owner of the rights is truly denying access to its intellectual property. That will never be the case when the owner's property is denied to one who will not use the intellectual property.").

183. *Id.* at 1135.

184. *Id.* at 1140 ("[B]y focusing on the one to whom the work would be denied rather than the owner of the work, the proposal seeks to ensure that the return on intellectual property is related to its value.").

only 65 were patented.[185] In that circumstance, the refusal to deal was clearly divorced from the entitlement to appropriate the reward from innovative activity, and the protection of intellectual property rights had crossed the line and become a pretext for anticompetitive market foreclosure.

b) Pretext #2: Price Discrimination Indirectly Related to Intellectual Property[186]

Several authors have addressed the issue of the antitrust approach of price discrimination schemes.[187] Recent scholarship demonstrates price discrimination schemes can be pro-competitive. Elhauge argues that common costs, which are incurred by offering the products or services regardless of the number of customers, can be efficiently recouped using price discrimination. The higher valuators of the product can be charged a disproportionate share of the common costs to balance the lower share paid by low-valuators.[188] This enhances the customer-base and increases output. Elhauge's analysis suggests that price discrimination is not incompatible with a competitive marketplace. Although firms are enabled to maximize revenues by price discriminating between consumers who value the product differently, their total revenue will not exceed their total cost (i.e., fixed cost plus marginal cost) thus excluding the possibility of supra-competitive profits.[189] Therefore the hostility toward price discrimination is indeed misplaced because price discrimination can be a pro-competitive means to reap return on *any* kind of property.[190]

If so, then price discrimination may be justified and constitutes a pro-competitive means for intellectual property owner to maximize revenue generated by an intangible asset. On the other hand, schemes that do not purport to achieve such maximization are not justifiable under this model.

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185. *Kodak II*, 125 F.3d 1195, 1214 (9th Cir. 1997).

186. In economic theory, perfect price discrimination occurs when sellers with market power are able to distinguish different consumers' price elasticity: by charging the highest price for the output each consumer is willing to pay, the seller appropriates the totality of consumers' surplus and extends the quantity of output to the competitive level. This increases the seller's return and increases the user base.

187. *See, e.g.*, Patterson, *supra* note 144; Benjamin Klein & John Shepard Wiley Jr., *Competitive Price Discrimination as an Antitrust Justification for Intellectual Property Refusals to Deal,* 70 ANTITRUST L.J. 599 (2003).

188. Einer Elhauge, *Why Above-Cost Price Cuts to Drive Out Entrants are Not Predatory—And the Implications for Defining Costs and Market Power*, 112 YALE L.J. 681, 734 (2003).

189. *Id.* at 733.

190. Klein & Wiley, *supra* note 187, at 608-21.

In that sense, Patterson argues that the denial of access to the patented parts in *Xerox* was not meant to achieve price discrimination between different valuators of the innovation.[191] He argues that excluding the ISOs from access to parts allowed Xerox to impose a higher mark-up on services, thus increasing revenues from heavy users.[192] Rather than reflecting discrimination based on the valuation of intellectual property, this kind of exclusion reflects discrimination based on valuation of the equipment as a whole.[193] To discriminate between different valuations of intellectual property would have required Xerox to impose higher prices on parts.[194] The best proxy for metering different valuators of intellectual property is parts, as opposed to services, because consumers' service needs are not linked to their valuation of the innovation embodied in the parts.[195]

Forceful arguments can be made, however, in favor of allowing intellectual property owners to shift some of the return from their intellectual property to the aftermarket.[196] Klein and Wiley argue that such a shift enables intellectual property owners to increase their return by lowering the price they charge for their equipment, which would in turn increase the user-base for the equipment,[197] and to reduce the difference that would otherwise exist between the price for equipment and the price for services.[198] This would be efficient since intellectual property incurs high fixed costs and low marginal costs. If companies could only recoup their investment in R&D through equipment sales, equipment would be overpriced because the gap between equipment price and marginal cost would be greater than the gap between service price and service marginal cost.[199] However, such a price discrimination scheme poses several problems. First, the "overprice" reflects the part's higher value because of its innovative character. Second, the intellectual property grant is not a grant of market power that can be used to increase price on whatever element the manufacturer wants. On the contrary, the rationale underlying intellectual property grants is that their owners should appropriate revenues flowing from their innovations and the return should be proportionate to the social

191. Patterson, *supra* note 144, at 1143.
192. *Id.*
193. *Id.*
194. *Id.*
195. *Id.* (stating that "service pricing would be an inaccurate discrimination device to the extent that consumers' valuations of the inventions were not exactly correlated with their service needs").
196. Klein & Wiley, *supra* note 187, at 613.
197. *Id.*
198. *Id.* at 614.
199. *Id.*

value of the innovations.[200] Allowing Klein and Wiley's price manipulation scheme would amount to giving intellectual property owners a license to pass on the price surcharge reflecting their private valuation of the innovation to services on the patented product. The value of repair service is not linked to the innovation, and certainly should not be protected by the intellectual property laws.

For that reason, such a scheme seems to run counter the policies underlying the intellectual property laws. Klein and Wiley's proposal cannot be used to distinguish between different valuators of intellectual property. Neither would this scheme protect the innovator's intellectual property, or even maximize its return on a product incorporating intellectual property. Instead, the scheme would maximize the return on a package of products and services that happen to include innovative components. And for the scheme to work, the independent service providers must be excluded from the aftermarket, although lower equipment prices has increased the user-base and made the aftermarket attractive for entry. As far as refusal-to-deal cases are concerned, it is not convincing for a defendant to argue that such exclusion was justified because it was necessary to recoup revenues that were forgone to increase market exposure of the defendant's equipment in the first place. This argument would also appear anticompetitive. It may be true that allowing such a scheme would increase incentives to innovate *ex ante*, but even Klein and Wiley acknowledged that increasing intellectual property owners' return may result in a net social cost,[201] especially when these innovators privately value their investments higher than the social value brought to bear by their innovation.[202] Klein and Wiley raised doubt that firms would exaggerate the value of their investment in innovation under their scheme because imperfect appropriability leads firms to underestimate their innovation's value.[203] But such doubts are far-fetched because, under their scheme, anticipated return will surely increase, and investors will have an incentive to overestimate their innovation's value.

Therefore, even if there was a price-discrimination scheme going on in *Xerox* or in *Kodak II*, there was no separation of the valuators for the inventions. The scheme would have been a business decision unrelated to intellectual property, because monopolization of the aftermarket would be unnecessary to protect statutory intellectual property rights. Therefore the

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200. *See* Motion Picture Patents Co. v. Universal Film Mfg. Co., 243 U.S. 502, 513 (1917).

201. Klein & Wiley, *supra* note 187, at 617.

202. *Id.*

203. *Id.* at 618.

promotion of a discriminatory pricing scheme through services is not justifiable, because services bear little relationship to the value consumers attach to the inventions.

2. Showing Anticompetitive Exclusionary Behavior

Antitrust law limits exclusionary privileges inherent in private property when monopolists use these privileges to exclude rivals on basis other than competition on the merits.[204] However, there does not seem to be a simple explanation of what makes exclusionary behavior anticompetitive. The Supreme Court in *Aspen* used a broad formulation, referring to the conduct's impact on rivals, its impact on consumers, and its impact on competition in general to assess whether the behavior at issue can be deemed exclusionary.[205] Arguing against the Ordover-Willig standard,[206] which mandates that conduct is predatory when it constitutes an immediate sacrifice of profit in order to exclude rivals and consequently regain market power,[207] Elhauge explains that focusing on profit sacrifice at one point in order to reap monopoly profits later in time is misguided because

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204. *See* Verizon Communications Inc. v. Law Offices of Curtis V. Trinko, 124 S. Ct. 872, 879 (2004).

205. Aspen Skiing Co. v. Aspen Highlands Skiing Corp., 472 U.S. 585, 605 (1985). The Court reasoned:

> The question whether [the] conduct may properly be characterized as exclusionary cannot be answered by simply considering its effect on [rivals]. In addition, it is relevant to consider its impact on consumers and whether it has impaired competition in an unnecessary way. If a firm has been 'attempting to exclude rivals on some basis other than efficiency,' it is fair to characterize its behavior as predatory.

Id.

206. Janusz A. Ordover & Robert D. Willig, *An Economic Definition of Predation: Pricing and Product Innovation*, 91 YALE L.J. 8, 9-10 (1981). Ordover & Willig suggest:

> [A]lthough a practice may cause a rival's exit, it is predatory only if the practice would not be profitable without the additional monopoly power resulting from the exit. . . . [T]he profitability of the incumbent's actual and alternative responses should be assessed on the assumption that the rival reacts to them in a competitive fashion.. . . Therefore, the proposed standard does not penalize the incumbent for legitimate competitive responses, even if they damage the rival, and the standard does not protect a rival that can not prosper under competitive circumstances.

Id.

207. Melamed & Stoepellwerth, *supra* note 17, at 419 ("[A]nticompetitive conduct is conduct that serves no legitimate purpose, or is itself unprofitable, and is undertaken in order to exclude or weaken competitors in anticipation of increased market power and resulting supracompetitive recoupment.").

such a focus ignores the incentives that foster pro-competitive behavior.[208] In his view, courts should instead focus on whether the means chosen to exclude rivals are "undesirable in a way antitrust law can regulate without having unduly negative effects on other desirable conduct."[209] This seems to be the Supreme Court's motivation behind its holding in *Aspen.* The *Aspen* Court refused to limit exclusionary behavior to instances where there is a direct impact on competitors; instead, the Court extended the inquiry to situations where there is harm to consumers and competition in general.[210] The holding is not a guideline, however, it is rather a reminder that exclusionary behavior should not be strictly defined so that practices that do not immediately harm rivals can still be properly deterred, while keeping the door open for efficiency justifications.

Therefore the nature of the anticompetitive harm exclusionary practices might bring about in the area of intellectual property is not limited to a specific set of injury and, according to *Aspen*, antitrust liability should not be limited to cases where there is proven direct harm to consumers, particularly in the form of output limitation. Fox argues that the *Microsoft* case[211] could serve as a template for analyzing unilateral exclusionary practices in the new economy.[212] Accordingly, the touchstone for anti-competitiveness in *Microsoft* was market foreclosure. Output limitation was not necessary for a finding of illegality.[213] The fact that Microsoft foreclosed an "important route of access to the browser market"[214] was enough. This is consistent with the holding in *Aspen* that the basis for illegality was the characterization of the conduct as designed to harm or exclude a competitor, thus harming consumers not by restricting output, but by decreasing quality and flexibility.[215]

Thomas Krattenmaker and Steven Salop proposed a two-part test for illegal exclusions:[216] (1) does the conduct unavoidably and significantly increase rivals' costs, and (2) does the conduct results in an acquisition of monopoly power, i.e., the power to fix supra-competitive prices, for the

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208. Elhauge, *supra* note 188, at 702.

209. *Id.*

210. Aspen Skiing Co. v. Aspen Highlands Skiing Corp., 472 U.S. 585, 605 (1985).

211. United States v. Microsoft Corp., 253 F.3d 34 (D.C. Cir. 2001).

212. Eleanor M. Fox, *What is Harm to Competition? Exclusionary Practices and Anticompetitive Effect*, 70 ANTITRUST L.J. 371, 384-92 (2002).

213. *Id.* at 387.

214. *Id.*

215. Aspen Skiing Co. v. Aspen Highlands Skiing Corp., 472 U.S. 585, 608 (1985).

216. *See* Thomas G. Krattenmaker & Steven C. Salop, *Anticompetitive Exclusion: Raising Rivals' Costs to Achieve Power over Price,* 96 YALE L.J. 209 (1986).

excluding firm.[217] This test is problematic for two reasons. First, relying on a determination of the competitive price by the courts is unrealistic. Second, this test misinterprets the legitimacy of property rights.[218] By definition, owning property raises rivals' costs for using the goods protected by the right to exclude, because the rivals must pay for the goods. In this sense, the property is a necessary tool for exchange and competition. Therefore thinking of anticompetitive exclusion merely in terms of raising rivals costs in general is not helpful. The focus should instead be on which specific costs may or may not be legitimate.[219]

Courts need to conduct a case-by-case inquiry in rival exclusion cases. The Ordover-Willig test poses over-deterrence problems,[220] while Kattenmaker and Salop's reliance on courts' ability to determine the competitive price on every market is unrealistic.[221] Many intertwined rationales exist for non-price predatory behavior: foreclosing competitors from distribution channels and sources of supplies, raising rival's costs, and deterring new competitors from market entry. The only way to determine whether a defendant's exclusion is anticompetitive is to examine whether the potential benefits of the conduct offset the costs to allocative efficiency. Elhauge argues that exclusionary conducts should only be condemned when they enhance or preserve a monopolist's market power regardless of any improvement in the monopolist's efficiency.[222] But when the competitors' exclusion depends on the monopolist improving its own efficiency, the behavior at issue should be deemed legal.[223] This is consistent with the holding in *Trinko,* which emphasized the notion that the attainment of monopoly power through legal means is pro-competitive:[224] when the gain of market power is unrelated to the monopolist's "growth or development as a consequence of a superior product [or] business acumen,"[225] it is anticompetitive. In the case of intellectual property, net anticompetitive effect may be proven by showing the unilateral refusal to deal at issue does not reflect the owner's intention to appropriate his lawful reward. Rebutting the presumption that use of intellectual property is a valid

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217. *Id.* at 214.

218. Wesley J. Liebeler, *Exclusion and Inefficiency*, 11 REGULATION 34 (1987).

219. *Id.* ("The real question is *which* rivals' costs *should* be raised.").

220. *See* Elhauge, *supra* note 188, at 701-2.

221. Liebeler, *supra* note 218, at 38.

222. Einer Elhauge, *Defining Better Monopolization Standards*, 56 STAN. L. REV. 253, 323-30 (2003).

223. *Id.* at 316-20.

224. Verizon Communications Inc. v. Law Offices of Curtis V. Trinko, 124 S. Ct. 872, 879 (2004).

225. United States v. Grinnell Corp., 384 U.S. 563, 571 (1966).

business justification on that basis simply reveals the fallacy of arguments claiming that the refusal was necessary to preserve *ex ante* incentives to innovate, because the innovation at issue had little to do with the market that is monopolized. In this sense, the rule of reason does not sanction a monopolist's legitimate use of its intellectual property.

3. Why the Rule of Reason Does Not Deter Desirable Incentives to Innovate

The Supreme Court in *Trinko* determined that safeguarding *ex ante* incentives to innovate required a clear proof of anticompetitive conduct on the part of the defendant,[226] and emphasized the necessary caution courts must exercise in finding the duties to deal.[227] There are two important concerns when applying the rule of reason to unilateral refusals to deal in intellectual property: that proper use of intellectual property is not sanctioned, and that pro-competitive incentives are preserved.

First, the rule of reason applied in unilateral refusal-to-deal cases is a cautious one and plaintiffs must overcome many hurdles before establishing that the intellectual property at issue has been improperly used. The plaintiff's burden of proof is substantial: it must demonstrate the defendant's possession of monopoly power, its exclusionary behavior, and finally overcome the presumption that the defendant is properly using its lawful right to exclude. Therefore the rule of reason does not open the door to open-ended balancing. Because the exercise of intellectual property rights should presumptively justify refusals to deal, plaintiffs who are unable to prove that the refusal was not linked to intellectual property will not be successful in the courts. This is consistent with the *Grinnell* test for monopolization, which protects monopoly power resulting from a superior product.[228] Applying antitrust principles to bind intellectual property owners does not limit their legal entitlements to efficiently exclude others from their property. It merely limits those actions taken solely to foreclose markets in ways unrelated to their intellectual property.

The *Trinko* opinion is thus consistent with the case-law discussed in part II.B. of this Article because it requires a showing by the plaintiff of anticompetitive exclusionary behavior and an anticompetitive intent on the part of the defendant.[229] This warrants the inquiry into the causal link between the refusal to deal and the preservation of the reward generated by

226. *Trinko*, 124 S. Ct. at 879-80.
227. *Id.* at 879.
228. *Grinnell*, 384 US at 571.
229. *Trinko,* 124 S. Ct. at 880.

the intellectual property. Though the *Trinko* Court describes *Aspen* as relying on a sacrifice-of-profit test to prove anticompetitive intent,[230] the opinion does not exclude alternative ways to prove such intent.[231] The Court's decision in *Trinko*, then, gives implicit support to the pretext test for unilateral refusals to deal in intellectual property.

Second, the rule of reason would only deter anticompetitive incentives. Antitrust liability is carefully constructed to preserve the perspective of attaining monopoly power by legal means. The Supreme Court explicitly endorsed this view in *Trinko*,[232] but it is a standard antitrust policy that underlies the *Grinnell* test for monopolization.[233] Antitrust liability does not destroy the prospect of being able to exclude rivals from one's property and charge a price that will generate profits. Rather the liability destroys the incentives to use intellectual property rights to behave anticompetitively, or in ways that are inconsistent with the policies underlying the grant of intellectual property in the first place.

This notion is supported by empirical evidence showing that compulsory licensing have little, if any, effects on the incentives to innovate.[234] In his 1977 study, F.M. Scherer concludes that there is "no indication that mandatory licensing ha[s] an adverse effect on R&D investment."[235] Scherer's conclusions are based on his own study on compulsory licensing, conducted in 1958 as a student at the Harvard Business School[236] and statistics he had generated from a Business Week compilation of privately-financed R&D expenditures for some 730 U.S. corporations.[237] Scherer offers several justifications for his conclusion that all appear to be industry and/or firm-specific.[238]

From an *ex post* standpoint, Scherer concluded that compulsory licensing had little effect on the incentives to innovate in industries where companies operating under a compulsory-license decree must maintain a high

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230. *Id.*

231. *Id.* at 879-80.

232. *Id.* at 879 ("The mere possession of monopoly power, and the concomitant charging of monopoly prices, is not only not unlawful; it is an important element of the free market system.").

233. *Grinnell*, 384 US at 571 (defining exclusionary conduct as "the willful acquisition or maintenance of [monopoly] power as distinguished from growth or development as a consequence of a superior product, business acumen, or historic accident").

234. F. M. SCHERER, THE ECONOMIC EFFECTS OF COMPULSORY PATENT LICENSING (1977).

235. *Id.* at 63.

236. F. M. SCHERER ET AL., PATENTS AND THE CORPORATION 91 (2d ed. 1959).

237. SCHERER, *supra* note 234, at 67.

238. SCHERER, *supra* note 234, at 63.

level of R&D to remain competitive, regardless of the particular antitrust policy. These compulsory licenses also had little effect on industries where the ability of competitors to "invent around" patents diminished the use of patent protection.[239]

Scherer also observed that the only industries where compulsory licensing was feared to have an effect on R&D investment were industries that had not actually experienced antitrust imposition of compulsory licensing.[240] Thus, from an *ex ante* perspective, the prospect of compulsory sharing raises concerns. Nevertheless, Scherer's study clearly concludes that those concerns did not translate into lower incentives when firms eventually had to share, because other factors came into play, such as the necessity to keep innovating to maintain a market position, or the fact that exclusion did not impair rivals' ability to invent around the patent and achieve the same result. Moreover, Scherer's study does not suggest that the fear of the adverse effect of compulsory licensing on investment lowered investment before compulsory licensing was, in fact, imposed.[241] The study therefore reflected the notion that only the inexperienced industries had concerns, while compulsory licensing did not in fact lower investment incentives in experienced industries because other competitive requirements fueled the need to keep innovating.

Finally, in studying R&D investment patterns for the year 1975, and comparing firms subjected to compulsory licensing under antitrust decrees to comparable companies not so constrained, Scherer observed that there was "no significant indication that [the] 44 companies subjected to compulsory patent licensing . . . sustained less intense R&D efforts."[242] If anything, he observed the opposite tendency.[243] His conclusion also suggests that the constraints on comparable companies in the form of duties to license did little to deter unconstrained companies from investing.

Therefore compulsory patent licensing has negligible effect on the incentives to innovate. Unfortunately, this lack of effect on the incentives to innovate, which is likely the industrial reality, has been largely overlooked, in an effort to lighten the load on judges and juries.

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239. *Id.*

240. *Id.*

241. *See* SCHERER, *supra* note 234, at 64 (stating that although he speculated that uncertainty with respect to antitrust liability may marginally weaken reliance on patents and thus adversely affect R&D expenditures, empirical evidence does not support this view).

242. *Id.* at 75.

243. *Id.*

IV. CONCLUSION

Per se legality for refusing to deal in intellectual property would deny antitrust plaintiffs the chance to demonstrate potential adverse impacts on competition resulting from unilateral refusals to deal in intellectual property. Courts routinely engage in this kind of analysis when other property rights are at issue. Proponents of per se legality justify their position by the stringent utilitarian principle that underlies grants of intellectual property. The intangible nature of intellectual property should not be neglected, but it does not necessitate a weakened antitrust analysis. Any private property grant is based on utilitarian principles.[244] Any private property grant also seeks to allow its owner to appropriate returns flowing from its use, and thus provide incentives for the creation or acquisition of such assets.

Xerox should be overruled to solve the major under-deterrence caused by an immunity rule. The arbitrary distinction between intellectual property and other property rights for purposes of antitrust analysis should not perpetuate. It is not enough that the courts recognize that holding intellectual property rights does not demonstrate monopoly power for antitrust purposes; it should also be reaffirmed that intellectual property grants do not establish a monopoly grant immune from antitrust liability. The Supreme Court plainly stated this proposition a long time ago, through the words of Justice Clarke who defined the patent grant in *Motion Picture Patents Co.* as giving

> the inventor the exclusive use of just what his inventive genius has discovered. It is all the statute provides shall be given to him and it is all that he should receive, for it is the fair as well as the statutory measure of his reward for his contribution to the public stock of knowledge. If his discovery is [. . .] unimportant, he should not be permitted by legal devices to impose an unjust charge upon the public in return for the use of it.[245]

To Justice Clarke, the statute's language[246] "is so plain that to argue it would obscure it."[247] In reality, the plain language of the law has been ob-

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244. *See* LANDES & POSNER, *supra* note 22, at 13.

245. Motion Picture Patents Co. v. Universal Film Mfg. Co., 243 U.S. 502, 513 (1917).

246. 35 U.S.C. § 154(a)(1) (2000). The language of the statute reads:

> Every patent shall contain a short title of the invention and a grant to the patentee, his heirs or assigns, of the right to exclude others from making, using, offering for sale, or selling the invention throughout the United States or importing the invention into the United States, and, if the invention is a process, of the right to exclude others from using, of-

scured and distorted by the *Xerox* rule. Intellectual property rights have been transformed from a means to put creators of certain intangible assets on equal footing with owners of other property rights, into a vehicle for asserting monopolistic control over markets. The transformation is unwarranted and is critical to the current state of affairs, and proponents of an expanding conception of intellectual property are sitting on the Court of Appeals for the Federal Circuit. The time may have come for a fresh reading of the law and a return to the simple, yet accurate guidelines as set forth by Justice Clarke eighty-six years ago.

> fering for sale or selling throughout the United States, or importing into the United States, products made by that process, referring to the specification for the particulars thereof.

Id.

247. *Motion Picture Patents*, 243 U.S. at 513.

HOW CURRENT COPYRIGHT LAW DISCOURAGES CREATIVE OUTPUT: THE OVERLOOKED IMPACT OF MARKETING

By Mark S. Nadel †

ABSTRACT

This Article explores how copyright law's prohibition against unauthorized copying and sales may, counter to the law's purported goal, have an overall negative impact on the production and dissemination of creative content. The Article contends that in the current lottery-like environment of many media markets, copyright law disproportionately inflates the revenues of the most popular creations, which leads publishers to spend increasing amounts on promotional campaigns, which, intentionally or not, drowns out economically marginal creations. This discourages, rather than encourages, investment in many new creations. Consequently, current copyright law may actually reduce the overall production of new creations. As an alternative to the current strict limits copyright law imposes on copying, this Article explains how new technologies, social norms, and much weaker prohibitions against unauthorized copying may be combined to create viable business models for financing new creations. These business models appear capable of ensuring creators and publishers a sufficient profit to stimulate creation and distribution but without the significant harms produced by broad prohibitions against unauthorized copying.

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TABLE OF CONTENTS

I. INTRODUCTION

> [F]or the sake of the good, we must submit to the evil.
>
> -Thomas Macaulay,
> Speech Delivered in the House of Commons[1]

1. *See* Thomas Macaulay, Speech Delivered in the House of Commons (Feb. 5, 1841), *in* PROSE AND POETRY 731, 734-35 (para. 7) (G.M. Young ed., 1952).

> The granting of [exclusive copyrights by Congress], under the proper terms and conditions, confers a benefit upon the public that outweighs the evils of the temporary monopoly.
>
> -House Report on the 1909 Copyright Act[2]

The quotations above highlight a fundamental premise of copyright law: that granting the copyright holder a virtual monopoly by prohibiting the unauthorized copying and sales of copyrighted works[3] is a necessary evil for attracting the financial investments needed to promote the creation and distribution of these creative works. The rationale is that if creative works could be freely copied, unauthorized copies would drive prices below the levels needed to induce most creators and publishers to invest in producing new works.[4] This would leave many valuable creative works uncreated or unpublished.[5] Thus, the assumption is that prohibiting unauthorized copying promotes a benefit—new creations—that outweighs the harm—limited access to these creations.[6]

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2. House Report on the 1909 Copyright Act, H.R. REP. NO. 60-2222, at 7 (1909).

3. *See* 17 U.S.C. § 106 (2000).

4. 1 PAUL GOLDSTEIN, COPYRIGHT § 1.14, at 1:40-:41 (2d ed. Supp. 2004) ("To give fewer property rights than are needed to support this investment would give users freer access, but to a less than socially desirable number and quality of works."). This market failure is intensified by content's nature as a "public good," the consumption of which by one person does not diminish the quantity available for another. *See* Harold Demsetz, *The Private Production of Public Goods*, 13 J.L. & ECON. 293, 293 (1970); Paul A. Samuelson, *The Pure Theory of Public Expenditure*, 36 REV. ECON. & STAT. 387, 387 (1954). Examples of public goods include non-rivalrous goods such as a song, a sunset, or national defense.

5. At least it might not be offered as soon. *See* Harper & Row, Publishers, Inc. v. Nation Enters., 471 U.S. 539, 546 (1985) ("It is evident that the monopoly granted by copyright actively served its intended purpose of inducing the creation of new material of potential historical value."); *id.* at 557 ("Absent such protection, there would be little incentive to create or profit in financing such memoirs."); MELVILLE NIMMER, NIMMER ON COPYRIGHT § 1.03[A], at 1-66.18 (1976); Brief of George A. Akerlof et al. as Amici Curiae at *4-*5, Eldred v. Ashcroft, 537 U.S. 186 (2003) (No. 01-618) (providing an economic analysis of the main feature of the Copyright Term Extension Act of 1998 and stating that "[t]he main economic rationale for copyright is to supply a sufficient incentive for creation"), *available at* www.aei.brookings.org/admin/authorpdfs/page.php?id=16; William M. Landes & Richard A. Posner, *An Economic Analysis of Copyright Law*, 18 J. LEGAL STUD. 325, 332 (1989) ("Without copyright protection, authors, publishers, and copiers would have inefficient incentives with regard to the timing of various decisions.").

6. *See* RICHARD WATT, COPYRIGHT AND ECONOMIC THEORY: FRIENDS OR FOES? 12 (2000); Landes & Posner, *supra* note 5, at 335 ("Some copyright protection is necessary to generate the incentives to incur the costs of creating easily copied works . . . ."). The benefits and costs of intellectual property are often measured via economic analyses.

Even those strongly opposed to monopolies accept the premise that the protection against copying provided by § 106 of the Copyright Act is required to stimulate investment in new creative works.[7] Moreover, the Supreme Court in *Harper & Row, Publishers, Inc. v. Nation Enterprises* characterized copyright law as "the engine of free expression."[8] Although the Court's opinion in *Eldred v. Ashcroft* indicated doubt in the wisdom of Congress's decision to extend copyright terms,[9] other court decisions on copyright have long presumed that Congress has crafted copyright legislation so as to maintain a "delicate balance" between excessive copyright protection (which limits consumption) and minimal copyright protection (which undercuts production).[10] Similarly, most copyright law commenta-

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See, e.g., Landes & Posner, *supra* note 5, at 333-36 (describing a model of the effect of copyright protection on the creation of works). Against the background of the success of the first enclosure (of land) movement, the premise of almost all economic analyses of intellectual property law is that the recognition of strong property rights in intellectual creations is fundamentally sound. James Boyle calls this establishment of strong intellectual property rights "the second enclosure movement." *See* James Boyle, *The Second Enclosure Movement and the Construction of the Public Domain*, 66 LAW & CONTEMP. PROBS. 33 (2003).

7. Even many who criticize current copyright protection as excessive agree. *See, e.g.*, LAWRENCE LESSIG, THE FUTURE OF IDEAS 251 (2001) [hereinafter LESSIG, IDEAS] (supporting five year terms of protection, renewable fifteen times); JESSICA LITMAN, DIGITAL COPYRIGHT: PROTECTING INTELLECTUAL PROPERTY ON THE INTERNET 80 (2001) ("[M]ore and stronger and longer copyright protection will always, at the margin, cause more authors to create more works."); C. Edwin Baker, *First Amendment Limits on Copyright*, 55 VAND. L. REV. 891, 938-39 (2002) ("Copyright, however, is generally justified precisely in terms of enhancing, not dampening, media entities' capacity to perform their role. It supposedly leads to more and higher quality provision of information and vision."); Arnold Plant, *The Economic Aspects of Copyright in Books*, 1 ECONOMICA 167, 192 (1934) ("More authors write books because copyright exists, and a greater variety of books is published.").

8. *See* 471 U.S. at 558; *see also* Eldred v. Ashcroft, 537 U.S. 186, 219 (2003) (stating that the purpose of copyright law is "to *promote* the creation and publication of free expression") (emphasis original).

9. *Eldred*, 537 U.S. at 208.

10. *See* Stewart v. Abend, 495 U.S. 207, 230 (1990) ("[I]t is not our role to alter the delicate balance Congress has labored to achieve."); Sony Corp. v. Universal City Studios, Inc., 464 U.S. 417, 429 (1984) ("Because this task involves a difficult balance between the interests of authors . . . in the control and exploitation of their writings . . . and society's competing interest in the free flow of ideas, information, and commerce on the other hand, our patent and copyright statutes have been amended repeatedly."); Am. Geophysical Union v. Texaco Inc., 60 F.3d 913, 917 ("As with the development of other easy and accessible means of mechanical reproduction of documents, the invention and widespread availability of photocopying technology threatens to disrupt the delicate balances established by the Copyright Act.").

tors have also accepted that a significant general prohibition against copying is a necessary component of copyright law, and their research has focused on finding a socially optimal point along the continuum between too much and too little copyright protection.[11]

This Article challenges copyright's fundamental premise by arguing that copyright law's prohibition of unauthorized copying may not be necessary *or even actually helpful* to inducing socially optimal levels of new creations from both creators and "publishers" in all media.[12] In fact, the Article contends that the prohibition against unauthorized copying may actually reduce the production of new works. This arises because of the development of new technologies and the emergence of many, if not most,

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11. *See* NAT'L RESEARCH COUNCIL, THE DIGITAL DILEMMA: INTELLECTUAL PROPERTY IN THE INFORMATION AGE 2 (2000) [hereinafter DIGITAL DILEMMA]; OFFICE OF TECHNOLOGY ASSESSMENT, U.S. CONG., INTELLECTUAL PROPERTY RIGHTS IN AN AGE OF ELECTRONICS AND INFORMATION 204 (1986) [hereinafter OTA Study]; WATT, *supra* note 6, at 4; Landes & Posner, *supra* note 5, at 326; *see also* Alan Greenspan, *Market Economies and Rule of Law* (Apr. 4, 2003) ("If our objective is to maximize economic growth, are we striking the right balance in our protection of intellectual property rights?"), http://www.federalreserve.gov/BoardDocs/speeches/2003/20030404/default.htm.

12. The term "publishers" is used hereinafter to include record companies, studios, and other disseminators of content. Although U.S. law vests copyright protection in authors, not publishers, the economic rationale for copyright suggests that this choice was more tactical than substantive. *See Am. Geophysical Union*, 60 F.3d at 927 ("[T]he monopoly privileges conferred by copyright protection and the potential financial rewards therefrom are not directly serving to motivate authors to write individual articles; rather they serve to motivate publishers to produce journals."); BENJAMIN KAPLAN, AN UNHURRIED VIEW OF COPYRIGHT 8-9 (1967) ("[P]ublishers saw the tactical advantage of putting forward authors' interests together with their own, and this tactic produced some effect on the tone of the statute"). In fact, support of the printers union was a key to passage of the 1909 Copyright Act. *See* SIVA VAIDHAYANATHAN, COPYRIGHTS AND COPYWRONGS: THE RISE OF INTELLECTUAL PROPERTY AND HOW IT THREATENS CREATIVITY 55 (2001). Today, however, many artists would not mourn the loss of the major record companies. *See* Charles C. Mann, *The Heavenly Jukebox*, ATLANTIC, Sept. 2000, at 39, 50, 54-56 (quoting Elton John as characterizing record companies as "thieves" and "blatant and out-and-out crooks"); Neil Strauss, *A Bill of Rights for Rockers Too*, N.Y. TIMES, Feb. 28, 2002, at E3 (discussing the formation of the Recording Artists Coalition, which was formed to "take a stand on financial and creative issues pertaining to musicians, whose best interests sometimes conflict with the agenda of the Recording Industry Association of America"); Neil Strauss, *David vs. Goliath to a Rock Beat*, N.Y. TIMES, Oct. 3, 2002, at E3 (discussing lawsuits and settlements by artists); Janice Ian, *The Internet Debacle—An Alternative View*, PERFORMING SONGWRITER MAG. (May 2002) (stating that arguments that the recording industry and artists are being harmed by free downloading is "nonsense" and that "every time we make a few songs available on my website, sales of all the CDs go up"), http://www.janisian.com/article-internet_debacle.html.

current media markets as lottery-like, "winner-take-all" markets, where promotional efforts may be more important than content.

This Article charges that previous comprehensive economic analyses of copyright, with one exception,[13] are seriously flawed due to their failure to account for promotional expenses.[14] It observes that promotional costs often far outweigh the other costs associated with a creation, and asserts that analyzing the economics of copyright without considering them is like assessing a political election contest without considering campaign advertising.

Additionally, this Article explains that protection against unauthorized copying provides dramatically disproportionate benefits to the most popular creations: it enables the publishers seeking to create blockbusters to finance enormous promotional campaigns, which drown out valuable, artistic creations that lack competitive marketing efforts. In this way, § 106 of the Copyright Act may actually serve to raise entry barriers for many new creations by diminishing expected profits for these economically marginal works.

Instead of an overbroad protection against unauthorized copying, this Article explains how current technologies, social norms, and minimal protection against copying could be used to support many profitable business models for creators and publishers. In fact, because current copyright protection likely *reduces* the overall number and breadth of new creations produced, these new models may encourage the production of even more creations. This approach builds on the findings of then-Professor Stephen Breyer's 1970 article, *The Uneasy Case for Copyright*, which revealed that the economic case for copyright protection was tenuous in many segments of the publishing market.[15] Breyer used empirical data,[16] which supported

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13. One exception is Raymond Shih Ray Ku, *The Creative Destruction of Copyright: Napster and the New Economics of Digital Technology*, 69 U. CHI. L. REV. 263, 316-17 (2002) (recognizing the need to finance marketing and promotion).

14. In their classic 1989 economic analysis of copyright, Landes and Posner ignore other fixed costs of producing an original and do not consider marginal marketing costs. Landes & Posner, *supra* note 5, at 71-84, 327, 333. Nor do they address this omission in their recent book discussing the economic configuration of intellectual property law where a slightly revised version of their 1989 article appears as chapter 3. WILLIAM M. LANDES & RICHARD A. POSNER, THE ECONOMIC STRUCTURE OF INTELLECTUAL PROPERTY LAW (2003). In his detailed and otherwise comprehensive book, COPYRIGHT AND ECONOMIC THEORY, Watt also points out that his equations are "an abstraction from any real life situations." WATT, *supra* note 6, at 201-02.

15. Stephen Breyer, *The Uneasy Case for Copyright: A Study of Copyrights in Books, Photocopies, and Computer Programs*, 84 HARV. L. REV. 281 (1970).

prior economic analyses,[17] to demonstrate that there were viable business models that worked in some segments of print publishing even in the absence of copyright protection. In addition, this Article greatly expands upon the scope of Raymond Ku's article, *The Creative Destruction of Copyright*, which examined online distribution of music and argued that copyright is unnecessary for digital works.[18]

This Article further challenges the necessity of a law prohibiting unauthorized copying by noting its lack of empirical support. For example, the fashion and food industries, among others, manage to stimulate new creations with reliance only upon trademark law protections and social norms.[19] Meanwhile, experts have concluded that the net effect of current copyright laws on creative output is ambiguous.[20] In fact, neither Congress

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16. *See id.*

17. *See, e.g.*, Robert M. Hurt & Robert M. Schuchman, *The Economic Rationale of Copyright*, 56 AM. ECON. REV. 421 (1966); Plant, *supra* note 7.

18. Ku, *supra* 13, at 267-68.

19. *See* LITMAN, *supra* note 7, at 105-06; Malla Pollack, *A Rose is a Rose is a Rose—But is a Costume a Dress?*, 41 J. COPYRIGHT SOC'Y 1 (1993); Malla Pollack, Note, *Intellectual Property Protection for the Creative Chef, of How to Copyright a Cake: A Modest Proposal*, 12 CARDOZO L. REV. 1477 (1991). Other types of intellectual content lacking specific legal protection in the United States include jokes, perfumes, and furniture. *See* Tom W. Bell, *Indelicate Imbalancing in Copyright and Patent Law*, *in* COPY FIGHTS: THE FUTURE OF INTELLECTUAL PROPERTY IN THE INFORMATION AGE 1, 9 (Adam Thierer & Wayne Crews eds., 2002); Tom G. Palmer, *Intellectual Property: A Non-Posnerian Law and Economics Approach*, 12 HAMLINE L. REV. 261, 287 (1989). Trademark law generally provides sufficient protection. *See* 15 U.S.C. §§ 1051-1127 (2000).

20. *See* DIGITAL DILEMMA, *supra* note 11, at 41 Box 1.4 ("No [solid] body of work exists with respect to the importance of copyright in fostering information creation and use."); RICHARD A. POSNER, LAW AND LITERATURE 343 (1988) (recognizing that data to test the economic argument for copyright "has never been gathered"); Landes & Posner, *supra* note 5, at 354 (recognizing that "it is not certain that *any* copyright protection is necessary to enable authors and publishers to cover their fixed costs"); Kai-Lung Hui & I.P.L. Png, *On the Supply of Creative Work: Evidence From the Movies*, 92 AM. ECON. REV. 217 (2002) (not finding sufficient evidence to show that the Sonny Bono Copyright Act led to an increase in U.S. movie production); Randall C. Picker, *Copyright as Entry Policy: The Case of Digital Distribution*, 47 ANTITRUST BULL. 423, 453 (2002) (observing that analyses of copyright law generally avoid the central social welfare question of whether creative works would be created in the absence of particular provisions of copyright law). Moreover, there is substantial evidence against the need for copyright. *See, e.g.*, Malla Pollack, *The Right to Know?: Delimiting Database Protection at the Juncture of the Commerce Clause, the Intellectual Property Clause, and the First Amendment*, 17 CARDOZO ARTS & ENT. L.J. 47, 92-96 (1999) (arguing that the current copyright regime lacks a rational basis and was instituted based upon misleading empirical evidence and despite the lack of evidence of market failure absent copyright protection). *But see* Bell,

nor the industry lobbyists who have shepherded the Copyright Act through its frequent expansions have offered convincing evidence that § 106 provides a net benefit to society or is less burdensome than alternatives.[21] Rather, the industry's response to Breyer's 1970 wake up call appears to have been a combination of denial and of relief that he stopped any case of advocating that copyright be abolished.[22] In short, Congress has neither

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supra note 19, at 7-8; Jessica D. Litman, *The Public Domain*, 39 EMORY L.J. 965, 965-67, 998 (1990) ("Most arguments over the appropriate scope of copyright protection, unfortunately, occur in a realm in which empirical data is not only unavailable, but is also literally uncollectible.").

Even with respect to patents, in 1958, Machlup concluded that, "None of the empirical evidence at our disposal and none of the theoretical arguments presented either confirms or confutes the belief that the patent system has promoted the progress of the technical arts and the productivity of the economy." FRITZ MACHLUP, AN ECONOMIC REVIEW OF THE PATENT SYSTEM, SENATE SUBCOMM. ON PATENTS, TRADEMARKS, AND COPYRIGHTS OF THE SENATE COMM. ON THE JUDICIARY, 85TH CONG., at 79 (1958) [hereinafter MACHLUP REPORT]. For more recent data on this point see F.M. SCHERER, INDUSTRIAL MARKET STRUCTURE AND ECONOMIC PERFORMANCE 450-54 (3d ed. 1990); RUTH TOWSE, CREATIVITY, INCENTIVE AND REWARD 21 (2002); Edwin Mansfield, *Patents and Innovation: An Empirical Study*, 32 MGMT. SCI. 173 (1986); Roberto Mazzoleni & Richard R. Nelson, *Economic Theories About the Benefits and Costs of Patents*, 32 J. ECON. ISSUES 1031 (1998).

21. *See* Eldred v. Ashcroft, 537 U.S. 186, 206, 207 n.15 (2003) (referencing only the self-serving testimony of some artists); Breyer, *supra* note 15, at 351 ("The [congressional hearings on the Copyright Revision Bill] reveal little critical analysis of industry claims that protection is needed."); Pollack, *supra* note 20, at 92 ("The Copyright Office finessed the absence of any evidence of market failure by declaring that Congress has often acted to legislate market conduct without empirical evidence."). Copyright law appears to pay little attention to the interests of consumers. Rather, it appears that Congress has agreed to defer judgment to industry representatives when they can develop a consensus among themselves on copyright legislation. *See* Robert C. Denicola, *Freedom to Copy*, 108 YALE L.J. 1661, 1684-86 (1999) (characterizing copyright legislation as a "series of contract negotiations" between interest groups without any "independent congressional evaluation of the substance of the negotiated agreements"); Jessica D. Litman, *Copyright, Compromise, and Legislative History*, 72 CORNELL L. REV. 857, 870-80 (1987); Jessica D. Litman, *Copyright Legislation and Technological Change*, 68 OR. L. REV. 275, 314-15 (1989) [hereinafter Litman, *Copyright Legislation*]; Thomas P. Olson, *The Iron Law of Consensus: Congressional Responses to Proposed Copyright Reforms Since the 1909 Act*, 36 J. COPYRIGHT SOC'Y 109, 120 (1989); Lloyd L. Weinreb, *Copyright for Functional Expression*, 111 HARV. L. REV. 1149, 1243 (1998).

22. According to Paul Goldstein, Breyer's article questioning the need for copyright was the main topic of conversation of copyright lawyers for months after it was published. PAUL GOLDSTEIN, COPYRIGHT'S HIGHWAY: FROM GUTENBERG TO THE CELESTIAL JUKEBOX 24 (1995). Nevertheless, the only scholarly response to Breyer's article was a student piece by Barry W. Tyerman, *The Economic Rationale for Copyright Protection for Published Books: A Reply to Professor Breyer*, 18 UCLA L. REV. 1100 (1971), which

assessed the business models discussed below nor examined how the explosion of marketing has changed the content market.

Part II gives some background on current copyright laws before discussing how the explosion of marketing and copyright's role in financing such marketing appears to increase entry barriers to creation and how other effects of § 106 also deter new creation. Part III identifies the costs creators and publishers must cover to induce them to publish. Part IV describes many business methods based on distribution technologies, social norms, and government funding, which together could provide viable business models that include only a very limited prohibition against copying. Part V offers a proposal for a severely truncated prohibition against unauthorized copying. Finally, Part VI offers a short conclusion.

II. THE HARMFUL EFFECTS OF COPYRIGHT PROTECTION UNDER § 106

The Exclusive Rights Clause of the Constitution empowers Congress "[t]o promote the Progress of Science and the useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries."[23] Based on this clause, Congress granted copyright owners the exclusive rights outlined in 17 U.S.C. § 106.[24] Most significantly, § 106 includes the rights: "(1) to reproduce the copyrighted work in copies or phonorecords; (2) to prepare derivative works based upon the copyrighted work; (3) to distribute copies or phon-

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Breyer easily answered in Stephen Breyer, *Copyright: A Rejoinder*, 20 UCLA L. REV. 75 (1972). Goldstein interprets Breyer's response to be backpedaling from the position that copyright was unjustified, GOLDSTEIN, *supra*, at 25-26, but Breyer's explanation for why he had declined to urge that copyright be eliminated merely reiterated his previous statements. *See* Breyer, *supra* note 15, at 321-23. *But see* William W. Fisher III, *Reconstructing the Fair Use Doctrine*, 101 HARV. L. REV. 1659, 1708 n.231 (1988) (finding Tyerman's response convincing).

23. U.S. CONST. art. I, § 8, cl. 8. This Article uses "Exclusive Rights Clause" in place of "Intellectual Property Clause" or "Copyright Clause" because this appears to be a more accurate description of the clause." *See* Yochai Benkler, *Through the Looking Glass: Alice and the Constitutional Foundations of the Public Domain*, 66 LAW & CONTEMP. PROBS. 173, 175 n.10 (2003).

24. *See* 17 U.S.C. § 106 (2000) (stating that "the owner of copyright under this title has the exclusive rights . . ."); *see also* Digital Millennium Copyright Act, Pub. L. No. 105-304, 112 Stat. 2860 (1998) (codified in scattered sections of 5, 17, 28, and 35 U.S.C.); The Sonny Bono Copyright Term Extension Act, Pub. L. No. 105-298, 112 Stat. 2827 (1998) (codified in scattered sections of 17 U.S.C.).

orecords of the copyrighted work to the public by sale or other transfer of ownership, or by rental, lease, or lending . . . ."[25]

Section A reviews the justification for a prohibition against unauthorized copying. Section B, however, explains how the protection under § 106 appears to be having some unanticipated effects. It observes that, by enabling publishers in many current lottery-like content markets to dramatically increase their revenues from their most popular works and then to spend them on promoting those works, § 106 leads those popular works to crowd out more economically marginal works, thereby, having a net negative effect on new creations. Section C discusses other effects of § 106 that frustrate vibrant new creation.

A. The Justification Behind the § 106 Prohibition of Unauthorized Copying

Throughout the world, intellectual property rights have been justified under at least three theories. Under a "natural rights" theory, copyright protection merely codifies a creator's natural right to possess the fruits of his or her labor.[26] Under a "just reward" theory, copyright protection recognizes that justice dictates that creators deserve the benefits of what they have created.[27] Under a "public welfare" theory, however, copyright protection is granted solely as a necessity to promote the creation and distri-

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25. 17 U.S.C. § 106.

26. Breyer, *supra* note 15, at 284-85; Hurt & Schuchman, *supra* note 17, at 422. This rationale, generally associated with the French, recognized a natural, almost divine right to one's creations. In the words of one philosopher, "[I]t's mine because I made it . . . . It wouldn't have existed but for me." *See, e.g.*, Edwin C. Hettinger, *Justifying Intellectual Property*, 18 PHIL. & PUB. AFF. 31, 36 (1989). These rationales, however, have serious weaknesses. *See, e.g.*, Hurt and Schuchman, *supra* note 17, at 243 (finding that the main difficulty with natural property right theory is applying the principle upon which it is based more generally); *see* Weinreb, *supra* note 21, at 1217-29 ("Traced to ground, the argument that an author has a 'natural' property in the copyright of his creation depends on a string of distinct but related propositions that are independently plausible and gain added force by their relation, but are in fact vulnerable.").

27. This theory, supported by classical English economists like Adam Smith and John Stuart Mill, viewed ones right to ownership of the fruits of ones work as a just reward for the creation. MACHLUP REPORT, *supra* note 20, at 21. However, the "just reward" rationale is not without weaknesses. *See* Breyer, *supra* note 15, at 285-91 (listing some weaknesses such as "discerning the extent to which an author should be able to maintain control" of the creation and determining the "value" of the work to society); Stewart E. Sterk, *Rhetoric and Reality in Copyright Law*, 94 MICH. L. REV. 1197, 1248 (1996) (arguing that the just reward rationale "rests on a faulty foundation" because "[i]n a market economy, the principal importance of high compensation is as a signal designed to affect future behavior, not as a reward for past achievement").

bution of new creative works, a result that would be in the public's best interest.[28]

Before the U.S. Constitution was adopted, laws granting copyright protection in the United States were justified under multiple theories.[29] However, the Exclusive Rights Clause of the Constitution uses only a public welfare justification and does not mention a natural rights justification for protection. As the House Report on the 1909 Copyright Act declared:

> The enactment of copyright legislation by Congress under the terms of the Constitution is not based upon any natural right that the author has in his writings . . . but upon the ground that the welfare of the public will be served . . . . Not primarily for the benefit of the author, but primarily for the benefit of the public, such rights are given. . . .
>
> In enacting a copyright law Congress must consider . . . two questions: First, how much will the legislation stimulate the producer and so benefit the public; and, second, how much will the monopoly granted be detrimental to the public.[30]

The public benefit rationale for copyright law was underscored by Congressman Robert Kastenmeier, long-time chair of the House subcommittee with jurisdiction over copyright and one of the primary players responsible for the passage of the 1976 Copyright Act:

> [T]he primary objective of the intellectual property laws is not to reward the author or inventor, but rather to secure for the public the benefits derived from the labors of authors and inven-

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28. Robert W. Kastenmeier & Michael J. Remington, *The Semiconductor Chip Protection Act of 1984: A Swamp or Firm Ground?*, 70 MINN. L. REV. 417, 422, 441 (1985).

29. *See* Jane C. Ginsburg, *A Tale of Two Copyrights: Literary Property in Revolutionary France and America*, 64 TUL. L. REV. 991, 1000-02 (1990); Sterk, *supra* note 27, at 1199.

30. H.R. REP. NO. 60-2222, at 7 (1909); *see also* Eldred v. Ashcroft, 537 U.S. 186, 246-47 (2003) (Breyer, J., dissenting) ("The Constitution itself describes the basic Clause objective as one of 'promoting the Progress of Science,' *i.e.*, knowledge and learning. The Clause exists not to 'provide a special private benefit,' . . . but 'to stimulate artistic creativity for the general public good.'") (citations omitted); Wheaton v. Peters, 33 U.S. (8 Pet.) 591, 661 (1834) ("That Congress, in passing the Act of 1790, did not legislate in reference to existing rights, appears clear . . . Congress, then, by this act, instead of sanctioning an existing right . . . created it."); H.R. REP. 100-609, at 17 (1988). The writings of Thomas Jefferson, Thomas Macaulay, Adam Smith, and James Madison also indicate a great concern about the problems with granting creators' monopoly rights. *See Eldred*, 537 U.S. at 246 (Breyer, J., dissenting); VAIDHAYANATHAN, *supra* note 12, at 22-24; Benkler, *supra* note 23, at 180-97; Boyle, *supra* note 6, at 53-56.

> tors. . . . The argument that a particular interest group will make more money and therefore be more creative does not satisfy . . . the constitutional requirement of the intellectual property clause.[31]

The Supreme Court has also interpreted the Exclusive Rights Clause in this manner. In *Mazer v. Stein*, the Court noted that "[t]he economic philosophy behind the clause . . . is the conviction that encouragement of individual effort by personal gain is the best way to advance public welfare."[32] Furthermore, consistent with the 1909 House report, the Court has interpreted the Constitution to limit Congress's ability to grant copyright monopolies. In *Sony Corp. v. Universal City Studios, Inc.*, the Court held that copyright's monopoly privileges "are neither unlimited nor primarily designed to provide a special private benefit. Rather, the limited grant is a means by which an important public purpose may be achieved. It is intended to motivate the creative activity of authors and inventors by the provision of a special reward."[33] The Court has also explicitly stated that monopolies are not permitted under the Exclusive Rights Clause when there is no "concomitant *advance* in the 'Progress of Science and useful Arts.'"[34]

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31. Kastenmeier & Remington, *supra* note 28, at 422, 441; *see also* Ralph S. Brown, *Eligibility for Copyright Protection: A Search for Principled Standards*, 70 MINN. L. REV. 579, 591-92 (1985); Orrin G. Hatch, *Toward a Principled Approach to Copyright Legislation at the Turn of the Millennium*, 59 U. PITT. L. REV. 719, 723 (1998) ("[C]opyright rights should be protected, unless it can be shown that the extent of protection is hampering creativity or the wide dissemination of works.").

32. 347 U.S. 201, 219 (1954); *accord* Zacchini v. Scripps-Howard Broad. Co., 433 U.S. 562, 576-77 (1977); Twentieth Century Music Corp. v. Aiken, 422 U.S. 151, 156 (1975) ("The ultimate aim is, by this incentive, to stimulate artistic creativity for the general public good."); 1 GOLDSTEIN, *supra* note 4, at § 1.14, at 1:40. While the Court in *Mazer* observed that ensuring that creative artists receive "rewards commensurate with the services rendered" is a goal of copyright law, 347 U.S. at 219, the Court has elsewhere noted that "copyright law, like the patents statute, makes reward to the owner a secondary consideration." United States v. Paramount Pictures, 334 U.S. 131, 158 (1948).

33. 464 U.S. 417, 429 (1984); *see also Eldred*, 537 U.S. at 211-13. The Court quoted *Sony* in *Fogerty v. Fantasy, Inc.*, 510 U.S. 517, 526 (1994) ("We have often recognized the monopoly privilege that Congress has authorized, while 'intended to motivate the creative activity of authors and inventors by the provision of a special reward,' are limited in nature and must ultimately serve the public good.").

34. Bonito Boats, Inc. v. Thunder Craft Boats, Inc., 489 U.S. 141, 146 (1989) (emphasis added); *see* Fox Film Corp. v. Doyal, 286 U.S. 123, 127 (1932) ("The sole interest of the United States and the primary objective in conferring the monopoly lie in the general benefits derived by the public from the labors of authors."). But the Court in *Eldred* accorded great deference to Congress on this matter. *See* 537 U.S. at 207 n.15, 212-13

Thus, the Supreme Court and Congress have often recognized that the Exclusive Rights Clause of the Constitution limits Congress's authority to grant copyrights and that copyright law must further the interests of the public, not merely the creators or publishers.[35]

B. How the Marketing Explosion Leads § 106 to Crowd Out Marginal New Creations

In furthering the public interest, Congress, courts, and scholars have long supported a substantial prohibition against unauthorized copying.[36] Today, however, promotional expenses, a variable that almost everyone has ignored when examining the economic incentives and justifications for copyright law,[37] have exploded. This has dramatically changed the economic environment of many media markets and should provoke policymakers to reexamine whether and when prohibiting copying actually best serves the public good.[38]

In many media markets today, marketing may be the most significant cost. That may not appear to be the case for major feature films, for which 2002 figures indicate average costs of $58.8 million to produce and $27.3 million to market,[39] but those figures hide a significant marketing cost in production costs. While actors' salaries are treated as a production cost, the fees commanded by superstar actors seem to reflect their marketing value rather than their acting skills.[40] Meanwhile, major music labels

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("We have also stressed, however, that it is generally for Congress, not the courts, to decide how best to pursue the Copyright Clause's objectives.")

35. *See* Harper & Row, Publishers, Inc. v. Nation Enters., 471 U.S. 539, 546 (1985) ("[This] *limited* grant is a means by which an important public purpose may be achieved.") (citing Sony Corp. v. Universal City Studios, Inc., 464 U.S. 417, 429 (1984)) (emphasis added); Graham v. John Deere Co., 383 U.S. 1, 5-6 (1966); Yochai Benkler, *Constitutional Bounds of Database Protection: The Role of Judicial Review in the Creation and Definition of Private Rights in Information*, 15 BERKELEY TECH. L.J. 535, 539-52 (2000); Robert Patrick Merges & Glenn Harlan Reynolds, *The Proper Scope of the Copyright and Patent Power*, 37 HARV. J. ON LEGIS. 45, 56-64 (2000).

36. *See supra* notes 2, 3, 6.

37. *See supra* notes 13, 14.

38. For example, increased distribution enables more people to consume a work and more creators to build on the work to produce derivative works. *See* Zechariah Chafee, Jr., *Reflections on the Law of Copyright: I*, 45 COLUM. L. REV. 503, 511 (1945) (stating we are all standing "on the shoulders of giants").

39. *See* MOTION PICTURE ASS'N WORLDWIDE MARKET RESEARCH, U.S. ENTERTAINMENT INDUSTRY: 2002 MPA MARKET STATISTICS 19, 20 (2003) [hereinafter 2002 MPA STATS]. "Negative costs" includes production costs, studio overhead, and capitalized interest. *Id.* at 19. Marketing costs are costs incurred after production. *Id.* at 20.

40. Realistically a large portion of the fee for marquee actors like Tom Cruise and

spend hundreds of thousands, on average, on promotion for a new album (including payola),[41] as compared to only $80,000 to $150,000 for producing them.[42] Michael Jackson even complained when Sony spent *only* about $25 million to market his album "Invincible."[43] The book publishing industry has also seen the triumph of marketing.[44]

Furthermore, the promotion of creative works is not simply to inform the public about the works; it is also to create "solidarity goods," which are products valued, in large part, due to their popularity, separate and

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Julia Roberts should be recognized as a marketing, not a production, cost. *See* A.O. Scott, *We're Ready for Their Close-Ups*, N.Y. TIMES, Feb. 17, 2002, §5 at 5 (movie stars are defined by their "ability to generate box-office cash"). *But see* Arthur de Vany & David Walls, *Uncertainty in the Movies: Does Star Power Reduce the Terror of the Box Office?*, 23 J. CULTURAL ECON. 285, 302-03 (1999) (finding that stars appear to have an impact on the number of screens films open on and remain on, but not necessarily on revenues). After this adjustment, marketing costs in the film industry may actually exceed first copy costs. *See* RICHARD E. CAVES, CREATIVE INDUSTRIES: CONTRACTS BETWEEN ARTS AND COMMERCE 76-78, 109-10 (2000) ("Superstar salaries thus consist largely of rents. With producers competing to employ [the superstar], the star's pay tends to be the expected rent that she can attract.").

41. *See* HAROLD L. VOGEL, ENTERTAINMENT INDUSTRY ECONOMICS 163 (5th ed. 2001) (estimating marketing costs at up to $100,000 for a standard release and $500,000 for a major artist); Douglas Abell, *Pay for Play: An Old Tactic in a New Environment*, 2 VAND. J. ENT. L. & PRAC. 52 (2000) (discussing payola); Lynn Hirschberg, *Who's That Girl?*, N.Y. TIMES, Aug. 4, 2002, § 6 at 30 (stating that the fee for promoters can range from $100,000 to $400,000); Moses Avalon Royalty Calculator, MosesAvalon.com, *at* http://www.mosesavalon.com/marc.htm (last visited Apr. 28, 2004) (providing a royalty calculator for creators and setting $500,000 as the default amount for average promotional expenses on a major label deal); *see also* Tobias Regner, *Innovation of Music*, *in* ECONOMICS OF COPYRIGHT: DEVELOPMENTS IN RESEARCH AND ANALYSIS 104, 107-09 (Wendy J. Gordon & Richard Watt eds., 2003).

42. Typically, musical recording costs for relatively new artists' albums by major studios range from $80,000 to $150,000. M. WILLIAM KRASILOVSKY & SIDNEY SHEMEL, THIS BUSINESS OF MUSIC 23 (8th ed. 2000). There is also the $3 to $5 per CD mark-up by retailers to cover their costs, including marketing costs. *See* Jon Healey, *CD Sticker Shock Accounting for Retail Sale Prices That Drive Song-Swapping Sites*, SAN JOSE MERCURY NEWS, Sept. 3, 2000, at 1D.

43. *See* Laura M. Holson, *A Pop Star Wants a Promotion Budget Fit for a Jackson*, N.Y. TIMES, June 6, 2002, at C1.

44. *See* GAYLE FELDMAN, BEST AND WORST OF TIMES: THE CHANGING BUSINESS OF TRADE BOOKS, 1975-2002, at 16-22 (2003) (finding that in the 1970s the focus in publishing shifted from editorial to marketing); Ken Auletta, *The Impossible Business*, NEW YORKER, Oct. 6, 1997, at 50, 63; Bill Goldstein, *Honing the Science of the Release Date*, N.Y. TIMES, Nov. 11, 2002, at C9 ("The 'opening' of a major book has increasingly come to resemble the opening of a movie.").

apart from their intrinsic quality.[45] Publishers hope consumers will feel pressure to purchase these popular creative products to allow them to join conversations with friends about the movie plotline, television character, or book,[46] and to belong to the group of consumers that has enjoyed the popular creative work.[47] This pack mentality contributes to the current winner-take-all content environment—a highly skewed market with a few big winners and a lot of losers.[48]

The incredibly cluttered nature of the current media markets only heightens the lottery environment. Today publishers annually release about 450 new major feature films,[49] 20,000 new music albums,[50] and more than 100,000 new books.[51] In addition, other producers of original content include most of the nearly 350 national television networks,[52] many of the 13,000 radio stations,[53] and 10,000 more specialized magazines and other periodicals.[54] The Internet offers millions of pages of blogs

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45. *See* Cass R. Sunstein & Edna Ullmann-Margalit, *Solidarity Goods*, 9 J. POL. PHIL.129, 132 (2001).

46. *See* CAVES, *supra* note 40, at 180-82 (describing the benefits creative goods receive from social interchange because "people like to converse about creative goods" and "[c]reative goods and the cultural consumption capital that surrounds them provide what is likely the most suitable grist [for conversation]"); Robert H. Frank, *When Less is Not More*, N.Y. TIMES, July 17, 2000, at A19.

47. Sunstein & Ullmann-Margalit, *supra* note 45, at 132.

48. *See* ROBERT H. FRANK & PHILIP J. COOK, THE WINNER-TAKE-ALL SOCIETY: WHY THE FEW AT THE TOP GET SO MUCH MORE THAN THE REST OF US 19 (1995) ("[W]inner-take-all markets attract too many contestants, result in inefficient patterns of consumption and investment, and often degrade our culture."); Glenn M. MacDonald, *The Economics of Rising Stars*, 78 AM. ECON. REV. 155 (1988); Sherwin Rosen, *The Economics of Superstars*, 71 AM. ECON. REV. 845 (1981); Verlyn Klinkenborg, *Nothing But Troubling News From the World of Publishing*, N.Y. TIMES, Jan. 27, 2003, at A24 ("Like the film and music industries, publishing is now driven wholly by the search for blockbuster books.").

49. *See* 2002 MPA STATS, *supra* note 39, at 14.

50. *See* Jon Pareles, *Best of the Obscure Among 2001's Albums*, N.Y. TIMES, Jan. 3, 2002, at E1.

51. The number of new book titles rose from 46,743 in 1990 to 122,108 in 2000. *See* FELDMAN, *supra* note 44, at 8-9.

52. *See* Annual Assessment of the Status of Competition in Markets for the Delivery of Video Programming, Tenth Annual Report ¶ 142 & tbl. 8 (2004), http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-04-5A1.pdf (last visited May 9, 2004).

53. *See* Audio Services Division, Fed. Communications Comm'n, Broadcast Station Totals (Mar. 31, 2004), *available at* http://www.fcc.gov/mb/audio/totals (last visited May 9, 2004).

54. In addition, there are more than 11,000 magazines of quarterly or greater frequency and as many as 18,000 magazines. *See* BENJAMIN M. COMPAINE & DOUGLAS

and other new content. Meanwhile, this new content competes with all the creative works produced in previous years.[55]

Under these conditions, publishers seeking to field one of the few winners in each niche market will often feel compelled to match their competitors' marketing efforts.[56] These promotional efforts are highly competitive, with winning often more dependent on the quality of the marketing than the quality of the product.[57] With success in these markets—the potential profits from being a solidarity good or other blockbuster—resembling a rent, these promotional campaigns represent a form of "rent seeking."[58] Also, much of the marketing expenses seeking to shift demand among equally valuable allocations appear to be socially wasteful.[59] The

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GOMERY, WHO OWNS THE MEDIA?: COMPETITION AND CONCENTRATION IN THE MASS MEDIA INDUSTRY 156-57 (3d ed. 2000).

55. In 1997, there were 1.3 million books in print. *See id.* at 61. In 2000, more than 18,000 feature films were stored in studio vaults. *See* VOGEL, *supra* note 41, at 65. Moreover, the Internet has spawned a substantial increase in the exchange of used media content. *See* Richard Rayner, *An Actual Internet Success Story*, N.Y. TIMES, June 9, 2002, § 6 at 112.

56. *See* CAVES, *supra* note 40, at 109, 393 n.25; Ann Beattie, *Essentials Get Lost in the Shuffle of Publicity*, N.Y. TIMES, Feb. 11, 2002, at E1 ("Writers are afraid not to be [on book tours], for fear they'll be completely lost in the shuffle, but paradoxically, by getting out there we add to the problem.").

57. *See* David D. Kirkpatrick, *Bookselling, the Unlikely Spectacle*, N.Y. TIMES, Apr. 29, 2002, at C6 ("It is a difficult trick making any book stand out at the booksellers convention—a noisy literary circus where scores of publishers and hundreds of authors desperately compete for attention."); Eric A. Taub, *You Oughta Be in Print*, N.Y. TIMES, Oct. 17, 2002, at G1 (stating the key to success for those offering online books is getting noticed); Bernard Weinraub, *A Warbler Set Aloft by a Dedicated Flock; Patience Pays Off for Nelly Furtado's Team*, N.Y. TIMES, Mar. 21, 2002, at E1.

58. *See generally* PAUL PECORINO, RENT SEEKING: A TEXTBOOK EXAMPLE 8-9 (U. Ala. Econ. Fin. & Legal Stud., Working Paper No. 04-01-01, 2004), http://www.ssrn.com/abstract=496062 (last visited May 9, 2004); Robert D. Tollison, *Rent Seeking*, 3 THE NEW PALGRAVE DICTIONARY OF ECONOMICS AND THE LAW 315, 316 (Peter Newman ed., 1998); Gordon Tullock, *The Welfare Costs of Tariffs, Monopolies, and Theft*, 5 W. ECON. J. 224 (1967).

59. Expenditures made to hype or simply to neutralize competitors' spending appear to be socially inefficient. *See, e.g.*, Floyd Norris, *Clinton Acts and Tobacco Profits*, N.Y. TIMES, Aug. 25, 1996, at F1 (stating that the government's ban on tobacco company advertising on television appears to have increased industry profits by eliminating substantial "defensive" advertising). This type of promotion is in contrast to the type that helps buyers find better matches for their idiosyncratic tastes, like that aiding "selection assistant" (SA) services, see *infra* Part IV.A.4, or which adds "psychic" value to creative works, the way cosmetics marketing often does. *See* Ruth La Ferla, *Front Row*, N.Y. TIMES, Jan. 7, 2003, at B9 ("'She's not buying that tube [of lipstick] for the color; she's buying it for the story.'") (quoting Mary Lisa Gavenas, a former beauty editor at *Glam-*

marketing expenditures of competitors also become a major factor in determining which projects will be profitable, creating a promotional "arms race."[60] As one commentator observed, "the costs of marketing new releases to a mass audience have grown prohibitive . . . [and] those costs have long helped limit competition from smaller companies."[61] As a result, high quality content, especially from smaller producers without deep pockets, can be drowned out.[62]

The overbroad copyright protection of § 106 feeds this beast by allowing the most popular creations to earn revenues well beyond what publishers need to cover the production and distribution costs of their new creations: successes and failures. Publishers then feel compelled to turn around and dissipate these revenues on larger marketing campaigns or greater rents for the few most popular creators.[63] In fact, this type of rent seeking may well dissipate 100% *or more* of the increased revenues generated by § 106.[64] The higher marketing expenses financed by § 106 raise entry barriers, leaving many economically borderline projects unprofitable. Thus,

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our and *Mirabella*).

60. *See supra* note 57; *cf.* Merges & Reynolds, *supra* note 35, at 55. Moreover, as in politics, the "horse race" aspect of the process has become a story that may eclipse the substance of the content. *See, e.g.*, Rick Lyman, *A Strong Start for 'Catch Me' but 'Two Towers' is Still Tops*, N.Y. TIMES, Dec. 30, 2002, at E1.

61. Jon Pareles, *Spit Out by the Star-Making Machinery*, N.Y. TIMES, Feb. 3, 2002, §2 at 28.

62. *See* VOGEL, *supra* note 41, at 90-91 (stating that films of high merit may be "pulled" if they are not quick hits); Goldstein, *supra* note 44 ("[T]he definition of big has changed in publishing, as it has in other entertainment industries. . . . [¶] 'It's more important than ever to have a fireworks display,' said Patricia Eisemann, publicity director of Scribner, a division of Simon & Schuster."); Healey, *supra* note 42; Ian, *supra* note 12 (describing this phenomenon in the music industry); Pareles, *supra* note 50. *But see* Martin Arnold, *Room at the Table for Fresh Faces*, Dec. 19, 2002, at E3.

63. *See* Ku, *supra* note 13, at 316-17 (contending that copyright cannot be justified based on its ability to help publishers finance marketing efforts that distort consumer choice); Glynn S. Lunney, Jr., *The Death of Copyright: Digital Technology, Private Copying, and the Digital Millennium Copyright Act*, 87 VA. L. REV. 813, 876 (2001).

64. There is a tendency for rent seeking expenditures to exceed the total reward in lottery environments. *See* Daniel Kahneman & Amos Tversky, *Prospect Theory: Analysis of Decision Under Risk*, 47 ECONOMETRICA 263 (1979); Lunney, *supra* note 63, at 879 n.210 (citing Amos Tversky & Daniel Kahneman, *Advances in Prospect Theory: Cumulative Representation of Uncertainty*, 5 J. RISK & UNCERTAINTY 297 (1992)); D. Michael Risinger et al., *Brave New "Post-Daubert" World—A Reply to Professor Moenssens*, 29 SETON HALL L. REV. 405, 425 (1998). *But see* Michael Abramowicz, *Copyright Redundancy* 11 (2003), *available at* http://www.ssrn.com/abstract=374580 (last visited May 9, 2004).

§ 106 seems likely to make it harder for marginal new works to find publishers willing to publish and promote them.

Meanwhile, the economic argument that § 106 necessarily promotes more creative works at the margin is flawed. The argument is that copyright protection allows publishers to appropriate a greater portion of the economic value generated by the few economically borderline new works that become blockbusters.[65] They do so by protecting such works against the competition blockbusters would face, and the accompanying reduced prices and revenues. Such protection should thereby lead publishers to find more of those works profitable and thus publish them.[66] Copyright supporters would argue that this demonstrates how § 106 pushes economically borderline creative works into profitability and increase the number of new works.[67]

The hidden and misleading assumption in this reasoning is that because § 106 produces this initial increase in the expected revenues of borderline creative works, the provision has a net positive effect on the profitability of such works. Yet this incomplete analysis assumes that all other factors relevant to the new works' revenues and profitability remain constant, and they do not. Rather § 106 also leads the revenues from the most popular works to increase, and disproportionately more than the revenues of more borderline works.[68] This allows publishers of the most popular works to disproportionately increase their marketing efforts, forcing publishers of marginal works to either 1) spend even more money on marketing simply to retain their sales and revenues or 2) refrain from further increasing marketing expenditures, but see their works' sales and revenues decline. In either case, the increased marketing costs or decreased revenues triggered by § 106 likely lead many otherwise marginally profitable

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65. *See* F.M. Scherer, *The Innovation Lottery*, *in* EXPANDING THE BOUNDS OF INTELLECTUAL PROPERTY: INNOVATION POLICY FOR THE KNOWLEDGE SOCIETY 20 (Rochelle Cooper Dreyfuss et al. eds., 2001); *supra* notes 7-8 and accompanying text. Some scholars argue that diminishing current copyright rewards would diminish publishers' willingness to take risks, i.e., publish untried or risky work. *See* Paul Goldstein, *Copyright*, 55 LAW & CONTEMP. PROBS. 79, 83 (1992); David Ladd, *The Harm of the Concept of Harm in Copyright: The Thirteenth Donald C. Brace Memorial Lecture*, 30 J. COPYRIGHT SOC'Y 421, 431 (1983).

66. Assume that the new work had a .1% chance of earning an additional $1 million and a .01% chance of earning an additional $10 million. Then, its expected earnings would increase by (.001 x $1 million) + (.0001 x $10 million) = $1000 + 1000 = $2,000.

67. Even critics of the current level of copyright protection appear to accept this rationale. *See supra* note 7.

68. *See* Lunney, *supra* note 63, at 882.

creative projects to become unprofitable and therefore to no longer be produced.[69]

In addition, the increased revenues that larger publishers earn due to § 106 that are not spent on promotion are still unlikely to be invested in projects expected to be unprofitable. These publishers are no more likely to finance "charitable" creative works—that is, to subsidize marginal work—than the consumers who would retain their funds absent § 106.[70]

C. Other Ways Current Copyright Law Chills Creative Expression

Although scholars have overlooked the negative impact of marketing on creative output, they have recognized other serious drawbacks to current broad copyright protection, particularly the expansive protection of "derivative works."[71] Prior to 1900, § 102(b) of the Copyright Act, which expressly denies any copyright protection to ideas,[72] was interpreted to

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69. *See supra* notes 61-62 and accompanying text.

70. Although the Senate Report accompanying the Copyright Term Extension Act states an expectation that publishers will use extra profits to subsidize marginal work, it offers no reason why this would arise. S. REP. NO. 104-315, at *12-*13 (1996), 1996 WL 397400; Lunney, *supra* note 63, at 874-75 (noting that work that would otherwise be expected to be profitable would be published anyway and that there is no rational reason why publishers would use excess profits to finance works expected to be unprofitable). *But see* David D. Kirkpatrick, *CD Price Cuts Could Mean New Artists Will Suffer*, N.Y. TIMES, Sept. 29, 2003, at C1.

71. *See* VAIDHAYANATHAN, *supra* note 12, *passim*; *see also* Glynn S. Lunney, Jr., *Reexamining Copyright's Incentives-Access Paradigm*, 49 VAND. L. REV. 483, 534-40, 546-48 (1996); L. Ray Patterson, Eldred v. Reno*: An Example of the Law of Unintended Consequences*, 8 J. INTELL. PROP. L. 223, 239 (2001); Jed Rubenfeld, *The Freedom of Imagination: Copyright's Constitutionality,* 112 YALE L.J. 1, 49-52 (2002).

72. "In no case does copyright protection for an original work of authorship extend to any idea, . . . concept, . . . or discovery, regardless of the form in which it is described, explained, illustrated, or embodied in such work." 17 U.S.C. § 102(b) (2000); *see also* Baker v. Seldon, 101 U.S. 99, 103 (1879). This reflects Thomas Jefferson's observation:

> That ideas should freely spread from one to another over the globe, for the moral and mutual instruction of man, and the improvement of his conditions, seems to have been peculiarly and benevolently designed by nature, when she made them, like fire, expansible over all space, without lessening their density in any point, and like the air in which we breathe, move, and have our physical being, incapable of confinement of exclusive appropriation.

Letter from Thomas Jefferson to Isaac McPherson, August 13, 1813, *in* THE WRITINGS OF THOMAS JEFFERSON 6, 175, 180 (H.A. Washington ed., 1861). As Judge Learned Hand emphasized, ideas and plot outlines are "given up to the public" so that authors may draw from their predecessors' innovations and insights." *See* Jane C. Ginsburg, *Authors and*

permit creators to build on the ideas of others to produce creative, transformative works.[73] Nevertheless, as protection of derivative works has grown to cover even the "total concept and feel" of a work,[74] the right of the copyright owner to deny licenses to other creators has chilled many types of transformative uses.[75] These include "fan edits"[76] and "fan fiction,"[77] and even political speech.[78] Since most new creations generally

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Users in Copyright, 45 J. COPYRIGHT SOC'Y 1, 5 (1997) (quoting Judge Learned Hand). In fact, when ideas and expression are inseparable, the expression loses copyright protection. *See* Herbert Rosenthal Jewelry Corp. v. Kalpakian, 446 F.2d 738 (9th Cir. 1971).

73. Prior to 1900, infringement was evaluated "by looking not so much to what the defendant had taken as to what he had added or contributed." *See* KAPLAN, *supra* note 12, at 17.

74. *See, e.g.*, Roth Greeting Cards v. United Card Co., 429 F.2d 1106, 1110 (9th Cir. 1970) (finding copyright protection for a greeting card's "total concept and feel"); Alfred C. Yen, *A First Amendment Perspective on the Idea/Expression Dichotomy and Copyright in a Work's 'Total Concept and Feel'*, 38 EMORY L.J. 393 (1989). Jessica Litman finds that § 106(2) now reads as though even thinking about a derivative work is prohibited! *See* LITMAN, *supra* note 7, at 22, 32, 71.

75. *See* LESSIG, IDEAS, *supra* note 7, *passim*; VAIDHAYANATHAN, *supra* note 12, *passim*.

76. *See* Daniel Zalewski, *Thinking These Thoughts is Prohibited*, N.Y. TIMES, Jan. 6, 2002, §9, at 10. Zaleski writes:

> [A] delightful new art form emerged [in 2001]: the fan edit. Devotees of the pop singer Bjork, for example, have begun running her songs through their computers, tweaking the beats and instrumentation, then posting hundreds of "remixed" versions on the Web. Some of these edits are tone-deaf; others, however, trump the original arrangements. . . . Mike J. Nichols, . . . used his Macintosh to make a series of merciful cuts to "The Phantom Menace" — most notably, the virtual elimination of the irksome Jar Jar Blinks. Fans who obtained a copy of Nichols's "Phantom Edit" through the Internet hailed the arrival of a vastly improved (if not yet good) movie.

Id.; *see also* OTA STUDY, *supra* note 11, at 138-39; Amy Harmon, *'Star Wars' Fan Films Come Tumbling Back to Earth*, N.Y. TIMES, Apr. 28, 2002, at § 2, at 28; Matthew Mirapaul, *If You Can't Join 'Em, You Can Always Tweak 'Em*, N.Y. TIMES, Mar. 4, 2002, at E2 (describing a website that "allows visitors to take six [works of art] at a time and combine them into an onscreen collage"). These include mash-ups and bootleg remixes, which are based on sampling. *See* Chris Norris, *Mash-Ups,* N.Y. TIMES, Dec. 15, 2002, §6 at 102; Neil Strauss, *Spreading via the Web, Pop's Bootleg Remix*, N.Y. TIMES, May 9, 2002, at A1.

77. See Rebecca Tushnet, *Legal Fictions: Copyright, Fan Fiction, and a New Common Law*, 17 LOY. L.A. ENT. L.J. 651 (1997).

78. For examples of how copyright law can suppress political expression, see Wendy Gordon*, A Property Right in Self-Expression: Equality and Individualism in the Natural Law of Intellectual Property*, 102 YALE L.J. 1533, 1535-36 (1993), and Neil Weinstock Netanel, *Copyright and a Democratic Civil Society*, 106 YALE L.J. 283, 294-

primarily reconfigure elements from previous work,[79] Judge Learned Hand recognized that the importance of letting works fall into the public domain was so later editors "might do a much better job than the originator."[80] Thus, it should not be surprising that the derivative works provision is probably the most severely criticized aspect of copyright law.[81]

Publishers fearing the cost of lawsuits are apt to decline to publish content where others appear likely to claim that it includes or is a derivative work of theirs, even if such claim appears unreasonable. The problem is the cost of litigation. In fact, the chill from the derivative works provision resembles the one created by many state libel laws before these laws were severely diminished by the Supreme Court's landmark 1964 decision in *New York Times v. Sullivan*.[82] (That holding granted publishers significant breathing room to err before they could be convicted of defamation, thereby reducing their fear of lawsuits.[83]) The Eleventh Circuit did recog-

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97 (1996).

79. *See* Landes & Posner, *supra* note 5, at 332 ("Creating a new work typically involves borrowing or building on material from a prior body of works, as well as adding original expression to it."); *infra* text accompanying notes 132-137.

80. *See* LESSIG, IDEAS, *supra* note 7, at 106. The booming Japanese market in comic book stories based on existing characters but by creators other than the original authors illustrates the large market demand for such output. *See* Salil Mehra, *Copyright and Comics in Japan: Does Law Explain Why All the Cartoons My Kid Watches are Japanese Imports?*, 55 RUTGERS L. REV. 155, 164-66 (2002); *see also* DIGITAL CONNECTIONS COUNCIL OF THE COMMITTEE FOR ECONOMIC DEVELOPMENT, PROMOTING INNOVATION AND ECONOMIC GROWTH: THE SPECIAL PROBLEM OF DIGITAL INTELLECTUAL PROPERTY 8 (2004) [hereinafter CED REPORT], *available at* http://www.ced.org/docs/report/report_dcc.pdf (last visited May 9, 2004).

81. *See, e.g.*, David Lange & Jennifer Lange Anderson, *Fair Use and Transformative Critical Appropriation* (Nov. 2001), *available at* http://www.law.duke.edu/pd/papers/langeand.pdf (last visited May 9, 2004); Lunney, *supra* note 71, at 513, 650; Rubenfeld, *supra* note 71, at 53-59; Sterk, *supra* note 27, at 1217; Naomi Abe Voegtli, *Rethinking Derivative Rights*, 63 BROOK. L. REV. 1213, 1269 (1997). Even access priced at "neutral" compulsory license rates, might still hinder some poor, aspiring creators, since "there is no particular reason to believe that creative ability will always correlate with the ability to pay market price for improvement rights." Julie E. Cohen, Lochner *in Cyberspace: The New Economic Orthodoxy of "Rights Management"*, 97 MICH. L. REV. 462, 482 n.67 (1998). Jed Rubenfeld would avoid this problem by only granting the original work owner a right to sue for profit allocation. Rubenfeld, *supra* note 71, at 59. But this raises the issue of what are profits. *See* Lange & Anderson, *supra* note 81, at 143-55.

82. 376 U.S. 254 (1965) (striking down a state law that allowed a libel action brought by a public official against critics of his official conduct).

83. *Id.* at 264-65. Unfortunately, the Court failed to take the opportunity to remedy this chill when it had the chance in the 1994 parody case *Campbell v. Acuff-Rose Music,*

nize an outside limit on copyright protection when it dissolved an injunction against the publication of Alice Randall's *The Wind Done Gone* parody of *Gone with the Wind*,[84] but the litigation costs were about $150,000.[85] Thus, the clear message these cases send to creators (and publishers) who seek to build on others' ideas is: if you publish it, they will come . . . to get you.[86]

Meanwhile, the fair use exception to copyright protection has only limited value due to publisher fears that copyright holders will claim that uses are not fair. The fair use doctrine, which permits unauthorized but very limited uses of copyrighted content, is supposed to spare creators the need to incur the administrative costs of obtaining permission for minor uses of others' materials.[87] Yet the standards for invoking it are so vague that creators are often chilled by the fear of litigation.[88] Given that even

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Inc., 510 U.S. 569 (1994). The Court in *Campbell* only held that parodies could qualify as "fair use," thus finding that a rap parody of Roy Orbison's song "Oh, Pretty Woman" could be a fair, noninfringing use. *Id.* The Court remanded the case for consideration of the resulting harm to the market for non-parodic rap derivatives of the song. *Id.*; *see* James Boyle, *The First Amendment and Cyberspace: The Clinton Years*, 63 LAW & CONTEMP. PROBS. 337, 340-48 (2000); Rubenfeld, *supra* note 71, at 59.

84. Suntrust Bank v. Houghton Mifflin Co., 268 F.3d 1257 (11th Cir. 2001). The litigation was settled in May 2002, with defendant Houghton Mifflin agreeing to contribute an undisclosed amount to Morehouse College. *See* David D. Kirkpatrick, *Mitchell Estate Settles 'Gone with the Wind' Suit*, N.Y. TIMES, May 10, 2002, at C6.

85. *See* A Debate on "Creativity, Commerce & Culture" with Larry Lessig and Jack Valenti, Annenberg School of Communications, Los Angeles, Cal., at 23-24 (Nov. 29, 2001) *available at* http://www.learcenter.org/pdf/LessigValenti.pdf (last visited May 9, 2004) [hereinafter Lessig & Valenti].

86. *Cf.* FIELD OF DREAMS (Universal 1989) ("If you build it, they will come."); *see also* Chilling Effects, Chilling Effects Clearinghouse, *at* http://www.chillingeffects.org (displaying cease-and-desist letters sent by copyright holders) (last visited Apr. 28, 2004).

87. *See* Breyer, *supra* note 15, at 316-18; 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, 1628-30 (1982). Still, after *Harper & Row, Publishers, Inc. v. Nation Enterprises*, it is not clear that fair use covers much beyond where a reasonable copyright owner would have consented to the use, and thus a situation that should only arise where administrative costs make it impractical to seek permission. *See* Neil Weinstock Netanel, *Locating Copyright Within the First Amendment Skein*, 54 STAN. L. REV. 1, 21-23 (2001).

88. *See* LAWRENCE LESSIG, FREE CULTURE: HOW BIG MEDIA USES TECHNOLOGY AND THE LAW TO LOCK DOWN CULTURE AND CONTROL CREATIVITY 95-99, 185-88, 304-06 (2004) (discussing how creators refrain from making fair uses of content out of fear of litigation, even when top legal scholars tell them that they are clearly in the right), *available at* http://cyberlaw-temp.stanford.edu/freeculture.pdf [hereinafter LESSIG, CULTURE] (last visited May 15, 2004); Pierre N. Leval, *Toward a Fair Use Standard*, 103 HARV. L.

some major Hollywood features have faced court injunctions for lacking appropriate clearances,[89] documentary filmmaker Davis Guggenheim concludes that "if any piece of artwork is recognizable by anybody . . . then you have to clear the rights of that and pay to use the work."[90] Yet trying to obtain permission to use others' materials or even simply tracking down the rights' owners requires significant, if not prohibitive, payments.[91] In fact, many have recognized that creators, as a class, might actually be better off with *less* copyright protection, since the benefit to creator licensees would exceed the harm to the creators whose content was used.[92] The Internet and a more efficient online copyright registration procedure, however, might well alleviate this problem if together they can make it inexpensive and practical for creators to procure licenses from copyright holders.[93]

REV. 1105, 1106-07 (1990); Litman, *Copyright Legislation*, *supra* note 21, at 341; Glynn S. Lunney, Jr., *Fair Use and Market Failure: Sony Revisited*, 82 B.U. L. REV. 975, 988-91 (2002); Patterson, *supra* note 71, at 224-26.

89. LESSIG, IDEAS, *supra* note 7, at 4 (describing the litigation faced by *12 Monkeys*, *Batman Forever*, and *The Devil's Advocate*). *See also* Rebecca Tushnet, *Copyright as a Model for Free Speech Law: What Copyright Has in Common with Anti-Pornography Laws, Campaign Finance Reform, and Telecommunications Regulation*, 42 B.C. L. REV. 1, 14 n.42 (2000); Copyright Website LLC, *at* http://benedict.com/visual/visual.aspx (last visited Apr. 28, 2004).

90. LESSIG, IDEAS, *supra* note 7, at 3 (quoting Davis Guggenheim).

91. *See* Eldred v. Ashcroft, 537 U.S. 186, 251-52 (2003) (Breyer, J., dissenting) (describing the difficulty of finding the current copyright holders of older works and the possibility that such works may have multiple copyright holders); DIGITAL DILEMMA, *supra* note 11, at 65; LESSIG, CULTURE, *supra* note 88, at 95-97, 101-07, 222-25; LESSIG, IDEAS *supra* note 7, at 3-4. For examples of the problems of identifying who owns a copyright see Frances M. Nevins, *Little Copyright Dispute on the Prairie: Unbumping the Will of Laura Ingalls Wilder*, 44 ST. LOUIS U. L. REV. 919 (2000); Amy Harmon, *Copyright Hurdles Confront Selling of Music on the Internet*, N.Y. TIMES, Sept. 23, 2002, at C1.

92. *See* Yochai Benkler, *Intellectual Property and the Organization of Information Production*, 22 INT'L REV. L. & ECON. 81, 88 (2002); Landes & Posner, *supra* note 5, at 332-34, 337 & n.17; Mehra, *supra* note 80, at 182-84, 194-96; *see also* Lunney, *supra* note 71, at 494-97, 513; Dawn C. Nunzianto, *Justice Between Authors*, 9 J. INTELL. PROP. L. 219 (2002); Alfred C. Yen, *Restoring the Natural Law: Copyright as Labor and Possession*, 51 OHIO ST. L.J. 517, 556 (1990); *cf.* Tim O'Reilly, *Piracy is Progressive Taxation, and Other Thoughts on the Evolution of Online Distribution*, Dec. 12, 2002, *available at* http://www.oreillynet.com/pub/a/p2p/2002/12/11/piracy.html (last visited May 9, 2004).

93. *See* LESSIG, IDEAS, *supra* note 7, at 251 (suggesting that the U.S. Copyright Office operate a website where authors could register their work). The Internet can certainly diminish costs for consumptive uses. *See* Tom W. Bell, *Fair Use v. Fared Use: The Im-*

All economic analyses of copyright recognize that there is a large "deadweight loss" to society because publishers protected by copyright set prices which deny access to many consumers who would willingly pay the marginal or even average cost for creative works.[94] Rewards enhanced by § 106 may also divert some creators into copyright-protected markets and away from other, more socially beneficial industry segments or industries[95]—a hidden opportunity cost to society.[96]

Section 106 also enables incumbent media industries to slow the development of competing new technologies by denying access to critical content. Thus, the film industry tried to stymie television by denying broadcasters access to films, both in television's early years[97] and when the broadcasters tried to experiment with pay-TV.[98] In turn, broadcasters constrained cable television systems' access to broadcast programming,[99]

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pact of Automated Rights Management on Copyright's Fair Use Doctrine, 76 N.C. L. REV. 557, 579-80 (1998); Trotter Hardy, *Property (and Copyright) in Cyberspace,* 1996 U. CHI. LEGAL F. 217, 236-42 (1996). Rights owners, however, may well refrain from automated licensing of productive uses. For discussions of copyright clearinghouses, see DIGITAL DILEMMA, *supra* note 11, at 68; LESSIG, IDEAS, *supra* note 7, at 251, and expedited registration processes, see New Music Jukebox, Am. Music Ctr., *at* http://newmusicjukebox.org (last visited Apr. 29, 2004).

94. *See* KENNETH J. ARROW, *Economic Welfare and the Allocation of Resources for Invention*, *in* ESSAYS IN THE THEORY OF RISK-BEARING 144, 153 (1971); Lunney, *supra* note 71, at 556-57, 564-67; Zimran Ahmed, *The Copyright Tax*, WINTERSPEAK.COM, Feb. 20, 2002, *at* http://www.winterspeak.com/columns/022002.html (estimating billions of dollars of losses) (last visited May 9, 2004). Such losses are somewhat mitigated by public libraries, which offer a small subset of the total content output free to the public.

95. *See* Lunney, *supra* note 71, *passim* (discussing the incentives for individuals to invest in creative works); *see also* Breyer, *supra* note 15, at 309; Hurt & Schuchman, *supra* note 17, at 430; Lunney, *supra* note 63, at 888-90; Plant, *supra* note 7, at 192.

96. *See* Lunney, *supra* note 71, at 492 (stating that the "inevitable result of such protection is that we will have too many entertaining works, at the expense of having too little of everything else"); Lunney, *supra* note 63, at 880-81; Plant, *supra* note 7, at 184; Arnold Plant, *The Economic Theory Concerning Patents for Inventions*, 1 ECONOMICA 30, 40 (1934).

97. See Douglas Gomery, *Failed Opportunities: The Integration of the U.S. Motion Picture and Television Industries*, 10 Q. REV. FILM STUD. 219 (1984).

98. In 1964, some movie theaters successfully pressured major film producers not to supply films for the Hartford subscription TV experiment. *See* Amendment of Part 73 to Provide for Subscription Television Service, Fourth Report & Order, 15 F.C.C.2d 466, 475 (1968).

99. When the Supreme Court rejected broadcasters' charges that cable television system operators' retransmission of broadcast signals was prohibited by the 1909 Copyright Act, broadcasters were still able to prevail upon the FCC and Congress to limit cable system access to distant broadcast signals and to attractive "pay" shows. *See* Stanley

and cable programmers tried to deny satellite companies access to cable networks.[100] Similar defensive industry responses today appear to be hindering the rollout of broadband,[101] digital video recorders,[102] and Internet distribution technologies.[103] Furthermore, when manufacturers of existing technologies have negotiated over legislative revisions to copyright laws they have allocated benefits among themselves, generally slighting new media[104] and thereby hindering innovation. Thus the Sonny Bono Act has frustrated many innovative uses of the Internet,[105] and other proposed

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Besen & Robert Crandall, *The Deregulation of Cable Television*, 44 LAW & CONTEMP. PROB. 77, 91-110 (1981).

100. *See* David Waterman, *Vertical Integration and Program Access in the Cable Television Industry*, 47 FED. COMM. L.J. 511 (1995). Congress responded to this problem by requiring cable networks to deal fairly with satellite distributors. *See* 47 U.S.C. § 548(c)(2)(B) (2000).

101. *See* Amy Harmon, *Hearings on Digital Movies and Piracy*, N.Y. TIMES, Mar. 1, 2002, at C4; Remarks of FCC Chairman Michael K. Powell, at the National Summit on Broadband Deployment, Oct. 25, 2001, at 2, *available at* http://www.fcc.gov/Speeches/Powell/2001/spmkp110.html ("Much of what is holding broadband content back is caused by copyright holders trying to protect their goods in a digitized environment.").

102. *See* Kevin Werbach, *Who Controls Information?*, RELEASE 1.0, May 31, 2002, at 1,17 ("One prominent Silicon Valley VC said he wouldn't invest in the next Tivo because it would be a lawsuit waiting to happen.").

103. *See, e.g.*, UMG Recordings, Inc. v. MP3.com, Inc., 92 F. Supp. 2d 349 (S.D.N.Y. 2000) (holding for record companies that sued a Web server that made music files available online to customers who already owned the music for copyright infringement); LESSIG, CULTURE, *supra* note 88, at 189-99 (the MP3 technology and Internet radio). The Movielink Internet service's five film studio partners have also been sued by a competitor, Intertainer, for trying to use their control over films to drive it out of business. *See* Amy Harmon, *Black Hawk Downloaded*, N.Y. TIMES, Jan. 17, 2002, at G1 (discussing Morpheus and other video technologies). Larry Lessig contends that the recording industry's aim seems to be to insure that no venture capitalist invests in a technology that competes with existing recording industry licensees without the approval of the industry, i.e., entry barrier control. *See* LESSIG, IDEAS, *supra* note 7, at 200-01.

104. *See* Litman, *Copyright Legislation*, *supra* note 21, at 299-305.

105. The Sonny Bono Copyright Term Extension Act, Pub. L. No. 105-298, 112 Stat. 2827 (1998), chilled projects like Eric Eldred, Eldritch Press, *at* http://web.archive.org/web/*/http://eldred.ne.mediaone.net (last visited May 3, 2004); Michael Hart's Project Gutenberg, *at* http://www.gutenberg.net (last visited Apr. 29, 2004) (free electronic books); Internet Archive, *at* http://www.archive.org (last visited Apr. 29, 2004); and the Prelinger Archives, http://www.prelinger.com/prelarch.html (last visited Apr. 29, 2004) (film archives). *See* Heather Green, *A Library as Big as the World*, BUSINESSWEEK ONLINE, Feb. 28, 2002, *at* http://www.businessweek.com/technology/content/feb2002/tc20020228_1080.htm (last visited May 9, 2004).

rules would constrain new technological innovations and creative works.[106]

Another problem with § 106 is that it appears to increase media concentration because merged media firms gain the advantage of having easier access to cross-license each others' content. Absent § 106, all publishers would be able to engage in socially beneficial cross uses.[107]

Finally, there are significant costs in enforcing § 106. Any property rights structure imposes enforcement costs.[108] In addition to the costs of monitoring, negotiating, and litigating, there is also the cost of lost privacy and the like, when there is litigation over who has had access to creative works.

III. INDUCING THE PRODUCTION OF CREATIVE CONTENT

Both creators and publishers must be motivated to create and disseminate creative content. Most creators are motivated by non-monetary as well as monetary needs or goals, in fact many, if not most, would probably create even in the absence of significant financial rewards. On the other hand, without adequate financial incentives, few publishers—as businesses created, generally, to make profits—would appear willing to invest the resources required to cover their many costs, as detailed in the rest of this section. The business models discussed in Part IV, below, appear to be sufficient to generate the needed revenues.

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106. *See* CED REPORT, *supra* note 80, at 45-59; John L. Zittrain, *Taming the Consumer's Computer*, N.Y. TIMES, Mar. 11, 2002, at A21.

107. RONALD V. BETTIG, COPYRIGHTING CULTURE: THE POLITICAL ECONOMY OF INTELLECTUAL PROPERTY 101 (1996); Benkler, *supra* note 92, at 88-89, 92, 94; Yochai Benkler, *Free as the Air to Common Use: First Amendment Constraints on Enclosure of the Public Domain*, 74 N.Y.U. L. REV. 354, 400-12 (1999); Neil Weinstock Netanel, *Market Hierarchy and Copyright in Our System of Free Enterprise*, 53 VAND. L. REV. 1879, 1904-11 (2000) (examining the problem of a small number of conglomerates holding the rights to creations); *see also* Guy Pessach, *Copyright Law as a Silencing Restriction on Non-Infringing Materials—Unveiling the Scope of Copyright's Diversity Externalities*, 76 S. CAL. L. REV. 1067 (2003); Paul Goldstein, *Copyright and the First Amendment*, 70 COLUM. L. REV. 983, 983-84 (1970). Benkler also points out a homogenization effect, *see* Benkler, *supra* note 92, at 95, and a feedback effect. *Id.* at 95-98. In addition, larger firms are more likely to find it cost effective to survey consumers so as to permit them to engage in price discrimination for their libraries of content. Netanel, *supra* note 107, at 1914-17.

108. *See* Harold Demsetz, *The Exchange and Enforcement of Property Rights*, 7 J.L. & ECON. 11, 14 (1964).

A. Inducing Creators to Create

Non-pecuniary motivations have long played a major role in stimulating artistic creations.[109] The joy of simply pleasing audiences[110] or of the creative process drives many creative artists.[111] Others see themselves simply as vessels to deliver content.[112] Still others seek to praise or punish others or to celebrate or mourn some event.[113] The desire for fame, respect, and achievement also motivates many creators.[114] For example, as one journalist asserted: "[P]eople who choose journalism [seek] . . . the satisfaction of being known and noticed, with your name in print and perhaps your face on the air; the opportunity to play a part in shaping public issues without having to go into politics."[115] Many seek to prove that they

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109. *See* Plant, *supra* note 7, at 168-69 ("Some of the most valuable literature that we possess has seen the light without the need for monetary incentives."); *see also* BRUNO S. FREY, NOT JUST FOR THE MONEY: AN ECONOMIC THEORY OF PERSONAL MOTIVATION (1997).

110. Aaron Copland once testified that he would pay people to listen to his music. *See* Scherer, *supra* note 65, at 3, 19.

111. *See, e.g.*, CLAUDE SAMUEL, PROKOFIEV 119 (1971) (quoting Sergei Prokofiev's wife who stated that the composer found the supreme joy of life to be "the joy of creation"); David D. Kirkpatrick, *After 2-Year Detour, Grisham Returns to Legal Thrillers*, N.Y. TIMES, Feb. 4, 2002, at E1 (quoting John Grisham: "My motives when I started were initially pure . . . I didn't even dream of publishing . . . 'A Time to Kill' I wrote for the love of the story.").

112. *See* MARTHA WOODMANSEE, THE AUTHOR, ART AND THE MARKET (1996). Speaking of his writing, Martin Luther said, "Freely have I received, freely given, and want nothing in return." *Id.* at 159 n.19.

113. *See, e.g.*, DAVID THROSBY, ECONOMICS AND CULTURE 109 n.13 (2001) (Johann Sebastian Bach stated that "the ultimate end or final goal of all music . . . is nothing but for the honour of God and the renewal of the soul."); Ari Posner, *No Experience Required: 'The O.C.' Rewrites the Rules of TV Writing*, N.Y. TIMES, Mar. 21, 2004, §2, at 1 (Josh Schwartz "is the rare writer who uses his work to thank his parents . . . instead of exacting revenge on them.").

114. *See* ERIC S. RAYMOND, THE CATHEDRAL AND THE BAZAAR: MUSINGS ON LINUX AND OPEN SOURCE BY AN ACCIDENTAL REVOLUTIONARY 53 (2d ed. 2001) (describing ego satisfaction and reputation among hackers); Landes & Posner, *supra* note 5, at 331 (describing prestige that translates into income); *see also* OTA STUDY, *supra* note 11, at 182-83 (discussing the origin of "Freeware"); Christopher M. Kelty, *Free Software/Free Science*, FIRST MONDAY, Dec. 2001, *available at* http://www.firstmonday.dk/issues/issue6_12/kelty/index.html (last visited May 9, 2004). *But see* David Lancashire, *Code, Culture and Cash: The Fading Altruism of Open Source Development*, FIRST MONDAY, Dec. 2001, *available at* http://www.firstmonday.org/issues/issue6_12/lancashire/index.html (suggesting that a primary cause of the rise of the free software movement may have been the immaturity of certain types of software markets) (last visited May 9, 2004).

115. *See* JAMES FALLOWS, BREAKING THE NEWS: HOW THE MEDIA UNDERMINE

are the best in their field, as certified by a Nobel Prize, Pulitzer Prize, or Grammy Award.[116] To achieve fame or generate publicity, some even pay to send their work to others.[117] Non-pecuniary motives also lead some to participate in community projects to create software.[118] Clearly, social, religious, moral, or political goals at least partially motivate some creators.[119]

AMERICAN DEMOCRACY 74 (1996). This even leads reporters to risk their lives. *See* Nicholas D. Kristof, *A Life of Balances*, N.Y. TIMES, Feb. 22, 2002, at A25. Kristof mourned the death of a *Wall Street Journal* correspondent, but observed:

> Will Danny Pearl's death change anything? Will it make reporters more careful? I hope so, but I doubt it. The reality is that war is a riveting story. It is the route to front-page articles, to Pulitzer Prizes, to promotions. It's terrifying, grueling, traumatizing, exhilarating. . . . And when you get a story out to the world, exposing some misery or brutality, and thereby usually making people less brutal or miserable, you feel pride at having saved lives.

Id.

116. Both the Soviet Union and China used state-issued prizes as a socialist mechanism to encourage creation. *See* Carla Hesse, *The Rise of Intellectual Property, 700 B.C. - A.D. 2000: An Idea in the Balance*, DÆDALUS, Spring 2002, at 26, 43. In the United States, many treat salaries more as a means to measure their relative standing among their peers than for monetary value. *See* ROBERT H. FRANK, LUXURY FEVER 122-45 (1999).

117. Prior to the Internet, many authors of law review articles paid for reprints to send free to potential readers. This emerging "author pays" business model, so readers have free access, appears likely to dominate in the scientific community. *See* Amy Harmon, *New Premise in Science: Get the Word Out Quickly, Online*, N.Y. TIMES, Dec. 17, 2002, at F1.

118. Prominent examples include GNU/Linux (a viable alternative to Windows) and Apache (the leading web server). *See* Yochai Benkler, *Coase's Penguin, or, Linux and the Nature of the Firm*, 112 YALE L.J. 369 (2002). Such motivations may also work to provide the managerial support to coordinate the decentralized process. *See id.*; Boyle, *supra* note 6, at 46-47. In fact, this culture led Richard Stallman to create the General Public License ("GPL") for software, under which a creator permits anyone to copy a piece of software as long as the copier attaches the GPL and the source code (explaining the software) to all copies. *See* Richard Stallman, *The GNU Operating System and the Free Software Movement*, *in* OPEN SOURCES: VOICES FROM THE OPEN SOURCE REVOLUTION (Chris DiBona et al. eds., 1999); *see also* GNU General Public License (June 1991), *available at* http://www.fsf.org/copyleft/gpl.html (discussing the concept of "copyleft"). Some creators may be attracted by the philosophy of a "Creative Commons" or other niches in the "gift economy." *See, e.g.*, Creative Commons, *at* http://www.creativecommons.org (last visited Apr. 29, 2004).

119. *See* Marci A. Hamilton, *Art Speech*, 49 VAND. L. REV. 73, 86-95 (1996) (discussing social and political motivations for art); Joseph Epstein, *Think You Have a Book in You? Think Again*, N.Y. TIMES, Sept. 28, 2002, at A17 (suggesting that being published may provide individuals with the significance that they formerly sought through religious salvation). This also applies to some publishers. *See infra* note 143.

Still, even great artists acknowledge the tremendous importance of financial payments. As one scholar has noted,

> Bach, Mozart, Hayden, and Beethoven were all obsessed with earning money through their art . . . . Mozart even wrote: "Believe me, my sole purpose is to make as much money as possible; for after good health it is the best thing to have." When accepting an Academy Award in 1972, Charlie Chaplin remarked: "I went into the business for money and the art grew out of it. If people are disillusioned by that remark, I can't help it. It's the truth."[120]

Moreover, individual creators must pay for costs related to creation of their works: materials, production, and possibly marketing costs. They must also pay for living expenses and, ideally, recover their opportunity costs: the income that they could have earned if they pursued other employment instead of focusing on creating new content.[121] To feel emotionally satisfied, many also need to feel that they receive their fair share of any surplus value they help to create.

Economists have recognized that standard supply curves, which show the relationship between compensation paid to workers and their output, while useful for evaluating employees creating more "humdrum" works (telephone books, databases, and reference works),[122] fail to accurately reflect the incentives of creators, for whom non-monetary goals may well dominate monetary ones.[123] For those who are not fully employed as creators, it appears more appropriate to treat content creation as a leisure time activity or investment in the future[124] that is constrained by their ongoing

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120. TYLER COWEN, IN PRAISE OF COMMERCIAL CULTURE 18 (1998).

121. *See* RICHARD A. POSNER, ECONOMIC ANALYSIS OF LAW 6 (4th ed. 1992).

122. Those employed by for-profit firms to compile encyclopedias, telephone books, databases, etc., are likely to demand wages based on their opportunity cost, and a standard supply curve would represent them accurately. *See* Hurt & Schuchman, *supra* note 17, at 426. Richard Caves calls these "humdrum" inputs. *See* CAVES, *supra* note 40, at 4.

123. *See* David Throsby, *Artists as Workers*, *in* CULTURAL ECONOMICS 201, 202 (Ruth Towse & Abdul Khakee eds., 1992) ("[A] different set of determinants is likely to influence labour supply decisions of artists in arts and nonarts markets."). *See generally* CAVES, *supra* note 40, at 2 ("[C]reative goods and services, the processes of their production, and the preferences of tastes of creative artists differ in substantial and systematic (if not universal) ways from their counterparts in the rest of the economy . . . .").

124. Many work merely for exposure. *See* CAVES, *supra* note 40, at 66 & 359 (noting that pursuit of fame leads some musical groups to pay to open up for established groups at concerts and that a survey of composers in the 1970s found that their net income from composing was negative); Neil Strauss, *For Musicians, Microsoft's Xbox is No Jackpot*,

financial needs.[125] Since at some level of effective wages (or savings or family support), a creator will be able to pursue creative work full-time,[126] such compensation, which leads to the creator's increased or even full-time production of creative content, does indeed spur overall creative output. Yet, once certain financial desires are satisfied, money may became less of a motivation and the pursuit of fame or the simple need to create may become the primary drivers of greater output. As John Grisham explained, "Money is not that big an issue anymore. It's not the driving force that it was five years ago. I'm a writer. If I didn't write, what would I do all year long?"[127]

Furthermore, even introductory economics textbooks recognize that the supply curve for labor is "backward bending" for each person. That is, at some point, greater compensation will cause a worker to devote *less* time to work.[128] Although most creators probably never reach that point, many famous creators—those who benefit most from copyright protection—seem to be in the high earnings range where increased compensation reduces their incentive to create.[129] Some renowned creators may demand

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N.Y. TIMES, Nov. 15, 2001, at E1 (discussing how less-famous musicians who provided material for Microsoft's Xbox video game received little if any payment).

125. *See* THROSBY, *supra* note 113, at 97, 99, 102, 162-63 (noting that "the artist is still assumed to be striving solely for the generation of cultural value but within the limitations imposed by the income requirement" and suggesting a model that "non-arts work is simply a means of enabling as much time as possible to be spent at the (preferred) artistic occupation"); David Throsby, *Disaggregated Earnings Functions for Artists*, *in* ECONOMICS OF THE ARTS 331, 334 (Victor A. Ginsburgh & Pierre-Michel Menger eds., 1996) (offering "a hypothesis that nonarts work is undertaken by artists essentially as a means of satisfying fixed minimum consumption requirements"). Many well known creators supported themselves, at least in part, with ordinary jobs, e.g., T.S. Eliot (Lloyd's Bank), Wallace Stevens (insurance executive), William Faulkner (power plant), and Philip Glass (taxi driver). *See* COWEN, *supra* note 120, at 17.

126. *See, e.g.*, MICHAEL FOOT, H.G.: THE HISTORY OF MR. WELLS 29-35 (1995) (discussing how H.G. Wells quit his job as a biology teacher after the successful publication of THE TIME MACHINE (1895)).

127. Kirkpatrick, *supra* note 111.

128. Although the opportunity to earn a higher salary generally leads workers to convert more leisure time into work (called the "substitution effect"), the salary also creates an "income effect," whereby one with a higher income chooses to "buy" more hours of leisure. *See* WALTER NICHOLSON, MICROECONOMIC THEORY BASIC PRINCIPLES AND EXTENSIONS 666-77 (7th ed. 1998); Plant, *supra* note 7, at 192 (noting that, once they have earned a sufficient amount, authors "may prefer now to take more holidays or retire earlier.").

129. *See* Lunney, *supra* note 63, at 891-92 (reporting that the reduction in output "begins to fall with increasing wages at a wage well below the level that broad copyright protection offers popular authors today."). For example, the majority in *Eldred* argued

substantial sums for future creations, but such requests probably only represent their desire for the perceived economic rents due them as their fair share of total revenues, rather than their need for a sufficient incentive to work more hours.[130] It is also important to recognize that many creators understand that their need or desire for financial rewards from their creative works need not come from direct sales of them. As Internet guru Esther Dyson has observed, experts often write to enhance their reputations and earn their income from ancillary services.[131] Most academic writing, including law review articles, would seem to fall into that category.

In addition to take-home pay, creators must also secure raw materials for their work. Courts have long recognized that all artists to some degree build on and borrow from their predecessors. As Justice Story explained,

> In truth, in literature, in science and in art, there are, and can be, few, if any, things, which in an abstract sense, are strictly new and original throughout. Every book in literature, science and art, borrows, and must necessarily borrow, and use much which was well known and used before.[132]

For example, many of Shakespeare's plots were originated by others.[133] In fact, literary imagination may be "but a weaving of the author's experience of life into an existing literary tradition."[134] Even leading copyright advocate Mark Twain acknowledged that "we are all thieves,"[135] and

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that singers Quincy Jones, Bob Dylan, etc., required greater compensation to produce more work. *See* Eldred v. Ashcroft, 527 U.S. 186, 207 n.15 (2003). However, lower compensation might actually have led them to work more to earn what they wanted.

130. *See* David Throsby, *A Work-Preference Model of Artist Behaviour*, *in* CULTURAL ECONOMICS AND CULTURAL POLICIES 69, 78 (Alan Peacock & Ilde Rizzo eds., 1994) (increased income to artists already working full-time might be treated as rent or enable the artist to purchase more and better materials).

131. ROBERT YOUNG & WENDY GOLDMAN ROHM, UNDER THE RADAR: HOW RED HAT CHANGED THE SOFTWARE BUSINESS AND TOOK MICROSOFT BY SURPRISE (1999); Esther Dyson, *Intellectual Value*, WIRED, July 1995, at 136.

132. Emerson v. Davies, 8 F. Cas. 615, 619 (D. Mass. 1845) (No. 4436). *See also* Berkic v. Crichton, 761 F.2d 1289, 1294 (9th Cir. 1985); White v. Samsung Elecs. Am., Inc., 989 F.2d 1512, 1513 (9th Cir. 1993) (Kozinski, dissenting).

133. *See* RICHARD POSNER, LAW AND LITERATURE 397-99 (rev. ed. 1998); *see also* Stuart P. Green, Plagiarism, Norms, and the Limits of Theft Law: Some Observations on the Use of Criminal Sanctions in Enforcing Intellectual Property Rights, 54 HASTINGS L.J. 167, 176 n.26 (2002).

134. *See* POSNER, *supra* note 133, at 403; *see also* Note, *Originality*, 115 HARV. L. REV. 1988, 1989-90 & n.5 (2002).

135. VAIDHAYANATHAN, *supra* note 12, at 55-80 (discussing Twain's energetic and

pop music star Moby agrees, observing that "I'm the composer and the musician and the engineer, but also a plagiarist and thief."[136] While the nature and form of the elements copied varies between and within media, since virtually all content includes some degree of copying, many have challenged the very concept that any one person can be recognized as *the* author.[137]

Those creators that use copyrighted source inputs must license those inputs, and this, at least initially, negatively impacts a creator's output. While a very successful creator may recoup this licensing cost and more, the need to license source material probably hinders the vast majority of only marginally successful creators, some of whom cannot afford to pay both the fee and the cost of tracking down whom to pay.[138] New creators face lower costs to the extent the material they build upon is available free as public domain materials,[139] including content predating copyright or with expired copyrights, government publications, facts,[140] or supposedly, ideas.[141] They will also benefit from access to work by creators who are

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persistent support for strong copyright protection, despite his borrowing practices). Stealing and adapting material from others was also the norm in vaudeville, as illustrated by the Marx Brothers. *See id*. at 81.

136. Gerald Marzorati, *All by Himself*, N.Y. TIMES, Mar. 17, 2002, § 6 (Magazine), at 32, 35-36. In fact, plagiarism appears to be very common. *See* VAIDHAYANATHAN, *supra* note 12, at 205-06 n.67; Jon Pareles, *Plagiarism in Dylan, Or a Cultural Collage?*, N.Y. TIMES, July 12, 2003, at B7.

137. *See* JAMES BOYLE, SHAMANS, SOFTWARE, AND SPLEENS: LAW AND THE CONSTRUCTION OF THE INFORMATION SOCIETY 51-60 (1996); Litman, *supra* note 20, at 965-67, 1007-13 (1990). *See generally* THE CONSTRUCTION OF AUTHORSHIP: TEXTUAL APPROPRIATION IN LAW AND LITERATURE (Martha Woodmansee & Peter Jaszi eds., 1994).

138. *See supra* note 91 and accompanying text.

139. *See* Pamela Samuelson, *Mapping the Digital Public Domain: Threats and Opportunities*, 66 LAW & CONTEMP. PROBS. 147, 148-53 (2003).

140. Although facts are not subject to copyright under *Feist Publ'ns, Inc. v. Rural Tel. Serv. Co.*, 499 U.S. 340 (1991), bills have been introduced in Congress seeking to change that situation, particularly with respect to commercial databases. *See* Jane C. Ginsburg, *U.S. Initiatives to Protect Works of Low Authorship*, *in* EXPANDING THE BOUNDS OF INTELLECTUAL PROPERTY: INNOVATION POLICY FOR THE KNOWLEDGE SOCIETY 55 (Rochelle Cooper Dreyfuss et al. eds., 2001); J.H. Reichman & Paul F. Uhlir, *Database Protection at the Crossroads: Recent Developments and Their Impact on Science and Technology*, 14 BERKELEY TECH. L.J. 793 (1999) (discussing H.R. 2281 and H.R. 354).

141. Although 17 U.S.C. § 102(b) (2000) clearly states that ideas are not protected by copyright, the protection of derivative works appears to protect ideas as expressed in sequels and other such variations. *See supra* notes 71-86 and accompanying text.

voluntarily registering their work under a general public license (GPL) or the like, making that work available free of charge.[142]

B. The Financial Needs of Publishers: Costs That Need to be Recovered

Most creators have relied on publishers to handle the tasks involved in both preparing final versions of and distributing their creative works (although, as discussed below, the Internet is changing this). Publishers, meanwhile, generally undertake these tasks if they believe that they can earn at least some small profit[143] after covering their costs. In addition to compensation to the creator, publishers' costs include: selection of content, preparation of first copy, reproduction and delivery, marketing, insurance against failure, and processing of payments. These latter six costs have generally absorbed at least eighty-five percent of revenues from creative content.[144]

The first cost publishers face is finding and selecting creative content. Predicting which creations will be profitable requires significant perceptiveness about quality and public tastes, as well as luck.[145] The often acci-

142. It is only free to those who offer their creative works under the GPL. *See supra* note 118.

143. Academic and a few politically motivated publishers, however, may be willing to lose money on publications in the service of other goals, as well as to accept lower salaries, *see* Auletta, *supra* note 44, at 50, and lower returns than they would for ordinary investments. *See* CAVES, *supra* note 40, at 44 (describing how many art dealers are "willing to settle for less profit than humdrum entrepreneurs"). Publishers may also use their businesses to trumpet their own views and causes. *See* Benkler, *supra* note 107, at 378 n.109 (citing anecdotal evidence that media moguls like Rupert Murdoch and William Randolph Hearst used their media to press their personal causes).

144. That is, most creators receive royalties of only about 5-15%. In the musical recording industry, new artists receive nominal royalties of 7% to 12%, superstars 15% or more. However, these royalties are subject to many adjustments so that a standard 12% royalty on a CD for an independent producer translates into a 3% of retail price royalty to the artist, i.e., less than 50¢ on a $15 CD. Still, few CDs earn enough for artists to receive more than their advance. *See* KRASILOVSKY & SHEMEL, *supra* note 42, at 19-23. Composers also receive about 5.7¢ for every track on every copy of every CD and vinyl record. *See* 17 C.F.R. § 201.19(e)(4) (2004) . Book publishing industry royalties are somewhat higher. *See* CAVES, *supra* note 40, at 56-57 (describing the typical royalty contract for trade books as including 10% of the book's retail price and splitting the gross profit 58%-42%); Auletta, *supra* note 44, at 54 (describing the standard as being 10%).

145. *See* William T. Bielby & Denise D. Bielby, *"All Hits are Flukes": Institutionalized Decision Making and the Rhetoric of Network Prime Time Program Development*, 99 AM. J. SOCIOLOGY 1287 (1994); *see also* ANDRE BERNARD, ROTTEN REJECTIONS: A LITERARY COMPANION (1990) (collecting data about many famous book rejections, including *The Peter Principle* (30 times)); VOGEL, *supra* note 41, at 73 & n.2 (listing fa-

dental nature of publishing was captured most famously by William Goldman's description: "Nobody knows anything."[146] Although agents or other successful creators often provide a first level of screening,[147] and the Internet is helping to cut this cost by facilitating peer group reviewing,[148] publishers nonetheless invest substantial resources in trying to identify worthy content. Interestingly, those that pirate creative works generally do not escape this cost simply by selecting creations that have already become best sellers. After all, to make a profit, pirates must accurately predict the future market for the creative work, i.e., what consumer demand, competition, and prices will be like at the time they are actually ready to start selling pirated copies to consumers.[149]

Second, a publisher must pay for the preparation of the first copy. While new technologies continue to reduce production costs in some creative markets,[150] creators often need significant funds to complete their original work. Although exceptional films have been made for small amounts,[151] the performance fees to performers, special effects, travel,

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mous film rejections).

146. *See* WILLIAM GOLDMAN, ADVENTURES IN THE SCREEN TRADE: A PERSONAL VIEW OF HOLLYWOOD AND SCREENWRITING 39 (1983); *see also* Norm Alster, *It's Just a Game, But Hollywood is Paying Attention*, N.Y. TIMES, Nov. 23, 2003, § 3, at 4.

147. *See* CAVES, *supra* note 40, at 53-56 (describing the very low acceptance rates—three or four for every 10,000 submissions received for one publishing company—and the role agents play as intermediaries between authors and publishers); *see also* Celestine Bohlen, '*We Regret We Are Unable to Open Unsolicited Mail'*, N.Y. TIMES, Nov. 8, 2001, at E1 (noting that some authors pay the Scott Meredith Literary Agency $450 to read and certify the quality of their manuscripts). Many publishers refuse to waste time even opening "slush piles" of unsolicited material. Bohlen, *supra*, at E1; CAVES, *supra* note 40, at 52, 61, 113, 116.

148. See, e.g., Matthew Mirapaul, *Aspiring Screenwriters Turn to Web for Encouragement*, N.Y. TIMES, Nov. 11, 2002, at E2. But see Amy Harmon, *Amazon Glitch Unmasks War of Reviewers*, N.Y. TIMES, Feb. 14, 2004, at A1.

149. They must predict additional future demand, industry output, and prices. *See infra* section IV.A.1. This is ignored by Landes & Posner, *supra* note 5, at 328-29, despite the note in Breyer, *supra* note 15, at 298 n.68.

150. *See* COWEN, *supra* note 120, at 19-21; Frank Ahrens, *A Disturbance in Film's Force*, WASH. POST, Dec. 27, 2002, at E1 (reporting that digital cameras and PC editing software are cutting film production costs); David Pogue, *Recording Studio in a Box*, N.Y. TIMES, Jan. 15, 2004, at G1. Using computer software to generate virtual actors and sets may dramatically cut film production costs. *See* Dave Kehr, *When a Cyberstar is Born*, N.Y. TIMES, Nov. 18, 2001, § 2, at 1; Rick Lyman, *Movie Stars Fear Inroads by Upstart Digital Actors*, N.Y. TIMES, July 8, 2001, at A1.

151. *See* JOHN PIERSON, SPIKE, MIKE, SLACKERS AND DYKES: A GUIDED TOUR ACROSS A DECADE OF AMERICAN INDEPENDENT CINEMA 17, 18, 52 (1995) (referencing Wayne Wang's *Chan is Missing* ($20,000), John Sayles's *Return of the Secaucus Seven*

crew wages, etc. can be quite costly.[152] Furthermore, talented personnel sought for a creative work may inflate their fee requests if they expect there to be a surplus on the project.[153] Musical recording costs for relatively new artists' albums by major studios range from $80,000 to $150,000.[154] Publishers also must often provide significant amounts of artistic, strategic, and psychological support to creators, particularly artists, at the beginning of their careers.[155]

Third, publishers must pay for the reproduction and delivery of creative works, although digital technologies have dramatically reduced these costs. For example, hardcover books can now be produced in high volume for about $2 per copy, high-end paperbacks, CDs, and DVDS for about $1.[156] New reproduction technologies have also dramatically reduced the cost savings of a large production run, making smaller runs that respond to customer demand more feasible.[157] The average cost of transporting hard copies of creative works, i.e., distributing books to retailers, is about $2 per copy.[158] Publishers generally employ private wholesalers and distributors who transport hard copies to tens of thousands of retail outlets.[159] To avoid lost sales that may never be recovered, publishers also generally err on the side of overproduction, which increases production costs. Publishers generally expect returns of about 35% for frontlist hardcovers, 25% for

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($60,000), and Spike Lee's *She's Gotta Have It* ($114,000)).

152. *See generally* 2002 MPA STATS, *supra* note 39 (describing MPAA cost averages). Even simply transferring a typical previously produced Hollywood film from a 35mm print to a "cleaned up" 70mm IMAX version can cost between $2 and $4 million. *See* Rick Lyman, *Imaxing Hollywood Hits for a Big, Seat-Shaking Second Helping of Thrills*, N.Y. TIMES, Sept. 16, 2002, at E1.

153. *See* CAVES, *supra* note 40, at 109 (warning about "the common fallacy of regarding a film's costs as exogenous to its expected revenues"); Laura M. Holson, *Big Hollywood Hits Don't Ensure Big Profits*, N.Y. TIMES, Sept. 2, 2002, at C1.

154. *See* KRASILOVSKY & SHEMEL, *supra* note 42, at 23. Still, software for digital audio workstations is available for $1,000 (plus special effects) and studios rent for as little as $20/hour.

155. *See, e.g.*, Martin Arnold, *Making Books: With Editors Up Their Sleeves*, N.Y. TIMES, Apr. 4, 2002, at E3; Hirschberg, *supra* note 41; Jay Parini, *Saluting All the King's Mentors*, N.Y. TIMES, Feb. 25, 2002, at E1.

156. *See* VOGEL, *supra* note 41, at 162; David D. Kirkpatrick, *Some Book Buyers Read the Price and Decide Not to Read the Rest*, N.Y. TIMES, Dec. 16, 2001, § 1, at 1; Rick Lyman, *In Revolt in the Den, DVD Has the VCR Headed to the Attic*, N.Y. TIMES, Aug. 26, 2002, at A1.

157. *See* CAVES, *supra* note 40, at 144.

158. *See* Auletta, *supra* note 44, at 54.

159. *See id.* at 60; COMPAINE & GOMERY, *supra* note 54, at 69, 123, 160, 381; KRASILOVSKY & SHEMEL, *supra* note 42, at 4-5.

trade paperbacks the first year of publication (20% thereafter), and 40-50% for mass market paperbacks.[160] Meanwhile, personal computers and the Internet have dramatically cut the cost of reproduction and delivery of digital versions of creative content. Thus, online publishers are offering about 100,000 new titles a year at little cost under a print-on-demand system, even if the lion's share are not worth reading.[161] The MP3 standard compresses one minute of music to a mere one megabyte of data, which can be transmitted in about three minutes via a 56K modem (seventeen minutes for a five-minute song), while a whole album can be sent via a high-speed connection in eighteen minutes.[162] Even Hollywood films can be disseminated online over broadband connections.[163] Still, while younger consumers may soon rely primarily on e-versions, hard copies of most creations are likely to be quite popular for a long time, particularly for gifts.[164]

The fourth and often most important element of selling content is the enormous expense of marketing a work effectively. While the Internet already helps cut promotional costs by enabling publishers to offer free online access to excerpts of their books, music, or video,[165] or even an in-

160. *See* FELDMAN, *supra* note 44, at 24.

161. *See* Gayle Feldman, *Got a Book in You? More Companies Than Ever are Willing to Get it Out*, N.Y. TIMES, Mar. 1, 2004, at C6; Taub, *supra* note 57, at G1. Creators can also post shorter creations on weblogs or disseminate them via email. *See* Judith Shulevitz, *At Large in the Blogsphere*, N.Y. TIMES, May 5, 2002, § 9, at 31; Bob Tedeschi, *Internet Experts Wonder if Weblog Technology is a Powerful New Media Species, or Just Another Fad*, N.Y. TIMES, Feb. 25, 2002, at C6.

162. *See* DIGITAL DILEMMA, *supra* note 11, at 77. Real Audio and MP3.com also pioneered the use of streaming audio (and video). Whole bundles of all the songs on an album as well as the CD's artwork are increasingly available as zip files. *See* Neil Strauss, *A Boxed Set in One File? Online Music Finds a Way*, N.Y. TIMES, Feb. 25, 2002, at E1.

163. *See* Ku, *supra* note 13, at 303-04 (observing that this eliminates the need for publishers to finance this cost); Harmon, *supra* note 103, at G1 (discussing Morpheus and other video technologies).

164. The current generation of adults is likely to remain more comfortable with printed books and magazines. *See generally* W. Russell Neuman, *The Media Habit*, *in* ELECTRONIC PUBLISHING PLUS 5, 8-9 (Martin Greenberger ed., 1985); Matthew Rose, *E-Books Have a Big Future, But It's Unlikely to Come Anytime Soon*, WALL ST. J., Oct. 2, 2000, at B1. Still, e-books appear to be gaining popularity. *See* Peter S. Menell, *Envisioning Copyright Law's Digital Future*, 46 N.Y.L. SCH. L. REV. 63, 128-29 (2002-03).

165. *See Authors, Publishers Say Book 'Em—Online*, USA TODAY, Feb. 7, 2002, *available at* http://www.usatoday.com/life/cyber/tech/2002/02/07/books-online.htm (last visited May 15, 2004); Matt Richtel, *Access to Free Online Music is Seen as a Boost to Sales*, N.Y. TIMES, May 6, 2002, at C6; Anthony Tommasini, *Click to Download Scores*

ferior quality copy of the whole work,[166] use of the traditional media, particularly television, remains crucial.[167] Promotional costs and their significance were already discussed in some detail in Section II.B, above. Increased use of the buyer-financed, Internet-empowered selection assistants, discussed in IV.A.4, however, could dramatically reduce these costs of publication.

A fifth publishing cost is the need to insure against the risk of failure. The unpredictability of consumer tastes makes investment in the production of creative content so risky that investors must be offered enormous prizes for their rare winners.[168] Publishers can partly reduce the cost of failure by using royalties rather than large advances,[169] but because many participants are unwilling to trust publisher judgments or accounting, they demand set fees based on expected revenues. This leads publishers to lose on most creative works.[170] Publishers also suffer from the effects of "the

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by New American Composers, N.Y. TIMES, Oct. 9, 2002, at E1 (discussing the American Music Center's New Music Jukebox: newmusicjukebox.org); Amazon.com, *at* http://www.amazon.com (last visited Apr. 29, 2004) (providing a function called "Look Inside," which displays excerpts from selected books). Amazon is even experimenting with offering online text searches of books. *See* Lisa Guernsey, *In Amazon's Text Search, a Field Day for Book Browsers*, N.Y. TIMES, Nov. 6, 2003, at G7.

166. *See infra* note 202

167. Even the dot.com companies recognize this, and they purchased most of the ads for the 2000 Super Bowl game. *See* Kathryn Kranhold, *The Real Action: Ad Bowl XXIV*, WALL ST. J., Jan. 28, 2000, at B1; *see also* Neil Strauss, *Forget Radio, Music Path to Success is TV, TV, TV*, N.Y. TIMES, Jan. 22, 2004, at E1.

168. *See* Scherer, *supra* note 65, at 15. The situation is somewhat analogous to that in the pharmaceutical industry. Although the revenues that drug companies earn on their biggest successes may appear obscene, those rewards may be justified by the enormous costs of failed projects. *See* Robert Pear, *Research Cost for New Drugs Said to Soar*, N.Y. TIMES, Dec. 1, 2001, at C1, (finding the cost of developing a new drug now averages $802 million, according to the Tufts Center for the Study of Drug Development, http://csdd.tufts.edu/NewsEvents/RecentNews.asp?newsid=6 (last visited May 15, 2004)).

169. Executive egos, however, may prevent this. *See* Pareles, *supra* note 61, §2, at 28. For a general discussion of sharing risks between publisher and creator see WATT, *supra* note 6, at 71-107.

170. *See* CAVES, *supra* note 40, at 113-14; PIERCE O'DONNELL & DENNIS MCDOUGAL, FATAL SUBTRACTION (1992); Lunney, *supra* note 63, at 876-77. This yields lottery-like payout patterns. *See* CAVES, *supra* note 40, at 61-62, 102, 120 (estimating that 1/3 to 1/2 of independent films never even find distributors and that 76% of musicals and 80% of stage plays lose money); de Vany & Walls, *supra* note 40, at 285 (stating that films are among the riskiest products with their data showing an infinite variance); Lunney, *supra* note 63, at 878 n.205; Pareles, *supra* note 61 (stating that 90% of albums do not break even); Scherer, *supra* note 65, at 12-15. *But see* Breyer, *supra* note 15, at 296 n.66 (esti-

winner's curse," where the winning bidder for some creative work is the one that makes the most unrealistically high estimate of the value of a property, and thus suffers from this overpayment.[171] As noted above, copiers intending to sell hard copies do not avoid all of this risk, since they are forced to estimate future demand, competition, and prices, creating their own comparable risks.

Finally, publishers need to recover their cost of processing payments, i.e., transferring funds from the consumer to themselves. The use of credit cards and online payment systems that delegate the work to buyers (who may be aided by electronic passports) is reducing the cost of this process, while the emergence of new micro-payment technologies[172] should make it practical to collect even small fees and donations.

IV. SOURCES OF FINANCIAL REWARDS ABSENT § 106's BROAD PROTECTION AGAINST COPYING

To generate sufficient revenues to cover the costs of production and dissemination of all types of creative works, as just reviewed in Part III, there must be at least one viable business model for each media market segment. As the discussion below makes clear, many relevant business models can function effectively without § 106's prohibition against unauthorized copying. Rather, these business models rely on a combination of new and existing technologies, social norms, and copyright laws other than § 106's broad protection against unauthorized copying.[173]

This section attempts to present a comprehensive survey and conceptual assessment of the relevant business models for financing the creation of content.[174] Many of these methods depend primarily on technology, but

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mating that 85% of textbooks are profitable).

171. CAVES, *supra* note 40, at 142-43; Richard H. Thaler, *Anomalies: The Winner's Curse*, 2 J. ECON. PERSP. 191 (1988).

172. *See infra* note 235 and accompanying text.

173. This analysis of business models draws somewhat on Professor Lawrence Lessig's observation that human behavior is regulated by four interdependent constraints—architectures (technologies), social norms, markets (prices), and laws. LAWRENCE LESSIG, *The New Chicago School*, 27 J. LEGAL STUD. 661 (1998), *in* CODE AND OTHER LAWS OF CYBERSPACE 87-99 (1999) [hereinafter LESSIG, CODE]. Lessig's focus, however, was quite different than the one in this Article. He was concerned with how changes in architecture, social norms, and markets had changed the justification for laws or how one should interpret the Constitution. The National Research Council recognized the relevance of Lessig's four modalities to copyright. DIGITAL DILEMMA, *supra* note 11, at 52-54.

174. *See generally* Eugene Volokh, *Cheap Speech and What it Will Do*, 104 YALE

social norms and some government funding and limited legal protection are also important. In addition, most involve selling creative content directly but some also rely on general, indirect payments like tips and donations. Most could apply to both electronic copies distributed online and physical copies distributed trough traditional channels. But some would work only for one type of distribution or the other.

A. Using Technology to Generate Revenues From Creative Works

A publisher's ability to sell access to creative content depends largely on the existence of technologies that allow them to provide buyers with limited access to the content. Although publishers usually criticize new technologies as threatening their existing business models and requiring additional legal protection,[175] new media have repeatedly spawned unprecedented ways to convert the social value of creative works into revenues and profits.[176] For example, recording music on piano rolls, then vinyl disks, and so, on enabled publishers to sell musical performances. The invention of motion pictures allowed many writers and producers of plays to sell performances of screenplays. In each case, the key to capturing new revenue was creating new business models to suit the new technologies.[177] For example, when developers introduced the first videocassette recorders (VCRs) in 1982, MPAA President Jack Valenti testified that "the VCR is to the motion picture industry and the American public what the Boston strangler is to the woman alone."[178] But the film industry adapted and by the 1990s a film's income from videotapes dwarfed all other revenue streams.[179]

L.J. 1805 (1995).

175. *See* DIGITAL DILEMMA, *supra* note 11, at 78-79; Landes & Posner, *supra* note 5, at 330, 363. Copyright owners also commonly see the emergence of new technologies as an opportunity for them to supplement their rights. *See* David Nimmer et al., *The Metamorphosis of Contract into Expand*, 87 CALIF. L. REV. 17, 44-45 (1999).

176. *See* CED REPORT, *supra* note 80, at 18-22, 68-73.

177. *See* DIGITAL DILEMMA, *supra* note 11, at 177-79; *see also* GOLDSTEIN, *supra* note 22.

178. *See Home Recording of Copyrighted Works: Hearing on H.R. 4783, H.R. 4794, H.R. 4808, H.R. 5250, H.R. 5488, and H.R. 5750 Before the Subcomm. on Courts, Civil Liberties, and the Admin. of Justice of the Comm. on the Judiciary*, 97th Cong. 8 (1983) (testimony of Jack Valenti, president, Motion Picture Association of America, Inc.).

179. *See* COMPAINE & GOMERY, *supra* note 158, at 381, 411-22; Sharon Waxman, *Studios Rush to Cash in on DVD Boom*, N.Y. TIMES, Apr. 20, 2004, at E1. Similar situations have arisen in other market segments, such as publishing, sound recording, and television. *See* Menell, *supra* note 164, at 98-108.

In summary, new technologies have created the potential to dramatically reduce publisher costs—including marketing—enough to make it much more practical for new creators to finance publication without the broad protections of § 106.

1. Pre-sales to Consumers

Publishers can attempt to cover all of their costs by seeking that amount in prepayments from consumers. Of course, only certain types of content are likely to attract buyer interest in such an arrangement.

Pre-sales to distributors, rather than consumers, are already common in the film industry. Under pre-sale arrangements, production companies obtain financial commitments from foreign distributors, pay-TV networks, and home video before production even starts,[180] although they generally only cover a portion of a publisher's total costs. Similarly, newspaper and magazine publishers generally only recover a portion of their total costs from their subscribers. For other types of creative content, the Internet appears to make it practical to pre-sell in two ways: a) specific content to consumers before it is even produced and b) give consumers discretion to credit their prepayment to one of a number of competing works, after the works have been completed. The first of these pre-sale arrangements, however, is generally only practical for creators with large and enthusiastic fan bases. Furthermore, pre-sale arrangements in general are vulnerable to free riders who may decline to pre-buy, with the hope that others will pay the full cost and permit the free rider to get access at no cost.[181]

a) Pre-sales of a Specific Creative Work

The first type of pre-sale involves a specific single creative work, which the consumer makes a pre-production commitment to purchase once it is available. The Internet makes it practical for publishers to directly contact prior purchasers of a creator's work or others who appear to have enjoyed it and to solicit them directly and relatively inexpensively for pre-sales. For example, the popular British band Marillion collected an e-mail list of 25,000 fans and successfully solicited them for £200,000 in pre-sale orders for a £16 album in just a few weeks.[182] Another example is Stephen King's online serial publication of chapters of a new novel, *The*

180. *See* VOGEL, *supra* note 41, at 61. Theater and concert producers also pre-sell season subscriptions.

181. *See* Breyer, *supra* note 15, at 303-04.

182. Marillion sold 10 million albums and, had a huge hit with "Kayleigh." *See* MICHAEL LEWIS, NEXT: THE FUTURE JUST HAPPENED 139-44 (2001).

Plant. Although the payment system resembled a "shareware" model because he requested voluntary payments after receipt of a chapter, the online publication was also a form of pre-sale because King made his offering of new chapters contingent on receiving sufficient payments for previous chapters. King's effort was profitable but only partially successful: the percentage of downloaders who paid was below King's threshold and he stopped publishing online.[183]

Although King's online experiment shows that the pre-sale model is susceptible to free riding, the model has attracted the interest of some artists.[184] Under this type of pre-sale, a publisher or artist would post online the total dollar amount it required to finance and make a reasonable profit on a new creation. A deadline for meeting this goal could be set and consumers could be asked to pay either a fixed price for a single order or to make a variable contribution that would help meet the goal.[185] Even potential free riders would have a strong incentive to contribute some amount to ensure that the new work they desired was produced, at least if total pre-sales appeared likely to fall short of the total needed. Creators and publishers could use the techniques of bidding sites, like eBay, to capture funds by allowing bidders to choose last minute default strategies that empowered them to offer an amount as high as they were willing to pay if the work they desired would otherwise not be produced.[186]

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183. King's initial arrangement was to publish chapters of The Plant and request $1 donations from each reader for each chapter. King would publish subsequent chapters as long as 75% of those downloading paid for the privilege. *See Comment: Publishing: Not So Fast*, WALL ST. J., Aug. 2, 2000, at A20. After less than 50% of downloaders paid for the sixth installment, King stopped writing. Still, King apparently made a profit of $450,000 on revenues of $720,000 from the project. *Marketing & Media*, WALL ST. J., Feb. 8, 2001, at B10; *see also* Lunney, *supra* note 63, at 863-64. There is, however, a danger that some will game the system. *See* Breyer, *supra* note 15, at 303-04.

184. *See* Chris Nelson, *Pearl Jam, On its Own, Seizes the Moment and Sells CD on the Web*, N.Y. TIMES, Nov. 17, 2003, at C10; Charles C. Mann, *The Year the Music Dies*, WIRED, Feb. 2003, at 90, 93 (Phish, Prince, and Wonderlick). It has also attracted the interest of a middleman. *See* OpenCulture.org, *at* http://web.archive.org/web/*/http://-www.openculture.org/ (last visited May 6, 2004).

185. Conditionally binding assurance contracts are in widespread use in magazine and book sales, *see* Palmer, *supra* note 19, at 299, as is holding funds in escrow. *See* John Kelsey & Bruce Schneier, *The Street Performer Protocol and Digital Copyrights,* FIRST MONDAY, June 1999, 8-10, *at* http://www.firstmonday.dk/issues/issue4_6/kelsey/ (last visited May 15, 2004); *see also* Diane Leenheer Zimmerman, *Authorship Without Ownership: Reconsidering Incentives in a Digital Age*, 52 DEPAUL L. REV. 1121, 1150-51 (2003).

186. This would help if insufficient funds were promised, although the real demand exceeded the cost. *See* Breyer, *supra* note 15, at 304; John Perry Barlow, *The Economy of*

As seen with the Marillion and King examples, this type of pre-sale arrangement is most suitable for creators that are already well-known, but lesser-known creators could also use this arrangement if they secured recommendations from critics or other institutions whose judgments have earned credibility among consumers. Subscriptions to magazines follow this model since the consumer is pre-purchasing a package of articles, often from unknown writers, based on the reputation of the publisher.

Another version of pre-sales of specific works would enable publishers to allow buyers to reduce their risks by basing the price ultimately charged on the quality of the reviews a new work received. Thus, consumers would commit to pay some maximum price, but if the "quality" of the offering was below some designated level they would be due a specified refund. For example, an album could be priced for presale at varying price levels depending on whether a designated reviewer rated its artistic quality with 3, 2, or 1 "stars."[187]

b) Discretionary Pre-sales

The second type of pre-sale would give buyers a bit more discretion. Buyers would merely commit to purchase one of a set of content packages. For example, textbook publishers would designate a webpage for displaying all of the potentially competing textbooks that they were considering publishing for a particular course. They would also indicate on the webpage how much total buyer demand for the set of texts would be needed to trigger them to commission one or more relevant texts. Thus, one publisher might be willing to commission one freshman-level, advanced algebra textbook if demand exceeded $2 million and a second if demand exceeded $3.5 million. Schools desiring to use a new advanced algebra would then commit to contribute some total amount, not counting printing costs, to purchase copies of one of the relevant available texts. To the extent that schools saw that total demand was insufficient to trigger the commissioning of any new texts they would have to decide whether to live with that or to raise their contributions. If they wanted to be able to choose

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Ideas: A Framework for Patents and Copyrights in the Digital Age, WIRED, Mar. 1994, http://www.wired.com/wired/archive/2.03/economy.ideas_pr.html (last visited May 15, 2004).

187. To avoid delegating too much power to any one review, prices could depend on how many of a specified group of reviewers gave the content a specific rating. Reliance on a large enough group would dilute the power of any one critic and make bribery less likely. Another way for trusted entities to reduce the risks of corruption without the need for too many critics would be for the entities to select a few expert critics and announce results without disclosing which experts they relied upon for the particular work.

from multiple texts they would have a strong incentive to help insure that total commitments reached the level needed to trigger that number of texts from publishers. This mechanism would replace the current "spot market" (where purchasers are made on an "as needed" basis) in textbooks with contracts that, while discretionary, also guarantee revenues to some publishers without dampening publisher incentives to compete.[188]

2. Versioning and Offering Services in Place of Products

Publishers can also increase their revenues from the sale of creative work by setting different prices for different versions of it,[189] that is, discriminatory prices, which take advantage of some consumers' willingness to pay more to get access to superior forms of the desired content. For example, publishers release hardbound versions of novels before cheaper paperback versions to capture revenues from those willing to pay more for earlier access. New technologies are increasing their ability to offer multiple versions of content. Film studios have long taken advantage of such prior technologies, and most now generally maximize their revenues by releasing a film first to theaters, than on videocassettes/DVDs, next on pay-per-view, then on pay cable, and finally on network TV.[190]

Creators can already earn substantial fees for live performances even when free recordings are available.[191] Thus, the Grateful Dead relied substantially on compensation for their live performances while encouraging their fans to make and circulate bootleg recordings.[192] Celebrity journalists already earn significant "entertainer" fees for presenting news analyses in

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188. The website CollabNet, *at* http://www.collab.net (last visited Apr. 29, 2004), already occasionally hosts markets of this type to finance new software.

189. *See* CARL SHAPIRO & HAL R. VARIAN, INFORMATION RULES 53–81 (1999) (discussing versioning strategies).

190. *See* CAVES, *supra* note 40, at 168-69; VOGEL, *supra* note 41, at 84-85; David Waterman, *Prerecorded Home Video and the Distribution of Theatrical Feature Films*, *in* VIDEO MEDIA COMPETITION: REGULATION, ECONOMICS, AND TECHNOLOGY 221 (Eli Noam ed., 1985).

191. *See* Ku, *supra* note 13, at 308-09; Brett May & Marc Singer, *Unchained Melody*, MCKINSEY Q., No. 1, 2001, at 128, 136-37. *But see* CAVES, *supra* note 40, at 66 (describing how in the 1960s, touring pop groups received extensive local airplay yet had several money-losing tours); Healey, *supra* note 42 ("While concerts can sustain an established band with a fervid national following, new artists generally don't make money when they venture away from home."). Small "house concerts" may also be profitable. *See* Eric Brace, *House Music*, WASH. POST, Oct. 25, 2002, at T32. Schools and students pay academics dramatically more for their live presentations of textbook content (teaching) than for the creations themselves.

192. *See* Ku, *supra* note 13, at 308-09; Barlow, *supra* note 186.

live speeches.[193] Likewise, the superior audio and visual experience of theatrical movie showings, particularly for films with cutting edge special effects or lush scenery,[194] is likely to be substantially more attractive than even free bootlegged DVDs of the film. Although the use of special glasses and polarized projections to produce three-dimensional images in movie theaters has not yet proved to be a practical offer, it is probably not long before holograph technologies may enable theaters to offer versions of a creative work that are both highly valued by consumers and too expensive and impractical for copiers to attempt to duplicate.

New technologies now allow creators to offer consumers "customized" versions of their works to meet the particular aural or visual constraints of the buyer's environments or tastes.[195] Creators may offer consumers enhanced versions of their work that permit consumers to "participate" in the work.[196] The technology of karaoke already enables consumers to inject their voices into a creative work. The economical practicality of customized printings of books can permit consumers to replace a character in a story with someone they want to surprise with a gift. Future technologies should permit consumers to insert their faces and bodies into films. As Ithiel de Sola Pool observed nearly two decades ago, publishers in some media industries could transform their business from providing a *product* to providing a *service*: enhanced access to content.[197]

In certain markets, publishers could also offer consumers supplementary content that adds value to the original work, including commentary on a film, book, or song, or crossword puzzle hints,[198] Access in multiple for-

193. *See* FALLOWS *supra* note 115, at 88. *But see id.* at 103-28 (concerning ethical issues).

194. These may soon be further enhanced by IMAX technology. *See* Lyman, *supra* note 152. IMAX technology allows viewers to feel as if they are a part of the film, as opposed to merely viewing the film. *IMAX® Cinema*, Science Museum, *at* http://www.sciencemuseum.org.uk/imax/imaxtechnology.asp (last visited Apr. 29, 2004).

195. *See* Kevin Kelly, *Where Music Will Be Coming From*, N.Y. TIMES, Mar. 17, 2002, § 6 (Magazine), at 29, 31.

196. Artwork that allowed the purchaser to participate would be another special option. *See* Matthew Mirapaul, *Selling and Collecting the Intangible, at $1,000 a Share*, N.Y. TIMES, Apr. 29, 2002, at E2 (discussing the sale of "shares" in an online work to owners who can alter the work).

197. *See* Ithiel de Sola Pool, *Whither Electronic Copyright*, *in* ELECTRONIC PUBLISHING PLUS 217, 226-27 (Martin Greenberger ed., 1985); *see also* Nimmer et al., *supra* note 175, at 35; Barlow, *supra* note 186; Steve Lohr, *An Internet Pioneer of the 90's Looks to a Future in Software*, N.Y. TIMES, June 17, 2002, at C1 (discussing the licensing of Opsware).

198. *See* Chris Nelson, *Trying To Sell CDs by Adding Extras*, N.Y. TIMES, Oct. 6,

eign language options is already often available. For some other works, creators might also offer enhanced access in the form of linked sets of content that permit easy jumping between or within works of scholarship or even art.[199]

In response to copiers, authorized online music services may publicize their comparative advantages (and justification for higher prices): quick access to reputable copies of music.[200] These authorized sources may become particularly significant if free online content is commonly infected with harmful viruses, adware, or fakes.[201] In certain markets, buyers are also often willing to buy clean hard copies even of content, such as newspapers or books, available free online.[202]

3. Advertising

Publishers have also helped finance creative content by selling advertising, including display ads in newspapers and magazines, television commericals and product placements within television shows and movies. Such media industry advertising currently totals about $130 billion annually.[203] While some new technologies are hurting this business model, oth-

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2003, at C7; Alex Salkever, *The Battle of the Online Content Models*, BUSINESSWEEK ONLINE (May 13, 2002), http://www.businessweek.com/ (noting that the N.Y. TIMES sells access to crossword puzzle hints and "TimesTalks Online" for $5.95 per stream).

199. *See* Matthew Mirapaul, *Today's Publishing: Better by the Book or by the Web?*, N.Y. TIMES, Feb. 4, 2002, at E2 (discussing the presentation of stories as a "dynamic and kinetic experience").

200. *See* DIGITAL DILEMMA, *supra* note 11, at 80-81; Amy Harmon, *What Price Music?*, N.Y. TIMES, Oct. 12, 2003, § 2, at 1; John Schwartz & John Markoff, *Power Players: Big Names are Jumping Into the Crowded Online Music Field*, N.Y. TIMES, Jan. 12, 2004, at C1.

201. See Lior Jacob Strahilevitz, *Charismatic Code, Social Norms, and the Emergence of Cooperation on the File-Swapping Networks*, 89 VA. L. REV. 505, 583-85 (2003); Andrew Ross Sorkin, *Software Bullet is Sought to Kill Musical Piracy*, N.Y. TIMES, May 4, 2003, § 1, at 1 (discussing RIAA efforts at sabotage); John Schwartz, *When Free Isn't Really Free*, N.Y. TIMES, Nov. 23, 2003, § 3, at 1.

202. Even when newspapers are available free online, consumers generally prefer hard copies. Hsiang Iris Chyi & Dominic L. Lasorsa, *An Explorative Study on the Market Relation Between Online and Print Newspapers*, 15 J. MEDIA ECON. 91 (2002). This also appears to apply to books. *See* LESSIG, CULTURE, *supra* note 88, at 284-85 (discussing other books, while his own book also illustrates the point); Eric Flint, *Prime Palaver #6*, Apr. 15, 2002, *available at* http://www.baen.com/library/palaver6.htm (last visited May 15, 2004). It may also apply to music. *See* Chris Nelson, *Upstart Labels See File Sharing as Ally, Not Foe*, N.Y. TIMES, Sept. 22, 2003, at C1; *Peer-to-Peer Music Trading: Good Publicity or Bad Precedent?*, Knowledge@Wharton, Oct. 9, 2002, *available at* http://knowledge.wharton.upenn.edu/articles.cfm?catid=4&articleid=635&homepage=yes.

203. This includes about $45 billion for newspapers, *see Annual Newspaper Advertis-*

ers are helping to increase its effectiveness. Television remote controls, which enable viewers to "zap" commercials with the mute button or avoid them by channel surfing, have long distressed TV advertisers.[204] Paramount Pictures has even challenged the legality of the TiVo and ReplayTV digital video recorder (DVR) technologies, which empower viewers to automatically eliminate commercials during playback or even when watching a live broadcast on a slightly-delayed (almost real time) basis.[205] Similarly, new online "screens" enable net surfers to view web pages stripped of their commercial messages.[206] Of course, advertisers have long responded to these technologies by offering commercials that are too entertaining for viewers to want to skip.[207]

Publishers have also long recognized the value of "product placements," which capture audiences by embedding advertised products in entertainment content.[208] This practice may increasingly pervade books[209]

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ing Expenditures, Newspaper Assoc. of Am., *at* http://www.naa.org/artpage.cfm?AID=1566&SID=1022 (last updated Feb. 2004); $42 billion for television programs, *see 2003 TV Ad Revenue Figures*, Television Bureau of Advertising, *at* http://www.tvb.org/rcentral/index.html (last visited Apr. 29, 2004); $20 billion for radio, *see Radio Advertising Revenues*, Radio Advertising Bureau, *at* http://www.rab.com; and $18 billion for magazines, *see Magazine Advertising Revenue and Pages for PIB Measured Magazines*, Magazine Publishers of Am., *at* http://www.magazine.org/Advertising_and_PIB/Ad_Trends_and_Magazine_Handbook/1238.cfm (last visited Apr. 29, 2004). It does not include the increasing amounts collected by movie theaters.

204. *See, e.g.*, Dennis Kneale, *'Zapping' of TV Ads Appears Pervasive*, WALL ST. J., Apr. 25, 1988, at 29. *But see* Bill Carter, *TV Industry Unfazed by Rise in 'Zapping'*, N.Y. TIMES, July 8, 1991, at D1.

205. *See* Amended Complaint, Paramount Picts. Corp. v. ReplayTV, Inc., Civ. No. 01-09358 (filed C.D. Cal. Nov. 21, 2001) ¶ 17, *available at* http://www.eff.org/IP/Video/Paramount_v_ReplayTV/20011121_paramount_amd_complaint.pdf (last visited May 15, 2004); LEWIS, *supra* note 182, at 165-90; Eric A. Taub, *Reply TV's New Owners Drop Features That Riled Hollywood*, N.Y. TIMES, July 21, 2003, at C3.

206. *See* Saul Hansell, *As Consumers Revolt, a Rush to Block Pop-Up Online Ads*, N.Y. TIMES, Jan. 19, 2004, at C1; David Pogue, *Puncturing Web Ads Before They Pop Up*, N.Y. TIMES, June 27, 2002, at G1.

207. See Bill Carter, *NBC is Hoping Short Movies Keep Viewers From Zapping*, N.Y. TIMES, Aug. 4, 2003, at C1; Joe Flint, *Super Bowl's 30-Second Ad Rush: Forget Pigskin; Real Action For Sunday's Game Lies in What Commercials Fly*, WALL ST. J , Jan. 26, 2001, at B1. Broadcasters even offer packages comprised solely of creative ads, see, e.g., Superbowl's Greatest Commercials, CBS Broadcasting Inc., http://www.cbs.com/specials/2004_superbowl_commercials (last visited Apr. 29, 2004); Classic TV, About.com, *at* http://classictv.about.com/cs/commercials (last visited Apr. 29, 2004).

208. See Steven L. Snyder, Note, *Movies and Product Placement: Is Hollywood Turning Films into Commercial Speech?*, 1992 U. ILL. L. REV. 301, 301-11 (1992); Stuart Elliot, *On ABC, Sears Pays to be Star of New Series*, N.Y. TIMES, Dec. 3, 2003, at C1;

and other content.[210] The Internet, however, is increasingly allowing product placements to give audiences the chance to make an actual impulse purchase of such products, e.g., fashions worn on *Sex in the City* and music heard on *Dawson's Creek*.[211] These offerings are not yet seamless, but technology should soon permit this, as well as enabling consumers to gain quick access to more information about a product of interest.[212] This should make product placements substantially more valuable to advertisers and thus a larger source of funding for creators.

Second, media firms are improving their ability to target consumers with customized or enhanced ads based on the user's interaction with the medium.[213] Because such ads are of more interest and value to consumers, they will be less disturbing, and this should make advertisers willing to pay higher fees. One problem with relying on an advertiser-support business model, however, is the well recognized danger that advertisers will use their financial influence to distort editorial or artistic content.[214]

4. Consumer Selection Assistants

The Internet facilitates a shift away from biased, seller-financed marketing messages and towards consumer financed selection assistance that serves the individual customer's personal tastes. The Internet already pro-

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Brian Steinberg, *Chapstick Chiller: Lip Balm Lands Role in Scary Movie*, WALL ST. J., Jan. 23, 2002, at B7C ("Having characters eat a particular food product can cost between $250,000 and $500,000 [or more].").

209. *See* Snyder, *supra* note 208, at 308; David D. Kirkpatrick, *Now, Many Words From Our Sponsor*, N.Y. TIMES, Sept. 3, 2001, at A1 (reviewing Fay Weldon's THE BULGARI CONNECTION, a novel at the center of much controversy for featuring paying product placements). Advertisers even sponsor school materials. *See* David D. Kirkpatrick, *Snack Foods Become Stars of Books for Children*, N.Y. TIMES, Sept. 22, 2000, at A1.

210. *See, e.g.*, Kelly, *supra* note 195, at 31.

211. For example, asseenin.com provides data about products featured on a number of television programs. *See also* David F. Gallaher, *New Service Offers Made-to-Order CD's From TV Show*, N.Y. TIMES, Jan. 7, 2003, at C4; Nancy Hass, *"Sex" Sells, in the City and Elsewhere*, N.Y. TIMES, July 11, 1999, § 9, at 1; Bob Tedeschi, *Recent Snafus at the Online Shops of TV Networks Have Barely Dimmed the Glow of Merchandising on the Web*, N.Y. TIMES, May 13, 2002, at C8.

212. *See* Amy Harmon, *Skip-the-Ads TV Has Madison Ave. Upset*, N.Y. TIMES, May 23, 2002, at A1 (noting that DVRs can offer expanded versions of ads).

213. *See* Bob Tedeschi, *If You Liked the Web Page, Try the Ad*, N.Y. TIMES, Aug. 4, 2003, at C1.

214. C. EDWIN BAKER, ADVERTISING AND A DEMOCRATIC PRESS 44-69 (1994); BEN H. BAGDIKIAN, THE MEDIA MONOPOLY, at xxv-xxvii, 152-73 (6th ed. 2000) (describing the influence advertisers have on content).

vides buyers with easy and often free access to recommendations from friends via personal e-mail, listserves, and blogs. Cyberspace is also fostering the growth of entities seeking to offer expert recommendations as "selection assistants" (SAs).[215] Previously, personal shopping consultants were too expensive for most shoppers. The Internet, however, by eliminating the need for the consultant to waste time on traveling to clients and also expanding their potential customer basis worldwide, thereby enables them to amortize their research costs over many more customers. This in turn permits SAs to charge lower rates that should be cost effective for increasing numbers of consumers eager to save time but still find their best choices. Even lower prices should be available for automated offerings.

SAs can offer more traditional services based on their exhaustive knowledge of all the relevant offerings available in a market segment, the most relevant features of those offerings, and the consumer's express preferences for such features.[216] Yet technologies that allow databases of consumer shopping data to be aggregated and manipulated are also increasingly enabling SAs to offer consumers exciting new "collaborative filtering" services. Collaborative filtering uses data about consumers' prior reactions to creative works in a category to predict their responses to other content by searching a large database of consumer purchases and reactions for other individuals who had very similar, if not identical, responses to those works. The SA can then examine this similar-tastes group to identify their reactions to other products, suggesting which to recommend to the customer and which to warn them to avoid. Such a system is generally much more accurate than any mere set of personal friends or individual experts for predicting one's likely reaction to a particular creative work.[217] This taste-driven marketing then may enable lesser known creators to

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215. *See* Mark S. Nadel, *The Consumer Product Selection Process in an Internet Age: Obstacles to Maximum Effectiveness and Policy Options*, 14 HARV. J.L. & TECH. 183, 185-87 (2000), updated version available at http://www.ssrn.com/abstract=247818. The emergence of this class of entities produces a dramatic shift in control over the market from producers to consumers. *See, e.g.*, Volokh, *supra* note 174, at 1834; Zimmerman, *supra* note 185, at 1166.

216. SAs could also help consumers to develop a customized, explicit "search profile" comprised of a formula that includes the attributes most relevant to an individual's choice, the relative importance of those attributes, and which values of the latter to seek. These profiles should be able to precisely identify the most desirable product for each individual in a particular market. *See* Nadel, *supra* note 215, at 246-62.

217. *See* Nadel, *supra* note 215, at 240-44.

come to the attention of their future fans without enormous promotional campaigns.[218]

Unfortunately, the euphoria and unsustainable business models associated with the e-commerce bubble led consumers to expect SA services to be free, forcing their providers to seek revenues from advertisers and commissions on the goods they helped sell.[219] This made it very difficult for SAs to place the interests of buyers ahead of those of the sellers who paid them. With excess free capital gone, and thus few, if any, firms willing to provide high value advice free of charge, consumers are beginning to be willing to pay for valuable information online. As this willingness increases, SAs should be able to blossom.[220]

In addition to fees from buyers, SAs—like financial auditors—might charge creators for evaluating creations and offering detailed reviews.[221] Assuming that these fees were reasonably low, new creators might even warmly welcome this alternative to current marketing practices, which are expensive and leave many dependent on publishers for financial and logistical support. Meanwhile, as more consumers relied on SAs, unsolicited marketing would become less cost-effective.[222]

5. First Mover or Lead Time Advantage for Hard Copies

Publishers generally enjoy a "first mover" or lead-time advantage[223] over copiers in the sale of physical copies. During the period after they

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218. See *Utah's Digital Economy and the Future: Peer-to-Peer and Other Emerging Technologies: Field Hearings Before the Senate Judiciary Comm.*, 106th Cong. (2000) (testimony of Peter Breinholt), *available at* http://judiciary.senate.gov/oldsite/1092000_pb.htm.

219. Nadel, *supra* note 215, at 203.

220. *See* Volokh, *supra* note 174, at 1816, 1830; Michael E. Porter, *Strategy and the Internet*, HARV. BUS. REV., Mar. 2001, at 63, 76–77; Matt Richtel, *A Shift Registers in Willingness to Pay for Internet Content*, N.Y. TIMES, Aug. 1, 2002, at C4; Neil Strauss, *Online Fans Start to Pay the Piper*, N.Y. TIMES, Sept. 25, 2002, at E1.

221. *See* Volokh, *supra* note 174, at 1830. ForeWord Magazine offers publishers the opportunity to have their book reviewed online for $295. ForeWord Reviews, *at* http://www.forewordreviews.com (last visited Apr. 27, 2004).

222. For example, how much would digital camera makers spend on advertising if they knew that the vast majority of consumers were relying on *Consumer Reports* to determine their choices? Large marketing expenditures, which raised product costs, and thus prices, would hurt a producer's *Consumers Report* ratings and thus probably reduce sales.

223. *See* RESTATEMENT (THIRD) OF UNFAIR COMPETITION § 38 cmt. c (1995) ("The originator of valuable information or other intangible assets normally has an opportunity to exploit the advantage of a lead time in the market. This can provide the originator with an opportunity to recover the costs of development and in many cases is sufficient to en-

release a new work and before copiers can make copies available to consumers, publishers can take two important actions. First, publishers can take advantage of any significant consumer demand for immediate consumption of a new work while it is a hot topic of conversation.[224] Such demand leads consumers to stand in long lines to see the newest movie or to buy a hardcover book rather than waiting for a cheaper paperback edition. It also leads businesses to pay premiums for access to databases that offer the quickest, e.g., real time, access to new data or stories.

Second, a publisher that can accurately forecast demand, efficiently reproducing its works, and pricing aggressively, can probably deter copiers by producing the full output necessary to meet anticipated demand and publicizing this fact. Once copiers knew that the publishers' variable cost of selling one more copy would include zero production costs, they would realize that they could not compete and rational copiers would refrain from entering the market. Most would understand that any copies they produced would create an excess supply and trigger a price war that would be unprofitable to all.

Historically, the initial publisher often responded with an analogous strategy: it demonstrated that if it faced copiers it would issue "fighter" or "killer" editions—extremely cheap versions designed to drive prices below the copiers' costs. Although this behavior was self-defeating in the short run, it served to deter future copying of other works.[225] In fact, first mover status was once so advantageous in the book industry that even before the United States granted copyright protection to books published abroad, U.S. publishers paid foreign publishers to secure an early, first edition.[226] English authors often received more from the sale of their books to American publishers than from their British royalties.[227]

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courage continued investment."); MACHLUP REPORT, *supra* note 20, at 38-39 (describing the rationale behind allowing headstart advantages via patents). *See generally* William T. Robinson et al., *First-Mover Advantages from Pioneering New Markets: A Survey of Empirical Evidence*, 9 REV. INDUS. ORG. 1 (1994).

224. *See* CAVES, *supra* note 40, at 277-78 ("[O]nly a few creative goods at a time bask in the limelight of buzz."); *supra* note 46 and accompanying text.

225. *See* Hurt & Schuchman, *supra* note 17, at 428; Plant, *supra* note 7, at 173-75. Although the antitrust laws limit this kind of behavior, it is quite effective. *See* Breyer, *supra* note 15, at 300-01 (discussing restrictions); Hurt & Schuchman, *supra* note 17, at 427 (discussing effectiveness). Publishers also used a collusive "courtesy principle" to avoid competition before it collapsed. *See* VAIDHAYANATHAN, *supra* note 12, at 52-53.

226. *See* Plant, *supra* note 7, at 172-73.

227. Breyer, *supra* note 15, at 299-300; Plant, *supra* note 7, at 172-73.

In addition to deterring entry with "full" production, publishers could also deter entry by setting prices just below that sufficient to attract copiers ("limit pricing").[228] Copiers typically will only see entry as attractive if they expect the publisher to maintain high prices that generate substantial profit margins, giving the copiers an umbrella price to operate under. Although publishers might find it desirable to tolerate some unauthorized copying in exchange for a slightly higher price point,[229] publishers could also undercut copiers by setting a high initial price for the work and then reducing it to little more than cost once the copiers entered the market.

Many believe that any first mover advantages due to prior technologies have been eliminated by newer technologies, but this is not quite so. It is certainly true that DVD copies of a blockbuster movie may turn up on the street days before it actually opens in the theaters. MP3's of a new album can pop up on peer-to-peer networks weeks before the album's release date. Illegal copies of best-selling books, like those of J.K. Rowling, are mass produced in third world countries and sold at roadside vendors for a few dollars. Still, a large portion of the consumer market does not have effective access to these copies and thus are still inclined by buy from traditional retailers. Also, some of these pre-release activities would be prohibited under the truncated version of § 106, discussed below.

6. Self-help Technologies: DRM and Tip "Boxes"

While some new technologies make it easier for consumers to make unauthorized copies, others make it easier for publishers to protect against such copying or to collect payments from willing consumers. Examples of the second include both hardware and software digital rights management (DRM) technologies, which can limit how many files a subscriber may download or how long a copy remains usable.[230] Although these technolo-

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228. *See* SCHERER, *supra* note 20, at 233-36; *see also* WATT, *supra* note 6, at 68 ("All piracy can be eliminated with a suitable pricing strategy.").

229. *See* WATT, *supra* note 6, at 58 ("It is not so difficult to imagine cases in which piracy can be beneficial to the producers of originals."); Fernando W. Nascimento & Wilfried R. Vanhonacker, *Optimal Strategic Pricing of Reproducible Consumer Products*, 34 MGMT SCI. 921 (1988). Copying that accelerates network effects may produce net benefits. Lisa N. Takeyama, *The Welfare Implications of Unauthorized Reproduction of Intellectual Property in the Presence of Demand Externalities*, 2 J. INDUS. ECON. 155 (1994). For example, a single fax machine is worthless, but its value increases as more individuals use them. *See id.*

230. Some DRM technologies include data shields, encryption technologies, and watermarks. *See* DIGITAL DILEMMA, *supra* note 11, at 153-76, 282-303; Mark Stefik, *Shifting the Possible: How Trusted Systems and Digital Property Rights Challenge Us to Rethink Digital Publishing*, 12 BERKELEY TECH. L.J. 137 (1997); Tom Di Nome, *You Lis-*

gies are vulnerable to hacking,[231] those that are reasonably robust or respected because of social norms can substantially reduce unauthorized copying. Indeed, since DRM depends on "code" to protect content, some fear that "[c]ode can, and increasingly will, displace law as the primary defense of intellectual property in cyberspace."[232] In fact, excessive technological content protection could be even more detrimental to creative output than current copyright law. These excesses should be addressed by law.[233]

Technology like the Internet also makes it much easier for consumers to contribute directly to creators whose work they consume or admire. Artists can set up their own websites to accept payments or direct their audiences to clearinghouse websites that will forward payment to the artists.[234] Debit cards and new micro-payment technologies should make even small

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ten, You Pay: Post-Napster Music Services, N.Y. TIMES, Mar. 7, 2002, at G9; Amy Harmon, *Studios Using Digital Armor to Fight Piracy*, N.Y. TIMES, Jan. 5, 2003, § 1, at 1; Eric A. Taub, *DVDs Meant for Buying but Not for Keeping*, N.Y. TIMES, July 21, 2003, at C1 (describing expiring discs).

231. *See, e.g.*, Amy Harmon, *Students Learning to Evade Moves to Protect Media Files*, N.Y. TIMES, Nov. 27, 2002, at C3; Mann, *supra* note 12, at 44-48. Mann quoted Internet security consultant Bruce Schneier, author of SECRETS AND LIES (2000):

> "You always have two kinds of attackers, Joe Average and Jane Hacker. Many systems in the real world only have to be secure against Joe Average." Door locks are an example: they're vulnerable to expert thieves, but the chance that any one door will encounter an expert thief is small. "But if I am Jane Hacker, the best online," Schneier says, "I can write a program that does what I do and put it up on the Web—click here to defeat the system. Suddenly Joe Average is just as good as Jane Hacker."

Id.; *see also* Pool, *supra* note 197, at 221 ("At any given moment, the race of technology may seem to shift in favor of hiders over seekers, but there is little reason to expect hiders to win a decisive advantage in the long term."); Matt Richtel, *Digital Lock? Try a Hairpin*, N.Y. TIMES, May 26, 2002, § 4, at 12.

232. *See* LESSIG, CODE, *supra* note 173, at 126; Kenneth W. Dam, *Self-Help in the Digital Jungle*, *in* EXPANDING THE BOUNDS OF INTELLECTUAL PROPERTY: INNOVATION POLICY FOR THE KNOWLEDGE SOCIETY 110-11 (Rochelle Cooper Dreyfuss et al. eds., 2001).

233. *See* CED REPORT, *supra* note 80, at 38-39, 74-77; Julie E. Cohen, *A Right to Read Anonymously: A Closer Look at 'Copyright Management' in Cyberspace*, 28 CONN. L. REV. 981, 999-1000 (1996)).

234. Examples of clearinghouse websites include Fairtunes and Tipster, or even Amazon's tip jar. *What We Do*, *at* http://web.archive.org/web/*/www.fairtunes.com/about/description.jsp (last visited May 1, 2004); *What is Tipster*, The Tipster Protocol, *at* http://tipster.weblogs.com/tipster (last visited Apr. 29, 2004); *Amazon Honor System*, Amazon.com, *at* http://www.amazon.com/honor (last visited Apr. 29, 2004).

online payments more economical.[235] This could make it practical for respected pundits to offer access to their columns or new musicians to individual songs for, maybe, 25 cents each. It would also provide the technological backbone for the tip-oriented business model discussed in greater detail in Part IV.B.

7. Ancillary Hardware Sales

In the early days of radio, before the business model of advertiser-supported content was introduced, content was broadcast free by firms seeking to profit from the sale of radio receivers.[236] Expanding on this model, hardware manufacturer industry groups might find it cost-effective to increase customer demand for their products by vertically integrating into or financing creative content for use in their product.[237] Currently, the owners of Broadway theaters often invest in very risky new shows to give value to what might otherwise be empty seats in their theaters. Even when theater owners lose money producing the play, they may make enough from renting their theaters to more than compensate for this. Of course, theater producers generally only do so for productions in their own theaters, making this example less relevant for other industries. Still, to the extent an industry trade association were to use persuasion to encourage voluntary, industry-wide contributions to such content, this could be a source of financing for some new forms of contents.

B. Social Norms: Tipping, Donations, Dues, and Reciprocity

Publishers can and should do more to tap the enormous potential of social norms[238] for providing a funding alternative to the current socially harmful broad legal protection of § 106. Instead of trying to handicap new

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235. See Anne Eisenberg, *A Virtual Cash Register Rings Up Tiny Transactions*, N.Y. TIMES, Jan. 8, 2004, at G5; Bob Tedeschi, *Companies Are Trying Once Again to Find Ways to Turn Penny-Ante Charges for Web Viewing into Profits*, N.Y. TIMES, July 21, 2003, at C5; Jari Kytöjoki & Vesa Kärpijoki, Micro-payments - Requirements and Solutions (Jan. 10, 2000), *at* http://www.hut.fi/~vkarpijo/netsec99 (last visited May 15, 2004).

236. See Yochai Benkler, *Overcoming Agoraphobia: Building the Commons of the Digitally Networked Environment*, 11 HARV. J. L. & TECH. 287, 306-07 (1998).

237. *See* Schwartz & Markoff, *supra* note 200.

238. "Social norms" is a relatively young field of law and economics, but represents a powerful phenomenon. *See generally* ERIC A. POSNER, LAW AND SOCIAL NORMS (2000); Robert C. Ellickson, *The Market for Social Norms*, 3 AM. L. & ECON. REV. 1, 3 (2001) (defining a social norm as "a rule governing an individual's behavior that third parties other than state agents diffusely enforce by means of social sanctions"); Richard H. McAdams, *The Origin, Development, and Regulation of Norms*, 96 MICH. L. REV. 338 (1997).

technologies and scare consumers into avoiding the use of others by threatening lawsuits, publishers should use their experience and expertise in marketing to teach consumers to view reasonable payments to creative artists as only fair and the right thing to do.[239] Publishers should encourage a stronger social custom of tipping, donating to, or otherwise supporting valued content creators and their publishers.

Individual consumers already support artistic creations in many ways. Some people donate cash to street musicians and at "pay what you can" live performances and museums. Others contribute money to public broadcasters and to creators of shareware computer programs.[240] In fact, consumers are often willing to pay more than they must in order to support some greater good. Just as many are willing to pay a voluntary "surcharge" for products "made in America" by "union labor," or otherwise to support "reasonable" payments to deserving workers,[241] so too they should

239. *See* Barlow, *supra* note 186 ("unwritten code . . . ethics . . . understandings"); David Lange, *Reimagining the Public Domain*, 66 LAW & CONTEMP. PROBS. 463, 471 (2003). Some observe that the music industry's biggest hurdle to stop piracy throughout the world is cultural, not legal. *See* Amy Harmon, *CD Technology Stops Copies, But it Starts Controversy*, N.Y. TIMES, Mar. 1, 2002, at C1 ("Being treated like a criminal [for private copying] makes me want to act like one."); Mark Landler, *For Music Industry, U.S. is Only the Tip of a Piracy Iceberg*, N.Y. TIMES, Sept. 26, 2003, at A1 (noting that music executives abroad doubt that suing file sharers will stem illegal copying due to relatively weak copyright laws and the ubiquity of piracy); Matt Richtel, *Music Services Aren't Napster, But the Industry Still Cries Foul*, N.Y. TIMES, Apr. 17, 2002, at C1; Remarks by Chairman Alan Greenspan, *supra* note 11 ("[I]f our market system is to function smoothly, the vast majority of trades must rest on mutual trust and only indirectly on the law.").

240. Subscribers, businesses, and foundations donated more than $560 million, $370 million, and $120 million to public broadcasters, respectively, in FY2000. Corporation for Public Broadcasting Appropriation Request and Justification FY 2003 and FY 2005, Report to the House and Senate Comms., Feb. 2002, at 31 app. E, *available at* http://-www.cpb.org/about/reports/appropriation/fy03_fy05/just_2003.pdf (last visited May 15, 2004). Creators post shareware on the Internet where it is available for downloading by anyone, but they ask users to voluntarily send them a payment. *See* Lisa N. Takeyama, *The Shareware Industry: Some Stylized Facts and Estimates of Rates of Return*, 2 ECON. INNOVATION & NEW TECH. 161 (1994).

241. *See* Elizabeth H. Creyer & William T. Ross, Jr., *The Influence of Firm Behavior on Purchase Intention: Do Consumers Really Care About Business Ethics?*, 14 J. CONSUMER MKTG. 421 (1997) (finding consumers would pay more for products from ethical firms); Jeffrey L. Seglin, *The Right Thing: A Boss Saved Them. Should They Save Him?*, N.Y. TIMES, Jan. 20, 2002, § 3, at 4. *But see* Maryln Carrigan & Ahmad Attalla, *The Myth of the Ethical Consumer—Do Ethics Matter in Purchase Behavior?*, 18 J. CONSUMER MKTG. 560 (2001).

be willing to pay, i.e., tip, creative artists, even if there is no legal requirement.

The model of voluntary payments most relevant to creative artists is that of restaurant tipping, which generates approximately $20 billion a year.[242] Although many tippers may claim that they tip to reward quality service, data show that tip size is only slightly related to the quality of the service.[243] Most North Americans tip even when they receive bad service and never expect to return to the restaurant.[244] They appear to act primarily to maintain a self-image of being "fair,"[245] treating tips as payments due for services rendered.[246]

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242. *See* Dan Seligman, *Why Do You Leave Tips?*, FORBES, Dec. 14, 1998, at 138, 141 (an IRS estimate for annual tipping in 1996 was $15-18 billion); Ofer H. Azar, *The Social Norm of Tipping: A Review*, at 1 (2002) (offering an estimate of $26 billion), *at* http://www.ssrn.com/abstract=370081 (last visited May 15, 2004).

243. *See* Azar, *supra* note 242, at 8-11; Michael Conlin et al., *The Norm of Restaurant Tipping*, 52 J. ECON. BEHAV. & ORG. 297, 306-07 (2003); Michael Lynn & Michael McCall, *Gratitude and Gratuity: A Meta-Analysis of Research on the Service-Tipping Relationship*, 29 J. SOCIO-ECON. 203, § 4 (2000) (restaurant customers tip only slightly more for better service, with the quality of service explaining about 2% of the size of the tip).

244. *See* Leo P. Crespi, *The Implications of Tipping in America*, 11 PUB. OPINION Q. 424, 428-30 (1947); Florence Fabricant, *Tips Past the Tipping Point,* N.Y. TIMES, Sept. 25, 2002, at F1 (noting with regard to tipping charts, "It would definitely be less offensive if they offered 10% as an option, to at least acknowledge the possibility of poor service."); William Grimes, *Tips: Check Your Insecurity at the Door*, N.Y. TIMES, Feb. 3, 1999, at F1 ("Many uncertainties surround the dining experience, but one thing is sure. At the end of the meal, the diner, barring a near-nuclear catastrophe, will leave a tip."). A 1996 survey found that 94% of Americans are inclined to leave tips in restaurants. *See* Tibbett L. Speer, *The Give and Take of Tipping*, AM. DEMOGRAPHICS, Feb. 1997, at 51.

245. Researchers like Michael Lynn have concluded that tippers probably tip to avoid disapproval, even by someone they will never interact with again, given existing social norm. Conlin et al., *supra* note 243, at 311-14; Azar, *supra* note 242, at 2-3; Robert Woodhead, *Tipping—A Method for Optimizing Compensation for Intellectual Property*, *at* http://tipping.selfpromotion.com (last visited May 15, 2004); Fred Hapgood, *Voluntary Payments*, http://tipster.weblogs.com/hapgood (presented to the Digital Commerce Society of Boston, Sept. 5, 2000) (last visited May 15, 2004); *see also* Crespi, *supra* note 244, at 426.

246. Even the Internal Revenue Service considers tips as income. Roberts v. Commissioner, 10 T.C. 581 (1948) (finding that it was reasonable for the IRS to treat the tips of taxi cab drivers as income, not gifts). Moreover, the IRS presumes that ninety percent of restaurant diners tip at least twelve percent. McQuatters v. Commissioner, 32 T.C.M. (CCH) 1122, 1973 T.C.M. (P-H) ¶ 73,240, 1973 WL 2419.

Given the American social norm for tipping, publishers should try to convince consumers that it is fair to give creative artists their due.[247] Fans already pay to join fan clubs of their favorite artists. This approach deserves more than the limited attention it has received.[248] A media campaign to encourage consumers of creative content to pay extra because creators deserve fair compensation for their work could be modeled after the "look for the union label" jingle or buy "green" (environmentally friendly) advertising.[249]

Now many might view a proposal to rely on voluntary compliance as absolutely ridiculous given current widespread public resistance to copyright laws. Yet most of that resistance appears to be based on public perception that the current system is unfair: prices of CDs have been too high[250] and restrictions on an individual's own uses, as well sharing are excessive, and thus file sharing is not stealing.[251] The recent success of

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247. *See* Pool, *supra* note 197, at 223 ("People would pay a small extra fee rather than feel they are cheating."); Woodhead, *supra* note 245; Hapgood, *supra* note 245. Yet, restaurant tipping varies significantly from nation to nation. *See* Michael Lynn, *National Personality and Tipping Customs*, 28 PERSONALITY & INDIVIDUAL DIFFERENCES 395 (2000).

248. Among the few who have given this option consideration are Ku, *supra* note 13, at 310-11; Lunney, *supra* note 63, at 858-68; William Fisher, *Digital Music: Problems and Possibilities* § IV.6, Oct. 2000, *at* http://www.law.harvard.edu/Academic_Affairs/coursepages/tfisher/Music.html (last visited May 15, 2004).

249. *See* Walter Coddington, *It's No Fad: Environmentalism is Now a Fact of Corporate Life*, MKTG. NEWS, Oct. 15, 1990, at 7 (finding that, in 1989, 76 percent of Americans stated that they were willing to pay 5-10 percent more for ecologically compatible products); Michael Laroche et al., *Targeting Consumers Who Are Willing to Pay More for Environmentally Friendly Products*, 18 J. CONSUMER MKTG. 503, 503 (2001) (finding environmentally conscious individuals were willing to pay 15-20 percent more for green products) (citing Hazel T. Suchard & Michael J. Polonski, *A Theory of Environmental Buyer Behavior and its Validity: The Environmental Action—Behavior and its Validity: The Environmental Action-Behavior Model*, *in* 2 AMA SUMMER EDUCATORS' CONFERENCE PROCEEDINGS 187 (M.C. Gilly et al., eds., 1991)).

250. *See* Amy Harmon & John Schwartz, *Despite Suits, Music File Sharers Shrug Off Guilt and Keep Sharing*, N.Y. TIMES, Sept. 19, 2003, at A1. This is aggravated when the consumer realizes that more than 90% of the price of a CD or DVD goes to middlemen rather than the artists, and that publishers are not passing on cost savings from using the Internet. *See* sources cited *supra* notes 42 and 144. Still, lower CD prices are addressing this. *See* Strauss, *supra* note 220.

251. *See* Harmon & Schwartz, *supra* note 250 (stating that eighteen percent think that sharing music files is always all right); Lunney, *supra* note 63, at 907-10; Mary Madden & Amanda Lenhart, Music Downloading, File-sharing and Copyright: A Pew Internet Project Data Memo, July 2003 (finding that 67% of Internet users who download music don't care whether the music they download is copyrighted), *available at*

more reasonably priced business models, like the 99 cent per song offerings by Apple's iTunes,[252] although most of such music is available free online, suggests that content consumers are willing to pay reasonable prices if given the chance. Back to tipping, it is useful to note that "[i]n its early history, tipping was . . . branded as un-American and undemocratic . . . [but] tipping eventually became more entrenched in American life than in any other country."[253]

In fact, economists have found that tipping behavior is surprisingly common. As one pair of scholars reported: " [O]ur experiments provide many examples where groups move toward cooperation rather than free-riding over time. Indeed, our results indicate that deterioration in the level of contributions is a special case, occurring only when the incentives to reach an efficient equilibrium are relatively low."[254] A donation system may even represent an efficient way to finance some creative activities.[255] It builds on the fact that many, if not most, consumers like to think of themselves as fair.[256] This has led some scholars to recognize that voluntary payments such as tips and donations from appreciative consumers could play a role in financing new creations.[257] As Kenneth Arrow has recognized, social norms can in some cases "compensate for market failures."[258]

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http://www.pewinternet.org/reports/pdfs/PIP_Copyright_Memo.pdf (last visited May 15, 2004).

252. *See* John Markoff, *Apple Sells 70 Million Songs in First Year of iTunes Service,* N.Y. TIMES, Apr. 29, 2004, at C10.

253. KERRY SEGRAVE, TIPPING: AN AMERICAN SOCIAL HISTORY OF GRATUITIES, at vii (1998).

254. Charles Bram Cadsby & Elizabeth Maynes, *Voluntary Provision of Threshold Public Goods with Continuous Contributions: Experimental Evidence*, 71 J. PUB. ECON. 53, 68-69 (1999); Daniel Rondeau et al., Voluntary Revelation of the Demand for Public Goods Using a Provision Point Mechanism, 72 J. PUB. ECON. 455, 468 (1999) ("Using large groups in an induced value framework, we have shown that the provision point mechanism with money-back guarantee and proportional rebate of excess contributions can closely approximate demand revelation.").

255. *See* Roland J. Kushner & Arthur C. Brooks, *The One-Man Band by the Quick Lunch Stand: Modeling Audience Response to Street Performance*, 24 J. CULTURAL ECON. 65 (2000) (proposing that street performance can be economically efficient).

256. *See* ROBERT H. FRANK, PASSIONS WITHIN REASON 1-42, 163-84 (1988). Neither tipping nor other related behavior appears to be explainable as enlightened self interest. *See* Jon Elster, *Social Norms and Economic Theory*, J. ECON. PERSP., Fall 1989, at 99; Lunney, *supra* note 63, at 858-68.

257. *See supra* note 248

258. *See* Kenneth J. Arrow, *Political and Economic Evaluation of Social Effects and Externalities*, *in* FRONTIERS OF QUANTITATIVE ECONOMICS 3, 22 (Michael D. Intriligator

States could require schools to teach students that consuming content without paying the creators their due is unfair[259] and discourages creators from producing more. Since compliance with copyright norms may sometimes depend more on perceptions of morality and legitimacy than the law,[260] the key would be to cultivate the attitude of personal responsibility for continued creative output described by one music artist:

> I actually believe that our fans, if they can download something that we're doing from Napster, will feel that they've sort of let us down if they don't pay for it. . . . [T]he record company is a bit like someone who bets ten pounds on a horse . . . . The relationship the fans have with the artists, they're a bit like that guy who looks after the horse and feeds it and trains it . . . . It's about caring rather than just having a bet.[261]

Creating this attitude in consumers should work for new or economically "borderline" artists, although sympathy for them would likely erode if they gained financial success. Consumers could be asked to contribute for free online copies as well as hard copies, and even to give some lesser amount for works borrowed from a library or bought used.[262] This would

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ed., 1971).

259. *See* INFORMATION INFRASTRUCTURE TASK FORCE, INTELLECTUAL PROPERTY AND THE NATIONAL INFORMATION INFRASTRUCTURE: THE REPORT OF THE WORKING GROUP ON INTELLECTUAL PROPERTY RIGHTS 203-10 (1995); *see also* Digital Dilemma, *supra* note 11, at 216-17, 304-10; OTA Study, *supra* note 11, at 120-21 (pertaining to industry education initiatives); Ellickson, *supra* note 238, at 38-42 (regarding the state's capabilities as moral educator); Laura M. Holson, *Studios Moving to Block Piracy of Films Online*, N.Y. TIMES, Sept. 25, 2003, at A1 (regarding antipiracy ads by the content industry).

260. See Tom R. Tyler, *Compliance with Intellectual Property Laws: A Psychological Perspective*, 29 N.Y.U. J. INT'L L & POL. 219 (1997).

261. *See* LEWIS, *supra* note 182, at 148-49 (quoting Steve Hogarth, the lead singer of the band Marillion). These conditions and the success of pre-sales would support the development of a radical transformation of the music business.

262. A "droit de suite" approach to artistic work grants artists rights to profits from resales of their copyrighted works, and California has adopted a five percent royalty payment on resales of fine arts. Michael B. Reddy, *The Droit De Suite: Why American Fine Artists Should Have the Right to a Resale Royalty*, 15 LOY. L.A. ENT. L.J. 509, 509, 521 (1995). Publishers are now eager to apply that concept so as to collect commissions on the resale of used books. *See* Brian Garrity et al., *CD Pricing, Used Sales Debated: Concerns Rise Over High Retail Profile of Used CDs*, BILLBOARD, June 8, 2002, at 1; Frank Green, *Music Industry Remains in Spin,* SignOnSanDiago.com, *available at* http://www.sduniontribune.com/news/business/20020614-9999_1614usedCDs.html. Used book sales have grown dramatically. *See* Rayner, *supra* note 55.

be even more practical if the government mandated that distributors of content offer consumers an option to contribute to the creator.[263]

Admittedly, tipping an artist may be less compelling given a lack of direct live contact comparable to that to food servers in a restaurant, but websites could be used to create some meaningful interaction between the consumer and the artist. For example, the website could include the voice of the creator or enthusiastic fan asking the consumer to please "enable us to continue our efforts by contributing at least $1?"[264] Shoppers in stores might eschew lower priced "unauthorized" copies in favor of higher-priced authorized copies merely to avoid the disapproval of the cashier.[265] Creators might also adapt the model that fan clubs use for soliciting and rewarding dues-payers with early notifications about new releases and performance schedules as well other privileges.[266] Theater companies, talent, and critics could support playwrights by protesting productions that refused to offer reasonable license fees to artists.[267]

Consumers also already provide substantial financial support to creators due to their appreciation of the creator's work or so that they may associate with such creators. "Angels" often invest in Broadway shows for the glamour,[268] and many fans buy merchandise with a creation's trademark or endorsed by the creator.[269]

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263. *See* Ku, *supra* note 13, at 311 n.319.

264. *See* Neil McManus, *Attention, Shoppers. Don't You Use That Tone With Me*, N.Y. TIMES, Mar. 7, 2002, at G3 (discussing the use of avatars that look like cartoons, but can converse with customers from kiosks in stores); Woodhead, *supra* note 245 ("It's easy to rationalize stiffing MegaCorp, but much harder to screw the hard-working guy the top of whose head they can see on the webcam answering their emails."). To be most effective, payment solicitations would need to be as personalized as possible to counter the distance and anonymity of cyberspace. *See* DIGITAL DILEMMA, *supra* note 11, at 49; *see also* Woodhead, *supra* note 245 ("By letting users set the price, rather than setting it myself, I more than doubled my income.").

265. In a scene from Woody Allen's BANANAS (United Artists 1971), Fielding Mellish pays a significant surcharge (for a bundle of unwanted magazines) to avoid embarrassing attention from a newsstand cashier regarding his purchase of the adult magazine "Orgasm," although his ploy fails. *See also* Hurt & Schuchman, *supra* note 17, at 428-29 (discussing the promotion of a version of J.R. Tolkien's *Lord of the Rings* trilogy labeled as the only "authorized" one in competition with one that paid no royalties to Tolkien).

266. *See* Strahilevitz, *supra* note 201, at 567-68 & n.204.

267. Although *Fashion Originator's Guild of America v. Federal Trade Commission*, upheld the FTC's prosecution of the Fashion Guild for organizing a boycott of retailers who sold pirated fashions, that boycott was a formal arrangement involving contracts, records, and heavy fines. *See* 312 U.S. 457, 462-65 (1941). A much more informal boycott of institutions that neglected playwrights would appear to be legal.

268. *See* James Andreoni, *Impure Altruism and Donations to Public Goods: A Theory*

Consumers are also likely to be more inclined to pay creators for ancillary services when they feel indebted to the creators for previous enjoyment of uncompensated work. This is not to claim that consumers will not seek out the most highly qualified service providers when they need a service, but when they view many as virtually equal, they are apt to choose the one to which they feel indebted. Thus, creators could earn funds by offering consumers the selection assistance discussed above in Part IV.A.4. Those with expertise in a field of business, such as human resources or sales, might be offered an inside track for serving as members of corporate boards of directors, representing shareholder interests.[270]

The Audio Home Recording Act of 1992 imposed surcharges on digital audio recording devices and associated storage media to compensate copyright holders for the unauthorized copies they feared would ensue.[271] Although weak demand reduced the significance of that experiment, this approach has significant academic support,[272] and in Western Europe, broadcast content has long received substantial funding from periodic license fees on radio and television sets and advertising.[273] This approach, however, failed to get much traction in Congress when it was presented as a response to the *Sony* Betamax decision,[274] probably due to some key

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of Warm-Glow Giving, 100 ECON. J. 464 (1990); Kelsey & Schneier, *supra* note 185, at 8; *cf.* Chris Nelson, *Rock Group Finds a New Way to Sell Out*, N.Y. TIMES, Sept. 23, 2002, at C9 (quoting one fan "It's a way for me and the other people . . . to really feel like [we're] part of the band, part of their music."). New online art forms even enable creators to sell rights to "participate" in a creation. *See* Mirapaul, *supra* note 196 (discussing sales of "shares" in an online work).

269. *See, e.g.*, VOGEL, *supra* note 41, at 96; Eric Asimov, *Britney Spears; Not Yet a Woman, Already a Restaurateur*, N.Y. TIMES, June 19, 2002, at F1; Laura M. Holson & Rick Lyman, *In Warner Brothers' Strategy, A Movie is Now a Product Line*, N.Y. TIMES, Feb. 11, 2002, at C1; Leslie Kaufman, *PBS is Expanding its Brand from the Television Screen to the Shopping Mall*, N.Y. TIMES, June 27, 2002, at C10.

270. In fact, such independent experts could alleviate the problems created by current board members more accountable to management than shareholders. *See* Mark S. Nadel, *More Power to Shareholders*, WALL ST. J., June 26, 1989, at A8.

271. The Audio Home Recording Act of 1992, Pub. L. No. 102-563, 106 Stat. 4237, applied it to digital audio recording devices and associated storage media. 17 U.S.C. §§ 1003-1007 (2000).

272. *See* Lunney, *supra* note 63, at 853-55; *see also* Neil Weinstock Netanel, *Impose a Noncommercial Use Levy to Allow Free Peer-to-Peer File-Sharing*, 17 HARV. J.L. & TECH. 1 (2003) (proposing such a levy on digital hardware to compensate for free personal use copying of digital content); Strahilevitz, *supra* note 201, at 587-90.

273. *See* ELI M. NOAM, TELEVISION IN EUROPE 3 (1991).

274. *See* BETTIG, *supra* note 107, at 167-75.

drawbacks to such surcharges.[275] Instead of mandating this surcharge, consideration might be given to making a strong effort to encourage hardware purchasers to make a suggested contribution at the time they purchased hardware capable of making unauthorized copies.

Certainly, there would be many free riders, but a social norm for tipping creative artists coupled with a de-escalation in today's hypermarketing practices could enable many new artists to finance both production and promotion. In fact with digital media, the virtual elimination of reproduction and distribution costs would allow some artists to handle their own marketing and production.

C. Government Funding

Governments have long provided significant funding towards the creation of culturally or scientifically valuable (and often unpopular) content termed "merit goods."[276] In fact, most of the greatest artistic and literary works of humanity were financed by royal, feudal, or church patronage, rather than copyrights.[277] Today the National Endowment for the Arts, the National Endowment for the Humanities, the Corporation for Public Broadcasting,[278] and state and local legislatures and arts groups provide significant amount of funds to creators.[279] Moreover, the tax-deductibility

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275. Lunney, *supra* note 63, at 855-58, 912-14 (discussing three drawbacks: unfairness to those who do not use the resources for copying, discouraging the introduction of innovative copying technologies, and transforming copyright from a "property" to a "liability" right). While one can describe copyright as "a tax on readers for the purpose of giving a bounty to workers," *see* Macaulay, *supra* note 1, at 737 (para. 9), a tax on purchasers of equipment rather than just consumers of works arguably distorts demand even more. *See also* WATT, *supra* note 6, at 132-34 (criticizing this approach and noting that Australia declared such a mechanism to be anti-constitutional); *supra* note 20.

276. *See* Richard A. Musgrave, *Merit Goods*, *in* RATIONALITY, INDIVIDUALISM AND PUBLIC POLICY 207-10 (Geoffrey Brennan & Cliff Walsh eds., 1990) (discussing the concept of "merit goods").

277. This would include all pre-1709 creative content. *See* POSNER, *supra* note 133, at 389; Plant, *supra* note 7, at 170.

278. Prior to 1930, there was very little federal support for content creation. During the Great Depression, however, the Roosevelt administration instituted the immense WPA Arts Project. *See* DICK NETZER, THE SUBSIDIZED MUSE: PUBLIC SUPPORT FOR ARTS IN THE UNITED STATES 53-59 (1978). In 1965, the creation of the National Foundation on Arts & Humanities established the National Endowment for the Humanities (NEH), the National Endowment for the Arts (NEA), and the Federal Council on Arts and Humanities. The Corporation for Public Broadcasting was added in 1967. *Id*. at 59-79.

279. *Id*. at 128-30; National Assembly of State Arts Agencies, Press Release, *State Arts Agency Funding Reflects Continuing State Budget Woes*, Nov. 3, 2003,

of many arts donations provides a further public subsidy to private donations.[280] Some have even proposed raising funds for the arts by selling or leasing portions of a quintessential public good—the radio spectrum.[281]

Public museums, schools, and libraries also help finance creative work with substantial purchases. For example, the Queens Borough Public Library in New York sometimes orders thousands of copies of a single blockbuster,[282] and schools and libraries often pay higher prices for periodical subscriptions to reflect their greater use.[283] It appears that public libraries and government-supported academic libraries together now spend on the order of $3 billion annually on information resources.[284] The "public lending rights" programs adopted in many European nations now pay creators based on the uses made of their work in libraries, a model that could serve as a basis for a more sophisticated content compensation program in the United States.[285] There has also long been support for using taxpayer-financed rewards instead of granting copyright or patent rights,

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http://www.nasaa-arts.org/nasaanews/legapprop04/press_rel.pdf (last visited May 15, 2004). Funds may be allocated not only for their long term value to cultural history, but for shorter term benefits to tourism, or community spirit or unity. *See* THROSBY, *supra* note 113, at 128-30 (discussing tourism benefits).

280. *See* NETZER, *supra* note 278, at 43-45. In the spirit of such public-private "joint ventures," some foundations seek to work with the private sector to fund joint projects. Examples of this model include the Noggin children's television show, and online educational fathom.com. *See* DAVID BOLLIER, IN SEARCH OF THE PUBLIC INTEREST IN THE NEW MEDIA ENVIRONMENT 12-15 (2002); NETZER, *supra* note 278, at 188.

281. *See* LAWRENCE GROSSMAN & NEWTON MINOW, A DIGITAL GIFT TO THE NATION (2001); *see also* BOLLIER, *supra* note 280 (discussing related proposals discussed at an Aspen Institute seminar in summer 2001).

282. *See* Marcia Biederman, *Making It Work: Library Thrives With a Common Touch*, N.Y. TIMES, Sept. 12, 1999, § 14, at 3.

283. *See* Janusz A. Ordover & Robert D. Willig, *On the Optimal Provision of Journals Qua Sometimes Shared Goods*, 68 AM. ECON. REV. 324 (1978); *see also* David D. Kirkpatrick, *Publishers and Libraries Square Off Over Free Online Access to Books*, N.Y. TIMES, June 17, 2002, at C7 (discussing the same issue with respect to e-books).

284. *See* CED REPORT, *supra* note 80, at 14 n. t.

285. *See* Joshua H. Foley, Comment, *Enter the Library: Creating a Digital Lending Right*, 16 CONN. J. INT'L L. 369, 385 n.115 (2002); Jennifer M. Schneck, Note, *Closing the Book on the Public Lending Right*, 63 N.Y.U. L. REV. 878, 883 (1988); *see also* Bennett M. Lincoff, *A Plan for the Future of Music Performance Rights Organizations in the Digital Age*, *in* EXPANDING THE BOUNDS OF INTELLECTUAL PROPERTY: INNOVATION POLICY FOR THE KNOWLEDGE SOCIETY 172-74 (Rochelle Cooper Dreyfuss et al. eds., 2001). Breyer rejected the idea of a fund to compensate publishers for photocopying due to the administrative costs of collecting funds from libraries. *See* Breyer, *supra* note 15, at 322. Yet federal funding for such a program might be considered if the other business models above did not prove viable in some submarkets.

although most analysis of this option has focused on patents rather than copyrights.[286]

Government bodies also play a number of other roles supportive of creators. Public schools teach English, music, and art and support school newspapers, yearbooks, and performances, which develops audiences as well as creators. Public entities also subsidize facilities such as the Kennedy Center,[287] public broadcasting stations, and cable television public access channels.[288]

V. PROPOSED LEGAL FRAMEWORK: DISCLOSURES OF PATERNITY AND A SEVERELY TRUNCATED PROHIBITION AGAINST UNAUTHORIZED COPYING (§ 106)

The business models and social norms discussed above appear capable of providing sufficient revenue streams for creative artists and publishers in the absence of a prohibition against unauthorized copying, but some of those business models depend on two provisions that would replace that prohibition. Furthermore, the analysis below suggests that replacing the current prohibition against unauthorized copying (§ 106) with a severely truncated set of prohibitions might be desirable for producing a more optimal level of creative output.

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286. *See* Steven Shavell & Tanguy Van Ypersele, *Rewards Versus Intellectual Property Rights*, 44 J.L. & ECON. 525, 526-27 (2001) (noting that many European countries considered such government support schemes in the 19th century); *see also* Boyle *supra* note 6, at 57. For a detailed review of the major proposals and his own, see Michael Abramowicz, *Perfecting Patent Prizes*, 56 VAND. L. REV. 115 (2003); Steve P. Calandrillo, *An Economic Analysis of Intellectual Property Rights: Justifications and Problems of Exclusive Rights, Incentives to Generate Information, and the Alternative of a Government-Run Reward System*, 9 FORDHAM INTELL. PROP. MEDIA & ENT. L.J. 301 (1998). Ku proposes this for music today. Ku, *supra* note 13, at 313-15. For support in the context of copyright, see Plant, *supra* note 7, at 193; Michael Polanyi, *Patent Reform*, 11 REV. ECON. STUD. 61, 65 (1944). Despite First Amendment dangers, the government, e.g., Library of Congress, already evaluates the quality of popular culture in other contexts. *See, e.g.*, Randy Kennedy, *So Many Films, But Only a Few are Treasures; Library of Congress Separates Mere Movies From Landmarks*, N.Y. TIMES, Feb. 5, 2004, at E1.

287. *See* NETZER, *supra* note 278, at 46.

288. *See* 47 U.S.C. § 531 (2000); Felix Gillette, *No Static at All*, WASH. CITY PAPER, Dec. 7, 2001, at 24, 35-36, *at* http://www.washingtoncitypaper.com/archives/cover/2001-/cover1207.html (last visited May 15, 2004).

A. Disclosures of Paternity and Social Norms

The two new provisions proposed as replacements for broad prohibitions against copying would recognize an expanded right of paternity[289] in a manner designed to foster the use of social norms to control unreasonable, but not reasonable, copying. First, copyright law should expressly require copiers to prominently label their copies as "unauthorized copies."[290] Existing tort and unfair competition laws already prohibit fraudulent claims of authorship,[291] and significant omissions are condemned as plagiarism,[292] but this provision would be more explicit and go a bit further. It would help ensure that those consumers who recognized the fairness of rewarding creators would be able to do so and those tempted to neglect creators would at least risk embarrassment in front of cashiers (for real space purchases),[293] if not guilt. Second, copyright law should require copiers to give consumers information about how to tip or donate to the creator, making it easier for fair-minded consumers to do so.[294] Even noncommercial disseminators could be required to include information about how to donate to the creators, such as a creator's URL.

Those now using filesharing on the Internet would face a different choice than they have today. No longer forced to pay $18 for a CD, they would now have to choose between paying ninety-nine cents for a song, pursuing a somewhat constrained form of filesharing, or violating the law.

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289. The right to paternity is guaranteed by the Berne Convention for the Protection of Literary and Artistic Works, Sept. 9, 1886, art. 6 bis., 25 U.S.T. 1341, 1161 U.N.T.S. 3. *See also* Green, *supra* note 133, at 206. Many creators, like those discussed in text accompanying notes 114-117, *supra*, care more about being acknowledged for their creative work than being paid. *See* Lange & Anderson, *supra* note 81, at 155.

290. *See* Tushnet, *supra* note 89, at 29 & n.102 (2000). The Supreme Court's unanimous decision in *Illinois v. Telemarketing Assoc.*, 538 U.S. 600 (2003), made it clear that states can act reasonably to ensure that consumers are not misled about where their payments go. Copiers would be free to indicate any voluntary payments they made to creators, but labels could still be required for unauthorized copies to prevent copiers from misleading buyers by paying creators only a very small portion of profits. *Cf.* David Barstow & Diana B. Henriques, *9/11 Tie-Ins Blur Lines of Charity and Profit*, N.Y. TIMES, Feb. 2, 2002, at A1.

291. 15 U.S.C. § 1125(a) (2000); *see also* Federal Trademark Dilution Act of 1995, 15 U.S.C. §1125(c)(1); Bonito Boats, Inc. v. Thunder Craft Boats, Inc., 489 U.S. 141, 157 (1989) ("[U]nfair competition has its roots in the common-law tort of deceit: its general concern is with protecting consumers from confusion as to source.").

292. *See* Green, *supra* note 133; Richard A. Posner, *On Plagiarism*, ATLANTIC, April, 2002, at 23.

293. *See supra* note 265.

294. *See supra* note 263.

The new, legal, but constrained form of filesharing would require them to seek out a provider who included a prominent label that 1) disclosed that the copies it provided were unauthorized and 2) gave recipients a URL where they could make voluntary payments to the relevant artists. Meanwhile, authorized publishers would be able to promote the fact that buying their versions would support the creator directly much like the "look for the union label" campaigns mentioned above. Government entities could also require, or at least encourage, public entities like schools and libraries to buy only authorized copies of content when the copies are priced close to the market price.[295]

Most consumers would probably find it easier to pay reasonable fees than to pursue the constrained, but legal form of copying. On the other hand, those who pursued their former unconstrained form of filesharing would stand in a very different light. While they might previously have thought of themselves as involved in civil disobedience,[296] flouting copyright law to "beat" the big, bad, rich publishers, they would now be violating a law that merely sought to aid sympathetic creators in a minimally burdensome manner. They would be hard pressed to defend their actions as more than personal selfishness and cheating. In fact, there is even reason to believe that many of those cyberspace leaders and many hackers who now devote significant time and effort to beating the "evil" music industry, would be willing to serve as vigilante, Guardian Angel-like protectors of new artists, policing cyberspace to try to ensure that such deserving creators were not being cheated.

B. A Truncated Set of Prohibitions Against Unauthorized Copying

It appears that even the combination of technology, social norms, and the two legal provisions just mentioned would not, in an environment lacking current § 106, be able to provide sufficient support to ensure that all types of creative content were economically viable at optimal levels. Rather, some categories of creative content would seem to deserve some appropriate level of protection against unauthorized copying, although given the social and economic costs of a broad § 106 to consumers and

295. In 2000, more than 100 public and private universities refused to authorize the use of their logos on lower-priced apparel made by companies whose factories did not meet the standards of the Fair Labor Association. *See* Thomas L. Friedman, *Knight is Right*, N.Y. TIMES, June 20, 2000, at A25; *see also* Breyer, *supra* note 15, at 305.

296. *See* Lunney, *supra* note 63, at 907-10.

new creators alike, as discussed in Parts II.B and II.C, it would be important to keep such protection to a minimum.[297]

This Article offers a general strategy for a minimal level of copyright protection against unauthorized copying. Congress could adopt general standards, modeled on the four-element test for judging fair use under copyright law,[298] and leave it to the courts to develop a common law resolution of copyright protections, as courts already do when judging allegations of unfair competition.[299] As Ray Patterson and Jessica Litman have suggested, copyright law could prohibit only commercial exploitation, rather than all copying.[300] A possible framework for providing publicly beneficial protection to creative content might resemble the following:

1. General Provisions

Unauthorized copying might be prohibited where copiers did not offer consumers a significant incremental benefit, such as significantly lower prices or easier access, over what publishers already offered. Thus, copiers would be prohibited from copying content that the original publisher was already providing at no charge online. For example, as long as newspaper

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297. *See* KAPLAN, *supra* note 12, at 115-17; Macaulay, *supra* note 1, at 734-35 (para. 7) (stating that copyright "ought not to last a day longer than is necessary for the purpose of securing the good [of increased production]"); Dan L. Burk, *Muddy Rules for Cyberspace,* 21 CARDOZO L. REV. 121, 133 (1999); William W. Fisher III, *Property and Contract on the Internet*, 73 CHI.-KENT L. REV. 1203, 1249 (1998); Jane C. Ginsburg, *Copyright and Control Over New Technologies of Dissemination*, 101 COLUM. L. REV. 1613, 1615 (2001) ("incentives should be as modest as possible"); Sterk, *supra* note 27, at 1205.

298. *See* 17 U.S.C. §107 (2000). For a clear recent application of the standard see Suntrust v. Houghton Mifflin Co., 268 F.3d 1257 (11th Cir. 2001). *See generally* WILLIAM F. PATRY, THE FAIR USE PRIVILEGE IN COPYRIGHT LAW (2d ed. 1995); Benkler, *supra* note 35; Fisher, *supra* note 22; Wendy J. Gordon, *Asymmetric Market Failure and Prisoner's Dilemma in Intellectual Property*, 17 U. DAYTON L. REV. 853, 854-59 (1992). *But cf.* Fisher, *supra* note 22, at 1717-19 (proposing alternative compensation schemes for digital content); Leval, *supra* note 88 (suggesting that despite inconsistent adjudication, there are sound principles governing fair use rooted in the purpose of copyright law). Ideally, Congress would adopt such criteria only after carefully considering the effects of different terms on various types of content, although the disappointing UCITA model gives little cause for hope on this. *See* Samuelson, *supra* note 139.

299. *See* Reichman & Samuelson, *supra* note 140, at 139-44; Reichman & Uhlir, *supra* note 140, at 825-28, 836-37.

300. *See* LITMAN, *supra* note 7, at 180; LYMAN RAY PATTERSON, COPYRIGHT IN HISTORICAL PERSPECTIVE 194, 215, 228 (1968) (observing that federal copyright law was originally designed to protect an exclusive right to sell); *see also* Rubenfeld, *supra* note 71, at 54-59 (discussing a profit allocation approach).

stories are available free online, other newspapers should not be allowed to make unauthorized republications of them, where they could easily have provided a "deep link" instead.[301] The same would be true for books like Lawrence Lessig's "Free Culture," which is available free online as a PDF file.[302] Similarly, to the extent that television program producers or record companies provide free access to their materials online, accompanied by commercial messages, others would only be allowed to disseminate the links to those materials, not the materials themselves.

In addition, the law could accord publishers protection for "hot news" under a misappropriation standard like that adopted by the Supreme Court in *International News Service v. Associated Press*.[303] This protection could apply whenever copiers tried to deny a publisher its first mover advantage, as by transmitting a publisher's live feed simultaneously over a competing channel or trying to scoop another publisher's exclusive.[304] Granting a publisher 24-hour exclusivity might be deemed a safe harbor for avoiding suit for unfair competition. The law might also prohibit unauthorized dissemination before the publisher had a "reasonable" chance to release a new work to consumers.[305] A provision like this should provide more than

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301. Deep links take users directly to specific content on a website, bypassing home or other front pages (and ads or other attractions). *See* Ticketmaster Corp. v. Tickets.com, Inc., No. CV-99-7654 HLH, 2000 WL 525390, 2000 U.S. Dist. LEXIS 4553 (C.D. Cal. Mar. 27, 2000), *aff'd*, No. 00-56574, 2001 WL 51509, 2001 U.S. App. LEXIS 1454 (9th Cir. Jan. 22, 2001). This would, however, only prohibit online copying, not the dissemination of hard copies to those lacking easy online access. This would support the much-criticized result in *Los Angeles Times v. Free Republic*, 56 U.S.P.Q.2d 1862 (C.D. Cal. Nov. 16, 2000).

302. *See* http://cyberlaw-temp.stanford.edu/freeculture.pdf (last visited May 15, 2004).

303. Int'l News Serv. v. Assoc. Press, 248 U.S. 215 (1918); *see also* L. Ray Patterson, *Copyright in the New Millennium: Resolving the Conflict Between Property Rights and Political Rights*, 62 OHIO ST. L.J. 703, 729-30 (2001).

304. *See, e.g.*, Harper & Row, Publishers, Inc. v. Nation Enters., 471 U.S. 539 (1985) (holding that excerpting President Ford's memoir before it was published was not fair use). The standards might be limited to situations meeting the 3 conditions articulated in 2 J. THOMAS MCCARTHY, MCCARTHY ON TRADEMARKS AND UNFAIR COMPETITION § 10:51, at 10-95 (4th ed. 1996) (naming three elements of misappropriation: (1) substantial investment in the appropriated item by the plaintiff; (2) appropriation at little or no cost by the defendant; and (3) injury to plaintiff by the misappropriation).

305. The release could be via the airwaves, wires, or in hard copies. This could discourage filmmakers from releasing their films for broadcast or home video, but that would seem unlikely given the investments studios make in marketing during the original release period and how quickly marketing value depreciates and most films age. Still, this might not apply to classics, such as many of Disney's animated features, which are rere-

adequate protection to those producing real time sporting events, award shows, or live reality shows.

2. Provisions for Specific Industries

Granting different statutory copyright protections to different industry segments may also better tailor the solution to the problem of providing optimal incentives for content creation. While such differential treatment may raise some problems,[306] the current, relatively uniform standards for all varieties of creative content may well produce greater harm. Instead, each individual industry segment should be considered on its own merits.[307] If industry groups believed that they needed additional legal protection to function at socially optimal levels, Congress could hold hearings and evaluate evidence, as it did when adopting the Newspaper Preservation Act in 1970.[308] If film studios could demonstrate a need for more protection in order for very old films to be restored,[309] then such evidence would justify aiding such content, but not new protection for book publishers or recent or future films. Given the likely need for analysis of detailed and continually-changing economic data, an expert body, like the Copyright Office, might be assigned the task of conducting administrative rulemakings.[310] Certainly, lobbyists for each industry would seek special protection, but their efforts would be constrained by their burden of presenting data justifying such special protection.

Those seeking additional protection could be required to show that: 1) they expended significant efforts to produce their creations; 2) sufficient

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leased periodically. *See* BETTIG, *supra* note 107, at 97-99.

306. *See* Breyer, *supra* note 15, at 322 (courts may have difficulty distinguishing between classes). *But see* KAPLAN, *supra* note 12, at 117 (proposing different copyright terms for various types of works).

307. *See* Chafee, *supra* note 38, at 510 ("The scope of protection for each kind of property should depend on its nature.").

308. Pub. L. No. 91-353, 84 Stat. 466 (codified at 15 U.S.C. §§ 1801-1804 (2000)). The Act seeks to preserve a diversity of editorial voices by making it easier for newspapers to qualify for the "failing company" defense to an otherwise anti-competitive merger. *See* Committee for an Independent P-I v. Hearst Corp., 704 F.2d 467, 478 (9th Cir.), *cert. denied*, 464 U.S. 892 (1983); *see also* COMPAINE & GOMERY, *supra* note 54, at 49-51.

309. *See* Eldred v. Ashcroft, 537 U.S. 186, 206-07 (2003) (affirming extension of the copyright term in part because it may encourage copyright owners to invest in the restoration of their works).

310. Research and analysis of the data might be provided by the respected, nonpartisan, and experienced National Academy of Sciences' National Research Council. *See, e.g.*, DIGITAL DILEMMA, *supra* note 11.

compensation was unavailable from other sources;[311] and 3) their proposed additional protection was minimally burdensome to creators and consumers.[312] For example, producers of non-time-sensitive broadcast television programming might assert that 24-hour protection would be insufficient to recover the hard costs of the quality fare offered by HBO. Setting the minimum duration of protection would be difficult, but it is useful to note that publishers earn large revenues from theaters, pay TV, and video rentals even though viewers know that the content will be available in only a few years on free television. A few months might suffice for books and only a few days for the increasing number of one-time-only reality TV shows, although other categories might justify longer terms.[313]

3. Consequences of Revising § 106

In considering how media markets would be affected by a drastic reduction in § 106 rights, it is useful to distinguish between currently popular creators and new entrants. The former are likely to remain viable by employing the business models discussed above in Part IV. For example, movie theater technology should protect the lion's share of first run box office receipts,[314] and established filmmakers could easily cultivate further

311. These first two are similar to the standards that the European Database Protection Directive requires for non-creative databases, *see* Ginsburg, *supra* note 140, at 70-71, and those of David Lange & Jennifer Lange Anderson's standard respecting infringements for transformative works. *See* Lange & Anderson, *supra* note 81, at 154.

312. Legislation passed under this provision should be held to the Court's intermediate scrutiny standard. *See* Baker, *supra* note 7, at 922-33; Netanel, *supra* note 87, at 47-69. Under that standard, the government would need to show that "the record as it now stands supports Congress' predictive judgment" that the provision 1) furthers important governmental interests; and 2) does not burden substantially more speech than necessary to further those interests. Turner Broad. Sys., Inc. v. FCC, 520 U.S. 180, 185 (1997) [hereinafter *Turner II*]. This is the approach the Supreme Court took in *Turner Broadcasting System, Inc. v. FCC*, 512 U.S. 622 (1994) ("*Turner I*") concerning the FCC's "must carry" rules. *Turner I* recognized that the "mere assertion of dysfunction or failure in a speech market, without more, is not sufficient to shield a speech regulation" from First Amendment review. 512 U.S. at 640. *But see Eldred*, 537 U.S. at 220-21 (rejecting the relevance of *Turner* to copyright).

313. *See* Bill Carter, *Reality Shows Alter the Way TV Does Business*, N.Y. TIMES, Jan. 25, 2003, at A1; Steve Lohr, *Steal This Book? A Publisher is Making It Easy*, N.Y. TIMES, Jan. 13, 2003, at C4 (describing open source electronic books). *The Economist* recently proposed returning to the 18th-century standard of a single 14-year term, renewable once. *See Copyrights: A Radical Rethink*, ECONOMIST, Jan. 23, 2003, at 15.

314. Movie makers might use technology to enhance the theater experience enough to justify higher prices. After all, theater tickets are priced many times as high as movie tickets for a comparable two hours or so of multi-media entertainment.

revenue from product placements. Popular musicians, novelists, and textbook writers could take advantage of the pre-sale mechanisms discussed above, as well as fees for consulting and teaching. Similarly, writers for television would probably be able to earn substantial amounts from product placements as well as for writing draft speeches or draft advertising copy for corporation. Free riding would certainly occur, but enough consumers would likely recognize that creators deserved and required a reasonable fee to continue and would contribute, if social norms and technology combined to make it attractive and easy.

The critical question, however, is how a truncation of § 106 copy protection would affect new entrants who lacked a loyal audience. Since most appear willing to earn little in the short run in return for the chance at fame, there may be little or no immediate effect; the dramatically lower costs of creation, reproduction, and dissemination of media today have combined to produce an explosion in the number of new works of all kinds.[315] This is not to deny that many creators can benefit, often significantly, from the editorial and artistic aid publishers have traditionally provided, but what they have generally needed most is the expertise and financing to reproduce, distribute, and market their creation. After all, new creators generally approach a publisher with a sample of their work, i.e., which they have already produced. Given that new technologies have reduced dissemination costs, if the SAs discussed in Part IV.A.4 grow in significance, new creators should stand a reasonable chance of financing all of the costs of production, distribution, and minimal marketing to supplement SAs.

New entrants with particular appeal to the young might find it difficult to rely on voluntary dues or donations, since social norms might have less sway with this demographic, but they might monetize their special appeal through fan clubs. Alternatively, publishers, like current record companies, might be willing to advance creators limited funds, as well as provide services for a fee, in return for a share of revenues that successful creators earned over a set term. Although these contracts might well resemble the ones currently criticized as exploitive by many recording artists, the reformed context may well increase the appeal of such arrangements enough to motivate content creation above current levels.

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315. For example, the number of new book titles more than doubled from 1990 to 2000. *See supra* note 51.

C. Compulsory Licenses

Even under the system of minimal prohibitions against unauthorized copying proposed here, compulsory licenses—granting legal authorization to make copies after payment of a statutory license fee—would remain relevant. They would provide a mechanism for copiers to avoid the potentially disruptive, if not embarrassing, disclosures of their unauthorized uses. Still, setting reasonable license fees is inherently political and has proved to be a thorny problem under existing compulsory licensing law.[316] Furthermore, a compulsory license system strips away the right of creators to prevent the use of their creation by someone of whom they disapprove.[317] Still, compulsory licenses could strike a judicious balance between the need of creators for compensation and the desire of other creators and disseminators to use the work.[318]

VI. CONCLUSION

This Article argues that current copyright law probably reduces the overall number of new creations while restricting consumer access and producing other harms. No empirical analyses have shown that copyright protection increases net output.[319] The analysis above reveals that the long accepted but rarely examined public value of § 106 of the copyright law is highly questionable. Section 106's impact on generally overlooked endogenous marketing costs appears to lead to a decrease in the economic viability of borderline works, diminishing net new creations and thereby undermining the presumption that it serves the public interest in this manner. Meanwhile, Congress has neglected to seriously consider the less bur-

316. *See* BETTIG, *supra* note 107, at 125-50; Dale N. Hatfield & Robert Alan Garrett, *A Reexamination of the Cable Television Compulsory Licensing Rates: The Copyright Royalty Tribunal and the Marketplace*, 5 HASTINGS COMM. & ENT. L.J. 681 (1983); Lessig & Valenti, *supra* note 85, at 32-33 (reporting the negotiations involved in setting the compulsory license rate for the 1976 Copyright Act); *see also* Summary of the Determination of the Librarian of Congress on Rates and Terms for Webcasting and Ephemeral Recordings, U.S. Copyright Office (Feb. 23, 2003), *at* http://www.copyright.gov/carp/-webcasting_rates_final.html (last visited May 15, 2004).

317. *See* Reichman & Samuelson, *supra* note 140, at 145-51.

318. Courts could enforce such a requirement in the same manner they handle eminent domain and the essential facilities doctrine requirements. *See* Sergio Baches Opi, *The Application of the Essential Facilities Doctrine to Intellectual Property Licensing In the European Union and the United States: Are Intellectual Property Rights Still Sacrosanct?*, 11 FORDHAM INTELL. PROP. MEDIA & ENT. L.J. 409 (2001); Glen Robinson, *On Refusing to Deal With Rivals*, 87 CORNELL L REV. 1177, 1209-11 (2002).

319. *See supra* notes 20 & 21.

densome alternative business models discussed in Part IV for stimulating creative output by employing recent technologies in combination with social norms and a seriously truncated § 106.

If Congress abridged § 106 there would be some initial negative effects,[320] especially to publishers and the wealthiest creators.[321] Once creators recognized that the world had changed, they would likely adjust their expectations, just as actors who demand $10 million fees for films projected to earn $100 million in revenues accept much smaller fees for creations expected to generate much lower revenues. As long as creators and publishers can earn more than their opportunity cost, they will continue to produce new works. Meanwhile reducing constraints on dissemination of content would be likely to increase societal welfare by spawning a vibrant content marketplace that supports the creative endeavor not by prohibitions, but by personal participation on the part of artists and creators alike. This paradigm seems better suited "To promote the Progress of Science and useful Arts" than § 106—or at the least, well suited to open a more productive debate.

320. Undermining author and publisher expectations built on the present system would be, admittedly, demoralizing. *See* Breyer, *supra* note 15, at 322. Still, that hardly seems to justify § 106 in the face of its substantial costs to society.

321. The beneficiaries of the current broad § 106 appear to be the most popular creators, their publishers and lobbyists, as well as the members of Congress who stand to be rewarded with campaign contributions in appreciation for their past and future action. *See* LESSIG, CULTURE, *supra* note 88, at 216-18; Ian, *supra* note 12.