

*REVIEW OF INNOVATION FOR THE 21ST CENTURY:
HARNESSING THE POWER OF INTELLECTUAL PROPERTY AND
ANTITRUST LAW*

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INTRODUCTION

It is no small task to juxtapose the diverse elements of copyright, patent, and antitrust laws in a useful arrangement that both introduces complex subject matter and sets the stage for a series of reforms proposed to promote innovation. Professor Michael A. Carrier’s book, *Innovation for the 21st Century: Harnessing the Power of Intellectual Property and Antitrust Law*, accomplishes this task skillfully and provides a valuable primer on antitrust, IP, and innovation.¹ He synthesizes the legal and economic foundations, contours, and controversies in these areas in an accessible fashion. He should be applauded for accomplishing this because, frankly, it is tough to do given that the fields are quite technical and specialized. The book really is enjoyable and appropriate for a general audience. That said, there is merit to the contentions of some of my co-commentators that at times, Carrier oversimplifies some of the very heated debates he summarizes. Given the breadth and complexity of issues, it is hard to imagine how he would not do so. Still, readers should recognize that the debates Carrier wades into are incredibly contentious and considerably nuanced. Nonetheless, the primer is excellent, and the rest of the book is quite provocative. Ambitiously, Carrier makes ten specific proposals to improve

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1. See MICHAEL A. CARRIER, *INNOVATION FOR THE 21ST CENTURY: HARNESSING THE POWER OF INTELLECTUAL PROPERTY AND ANTITRUST LAW* 19–87 (2009).

the copyright, patent, and antitrust laws.² This Review focuses on his discussion of dual-use technologies and the *Sony* rule.³ Part I outlines Carrier's position on secondary liability. Part II reflects briefly on Carrier's discussion of innovation, error cost, and litigation asymmetries.

I. SECONDARY LIABILITY

In the chapter introducing proposals for copyright law,⁴ Carrier investigates a very important and timely issue: *what should be the secondary liability regime for dual-use technologies, such as peer-to-peer file sharing?*⁵

To frame the investigation, Carrier provides a useful discussion of dual-use technologies.⁶ As the name suggests, dual-use technologies are technologies capable of being used in two (or more) different ways. The term is often used to refer to nuclear technologies capable of being used for both civilian (energy) and military (weapons) uses. In the context of copyright law, dual-use technologies typically involve technologies capable of being used in ways that constitute copyright infringement ("infringing uses") and in ways that do not constitute copyright infringement ("noninfringing uses"). He discusses various examples of such technologies—the telephone, camera, radio, photocopier, VCR, computer, Internet, and peer-to-peer file-sharing software—and explains that dual-use technologies are often a form of disruptive innovation that, on one hand, creates new markets, opportunities, and even more innovation and, on the other hand, creates new risks to copyright owners' rights to control reproduction and distribution of their works.⁷

Copyright law has struggled with technological change in general and dual-use technologies in particular throughout its history.⁸ Carrier explains how secondary liability theories of contributory liability⁹ and vicarious liability¹⁰ can be employed by copyright owners to hold dual-use technolo-

2. See *id.* at 1–10.

3. See *Sony Corp. of Am. v. Universal City Studios, Inc.*, 464 U.S. 417, 442 (1984).

4. See CARRIER, *supra* note 1, at 105–46.

5. See *id.* at 109–11.

6. See *id.* at 106–09.

7. See *id.* at 106–08.

8. See *id.* at 105–09. See also JULIE E. COHEN ET AL., COPYRIGHT IN A GLOBAL INFORMATION ECONOMY 473 (2d ed. 2006).

9. A defendant may be found contributorily liable for copyright infringement when it knowingly contributes to an infringement. See *Fonovisa, Inc. v. Cherry Auction, Inc.*, 76 F.3d 259, 264 (9th Cir. 1996). See also *Sony*, 464 U.S. at 440–42; *A&M Records, Inc. v. Napster, Inc.*, 239 F.3d 1004, 1019 (9th Cir. 2001).

10. A defendant may be found vicariously liable for copyright infringement when it has control over the infringer and benefits from the infringement. See *Fonovisa*, 76 F.3d 259, 261–62 (9th Cir. 1996).

gy vendors accountable for copyright infringement of technology users.¹¹ The difficult question is how far copyright law should reach into technology markets. Keep in mind that the technology market ordinarily is not the focus of copyright law; it is distinct and, as a general matter, ought to remain distinct. The secondary liability regime is exceptional.

As Carrier explains in detail, in *Sony Corporation of America v. Universal City Studios, Inc.*¹² (“*Sony*”), the U.S. Supreme Court was concerned about policing this boundary between copyright law and dual-use technologies. The Court erected a doctrinal shield to protect technology companies from contributory liability claims where their technologies are “widely used for legitimate, unobjectionable purposes, . . . [or even if] capable of substantial noninfringing uses.”¹³ For two decades, the *Sony* rule remained intact, but it came under intense scrutiny with the emergence of peer-to-peer file sharing technologies.¹⁴ In recent years, courts and scholars have struggled with the secondary liability regime in general and the *Sony* rule in particular.¹⁵ To set the stage for his proposal to resolve this struggle, Carrier provides an informative discussion of peer-to-peer file sharing technologies, peer-to-peer litigation, and different interpretations of and challenges to the *Sony* rule.¹⁶

Carrier’s proposal is essentially to preserve the *Sony* shield in its broad form.¹⁷ He prefers the more technology-protective version—where the defendant is off the hook if the technology is merely “capable of substantial noninfringing uses”¹⁸—to the less protective version—where the defendant is off the hook if the technology is “widely used for legitimate, unobjectionable purposes.”¹⁹ The more protective version turns on the functional capability of the technology in question, which is ascertainable relatively early in a technology’s development, and is not contingent on the behavior of users (or anyone else). The less protective version turns on the prevalence of actual noninfringing uses, which is contingent on the

11. See CARRIER, *supra* note 1, at 108–09.

12. 464 U.S. 417.

13. *Id.* at 442.

14. See Brief of Amici Curiae Sixty Intellectual Property and Technology Law Professors and the United States Public Policy Committee of the Association for Computing Machinery in Support of Respondents, *Metro-Goldwyn-Mayer Studios Inc. v. Grokster, Ltd.*, 545 U.S. 913 (2005) (No. 04-480), 2005 WL 508123; Pamela Samuelson, *Three Reactions to MGM v. Grokster*, 13 MICH. TELECOMM. & TECH. L. REV. 177 (2006). *But see* Brief for Professor Peter S. Menell et al. as Amici Curiae Supporting Petitioners, *Grokster*, 545 U.S. 913 (No. 04-480), 2005 WL 176675; Peter S. Menell & David Nimmer, *Legal Realism in Action: Indirect Copyright Liability’s Continuing Tort Framework and Sony’s De Facto Demise*, 55 UCLA L. REV. 143 (2007).

15. See generally *id.*; see also *Metro-Goldwyn-Mayer Studios Inc. v. Grokster, Ltd.*, 545 U.S. 913 (2005); *Ricoh Co., Ltd. v. Quanta Computer, Inc.*, 550 F.3d 1325 (Fed. Cir. 2008); *Cartoon Network LP, LLLP v. CSC Holdings, Inc.*, 536 F.3d 121 (2d Cir. 2008).

16. See CARRIER, *supra* note 1, at 106–19.

17. See *id.* at 108–11, 144–45. See also *Sony*, 464 U.S. at 442.

18. See *Sony*, 464 U.S. at 442.

19. See *id.*

behavior of users, and thus is hard to predict and, at times, to control. Commentators have offered a slew of intermediate alternatives.²⁰ Carrier offers a few reasons for favoring the more protective version of the *Sony* rule—the most important of them being that the broad bright-line rule is easier to apply by courts and practitioners than other rules that take into account the primacy of certain uses, subjective intent of technology providers, potential technological design options, and whether a technology provider employed adequate technological precautions to limit infringement.²¹ Generally, I agree with Carrier's approach and, in fact, have written a short essay on the subject that makes a similar recommendation.²²

There is, however, a concern that Carrier's analysis did not fully engage arguments made by Douglas Lichtman and others addressing the potential benefits of crafting a rule that forces technology providers to implement cheap, easy technological fixes to deter or disable infringement, or perhaps better enable copyright owners to detect infringers.²³ A number of different amicus briefs filed in the Supreme Court *Grokster* proceeding provide versions of such arguments.²⁴ Carrier touches on the arguments lightly in his discussion²⁵ of Judge Posner's decision in *Aimster*,²⁶ but it would have been beneficial to explore the matter in greater detail. The argument for a more nuanced rule that places some responsibility on technology providers²⁷ is especially stronger in the context of dual-use technologies that enable both widespread copying *and* distribution—peer-to-

20. See Brief for Professor Peter S. Menell et al. as Amici Curiae Supporting Petitioners, *supra* note 14, at 3, 25–26; Brief of Amicus Curiae Eagle Forum Education & Legal Defense Fund in Support of Respondents, *Metro-Goldwyn-Mayer Studios Inc. v. Grokster, Ltd.*, 545 U.S. 913 (2005) (No. 04-480), 2005 WL 483365; Peter S. Menell, *Can Our Current Conception of Copyright Law Survive the Internet Age?*, 46 N.Y.L. SCH. L. REV. 63, 191–99 (2002–2003); Neil Weinstock Netanel, *Impose a Noncommercial Use Levy to Allow Free Peer-to-Peer File Sharing*, 17 HARV. J.L. & TECH. 1 (2003).

21. See CARRIER, *supra* note 1, at 133–35.

22. See Brett M. Frischmann, *Peer-to-Peer Technology as Infrastructure: An Economic Argument for Retaining Sony's Safe Harbor for Technologies Capable of Substantial Noninfringing Uses*, JOURNAL OF THE COPYRIGHT SOC'Y OF THE U.S.A., 2005, at 329, available at <http://ssrn.com/abstract=726413>.

23. See Brief of Amici Curiae Kenneth J. Arrow et al. in Support of Petitioners, *Grokster*, 545 U.S. 913 (No. 04-480), 2005 WL 176441; see also William M. Landes & Douglas Gary Lichtman, *Indirect Liability for Copyright Infringement: An Economic Perspective*, 16 HARV. J.L. & TECH. 395 (2003), available at <http://ssrn.com/abstract=379201>; Douglas Gary Lichtman & Eric A. Posner, *Holding Internet Service Providers Accountable*, (Univ. of Chicago Law & Econ., Olin Working Paper No. 217, 2004), available at <http://ssrn.com/abstract=573502>.

24. See Brief of the American Federation of Musicians of the United States and Canada, American Federation of Television and Radio Artists, Directors Guild of America, Screen Actors Guild, Inc., and Writers Guild of America, West as Amici Curiae in Support of Petitioners, *Grokster*, 545 U.S. 913 (No. 04-480), 2005 WL 189888; Brief of Amici Curiae Law Professors, Economics Professors, and Treatise Authors for the Ninth Circuit, *Grokster*, 545 U.S. 913 (No. 04-480), 2005 WL 176448; Brief for Professor Peter S. Menell et al. as Amici Curiae Supporting Petitioners, *supra* note 14, at 3, 25–26.

25. See CARRIER, *supra* note 1, at 136–39.

26. See *In re Aimster Copyright Litig.*, 334 F.3d 643 (7th Cir. 2003).

27. See CARRIER, *supra* note 1, at 135–39.

peer file sharing technologies—than it is for dual-use technologies that only enable copying—video cassette recorders or a photocopier. Essentially, the threat to copyright owners is arguably much greater, and technological precautions implemented by technology providers may (or may not) be relatively cheap.

In the end, Carrier recommends a return to *Sony*,²⁸ at least for peer-to-peer file sharing technologies.²⁹ One might say it is too late to return to *Sony*,³⁰ given *Napster*,³¹ *Aimster*,³² and especially *Grokster*.³³ Since the Supreme Court justices split on *Sony* in *Grokster*, there is still some purchase in saying that *Sony*³⁴ is alive and well, perhaps even in its broad form, and that it ought to be preserved.

II. THREE ASYMMETRIES

Carrier provides an enjoyable and informative discussion of three asymmetries—innovation asymmetry, error-costs asymmetry, and litigation asymmetry.³⁵ He claims that innovation asymmetry occurs in dual-use cases because courts tend to “systematically overemphasize the infringing uses and underappreciate the noninfringing uses.”³⁶ The reasons for this asymmetry are that the effects of the former are more readily observed and quantified, while the effects of the latter are “less tangible, less obvious at the onset of a technology, and not advanced by an army of motivated advocates;”³⁷ as a result, the noninfringing uses are more difficult to quantify and value. As Carrier puts it, “How do we put a dollar figure on the benefits of enhanced communication and interaction?”³⁸ Moreover, the noninfringing uses tend to develop over time in ways that are difficult to predict upfront.³⁹

Carrier’s observations about the innovation asymmetry are right on point, and he is correct to emphasize how this asymmetry leads to a systematic bias in how courts and commentators evaluate technologies and develop the rules to regulate technologies.⁴⁰ This is one of those points that most people acknowledge but then fail to appreciate fully. Carrier does a worthy job of bringing it to the forefront of his analysis to support his

28. See *Sony Corp. of America v. Universal City Studios, Inc.*, 464 U.S. 417, 442 (1984).

29. See CARRIER, *supra* note 1, at 144–45.

30. See *Sony*, 464 U.S. at 442.

31. See *A&M Records, Inc. v. Napster, Inc.*, 239 F.3d 1004 (9th Cir. 2001).

32. See *In re Aimster Copyright Litig.*, 334 F.3d 643 (7th Cir. 2003).

33. See *Metro-Goldwyn-Mayer Studios Inc. v. Grokster, Ltd.*, 545 U.S. 913 (2005).

34. See *Sony*, 464 U.S. at 442.

35. See CARRIER, *supra* note 1, at 128–33.

36. *Id.* at 128.

37. *Id.* at 129.

38. *Id.*

39. See *id.*

40. See *id.* at 128–30.

proposal. Of course, the asymmetry he highlights is not unique to the creativity–innovation dichotomy at the intersection of copyright and technology; it also exists, for example, when courts analyze different uses of a work protected by copyright. The quantification and valuation problems at the heart of the innovation asymmetry are more general than dual-use technologies. The innovation asymmetry Carrier highlights⁴¹ should be argued in other contexts, as it is pervasive. In fact, it has been argued elsewhere that this type of asymmetry provides a relatively strong argument in favor of the broad version of the *Sony*⁴² rule for some types of general purpose, multiuse technologies.⁴³

The discussion of the error-costs asymmetry in the book is very brief.⁴⁴ I have my doubts about the utility of the error cost framework because it does not seem to account very well for “accuracy benefits,” but I stress that my thoughts on this are rather tentative.⁴⁵ Putting my doubts aside, I nonetheless found Carrier’s claims to be a bit strong. Specifically, he may be too quick to say that in the case of a type II error, which occurs if a court mistakenly rules in favor of a technology provider, “Congress can always step in to compensate copyright holders.”⁴⁶ I have my doubts that such compensation is readily available—there are many obstacles. Similarly, he may be too quick to say that in the case of a type I error, which occurs if a court mistakenly holds a technology provider liable, a technology will be abandoned and “consumers will never know what they are missing.”⁴⁷ Again, I have my doubts about how often this is the case. Frankly, the data is hard to come by.

Finally, Carrier’s discussion of litigation asymmetry is also important.⁴⁸ He notes how the high litigation costs alone can stifle technological innovation and create substantial holdup problems.⁴⁹ He gives a number of high-profile examples to make his point.⁵⁰ Carrier claims that the litigation asymmetry, along with the other asymmetries, “exert[s] a strong, though often hidden, pull in the evaluation of infringing and noninfringing uses.”⁵¹ This is one of those claims that is quite difficult to prove empirically, but nonetheless rings true.

41. *See id.*

42. *See Sony Corp. of America v. Universal City Studios, Inc.*, 464 U.S. 417, 442 (1984).

43. *See Frischmann, supra* note 22. *See also* Brett M. Frischmann, *An Economic Theory of Infrastructure and Commons Management*, 89 MINN. L. REV. 917 (2005).

44. *See* CARRIER, *supra* note 1, at 131.

45. I have expressed my tentative thoughts on this. *See* Posting of Brett Frischmann to Madisonian.net, <http://madisonian.net> (Jan. 16, 2008), available at <http://madisonian.net/2008/01/16/error-costs-vs-accuracy-benefits/>.

46. CARRIER, *supra* note 1, at 131.

47. *Id.*

48. *See id.* at 131–33.

49. *See id.* at 131–32.

50. *See id.* at 132–33.

51. *Id.* at 133.

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Professor Carrier has written a superb, provocative book. The book covers an incredible amount of complex subject matter in an incredibly accessible and reasonably balanced manner, and it provides a detailed discussion and defense of ten specific proposals for legal reform. This Review comments briefly on one of those proposals. Specifically, the Review discusses Carrier's proposal to preserve the broad, technology-protective version of the *Sony* rule for dual-use technologies, such as peer-to-peer software. It also comments briefly on Carrier's discussion of innovation, error-cost, and litigation asymmetries.