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Patent and Antitrust *Differing Shades of Meaning*

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ABSTRACT

The relationship between patent law and antitrust law has challenged legal minds since the emergence of antitrust law in the late nineteenth century. In reductionist form, the two concepts pose a natural contradiction: One encourages monopoly, while the other restricts it. To avoid uncomfortable dissonance, the trend across time has been to try to harmonize patent and antitrust law. In particular, harmonization efforts in recent decades have led Congress and the courts to engage in a series of attempts, some aborted and some half-formed, to graft antitrust doctrines onto patent law. These efforts have failed to resolve the conflicts. This piece argues that the deviations between patent law and antitrust law run far deeper than courts and commentators recognize. The problem is not just that one encourages monopoly while the other limits it. Rather, patent law and antitrust law often use the same concepts and terminology with differing meanings and contexts. In other words, it may appear that they are talking about the same things, and yet, they are not. Our tendency to assume parallel meanings threatens any attempt to reconcile the two bodies of law. Most important, ignoring asymmetries can lead to both underprotection and overprotection of patent rights, as well as the improper application of antitrust laws. To highlight the problem, this article explores a number of examples of differing meanings in hopes of promoting a subtler understanding of the patent-antitrust terrain.

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I. INTRODUCTION

¶1 The relationship between patent law and antitrust law has challenged legal minds since the emergence of antitrust law in the late nineteenth century. In reductionist form, the two concepts pose a natural contradiction: One encourages monopoly, while the other restricts it. The inherent tension can be framed in the following manner: Can a body of case law that grants monopoly opportunities be reconciled with a body of case law that curtails monopolization?¹

¶2 To avoid uncomfortable dissonance, the trend across time has been to try to harmonize patent and antitrust law. Since the 1930s, for example, the Supreme Court has ruled that antitrust law operates only when patent holders reach beyond the boundaries inherent in the patent grant.² It is an inspired attempt at reconciling the two bodies of case law. Unfortunately, no one has been able to determine what boundaries are inherent in the patent grant, a confusion that has spawned almost a century of consternation and conflict over what exercise of power lies within the patent grant and what lies outside.

¶3 In recent decades, harmonization efforts have led Congress and the courts to engage in a series of attempts, some aborted and some half-formed, to graft antitrust doctrines onto patent law.³ In addition, many scholars have advocated various

¹ See Robin C. Feldman, *The Insufficiency of Antitrust Analysis for Patent Misuse*, 55 HASTINGS L.J. 399, 403 (2003).

² See, e.g., *Carbice Corp. v. Am. Patents Dev. Corp.*, 283 U.S. 27, 34 n.4 (1931); see also *Morton Salt Co. v. G.S. Suppiger Co.*, 314 U.S. 488 (1942); *United Shoe Mach. Corp. v. United States*, 258 U.S. 451, 462 (1922); *Motion Picture Patents Co. v. Universal Film Mfg.*, 243 U.S. 502, 517 (1917).

³ Compare *Windsurfing Int'l Inc. v. AMF, Inc.*, 782 F.2d 995, 1001 (Fed. Cir. 1986) (holding that patent misuse requires both a finding that the patent holder tried to reach beyond the scope or length of the patent grant and that there is an anticompetitive effect), with *Senza-Gel Corp. v. Seiffhart*, 803 F.2d 661, 665 n.5 (Fed. Cir. 1986) (retreating from the *Windsurfing* holding that would require a finding of anticompetitive effect, on grounds that the Federal Circuit is bound by Supreme Court precedent unless otherwise instructed by Congress), and *Mallinckrodt, Inc. v. Medipart, Inc.*, 976 F.2d 700, 706, 708-09 (Fed. Cir. 1992) (citing *Windsurfing* in requiring a finding of anticompetitive effect for a holding of patent misuse, in apparent disregard of the *Senza-Gel* holding). See also *B. Braun Med., Inc. v. Abbott Labs.*, 124

harmonization approaches.⁴ These efforts, too, have failed to resolve the conflicts.

¶4 This piece argues that the deviations between patent law and antitrust law run far deeper than courts and commentators recognize. The problem is not just that one encourages monopoly while the other limits it. Rather, patent law and antitrust law often use the same concepts and terminology with differing meanings and contexts. In other words, it may appear that they are talking about the same things, and yet, they are not.

¶5 Our tendency to assume parallel meanings threatens any attempt to reconcile the two bodies of law. Most important, ignoring asymmetries can lead to both underprotection and overprotection of patent rights, as well as the improper application of antitrust laws. To highlight the problem, this article explores a number of examples of differing meanings in hopes of promoting a subtler understanding of the patent-antitrust terrain.

¶6 The relationship between patent and antitrust is particularly important at this moment in time. Patent law is experiencing a moment in the sun, both in the courts and in the public eye. In particular, after accepting relatively few patent cases over the past decade, the Supreme Court accepted a record number of patent cases both last term and this term, including ones that touch on the boundaries of the exercise of power permitted to patent holders.⁵ The Supreme Court also has accepted an unusually large number of antitrust cases. As both patent and antitrust law enjoy the spotlight, it is particularly

F.3d 1419, 1426 (Fed. Cir. 1997) (attempting to harmonize *Mallinckrodt* with prior Supreme Court precedent). For a full description of the Federal Circuit's transition from the notion that patent misuse is an attempt to expand the time and scope of a patent to its modern incarnation of the test, see Feldman, *supra* note 1, at 418-31. For other attempts to graft antitrust law onto patent law, see, for example, S. Rep. No. 100-83, at 67 (1987) (reporting on a bill passed by the Senate but not adopted, which would have prohibited a finding of patent misuse without a finding that the holder's actions violate the antitrust laws).

⁴ See Mark A. Lemley, *The Economic Irrationality of the Patent Misuse Doctrine*, 78 CAL. L. REV. 1599 (1990); Roger B. Andewelt, Chief Intellectual Property Section, Antitrust Division: Competition Policy and the Patent Misuse Doctrine, Remarks Before the Bar Association for the District of Columbia Patent, Trademark, and Copyright Section (Nov. 3, 1982), in 25 PAT. TRADEMARK & COPYRIGHT J. (BNA) 41 (1982). See also Note, *Is the Patent Misuse Doctrine Obsolete?*, 110 HARV. L. REV. 1922, 1939 (1997) (arguing that although the substantive test for misuse should be subsumed under an antitrust analysis, the relaxed standing requirements of misuse should be maintained). *But see* Louis Kaplow, *The Patent-Antitrust Intersection: A Reappraisal*, 97 HARV. L. REV. 1813, 1818-29 (1984) (arguing that neither patent nor antitrust law should reign supreme and suggesting that courts should determine whether a patentee's practice is acceptable by calculating a ratio comparing (1) the patentee's marginal reward over the optimal patent reward to (2) society's marginal monopoly loss in the case of that practice); Prepared Statement of Louis Kaplow, Hearings on H.R. 557, Apr. 30, 1987; Robert P. Merges, *Reflections on Current Legislation Affecting Patent Misuse*, 70 J. PAT. & TRADEMARK OFF. SOC'Y 793 (1988).

⁵ See, e.g., *Ill. Tool Works Inc. v. Indep. Ink, Inc.*, 547 U.S. 28, 31 (2006) (finding no presumption of market power for patent holders in antitrust actions). Other patent cases granted include *Microsoft Corp. v. AT&T Corp.*, 127 S. Ct. 1746 (2007) (limiting extraterritorial reach of patent protection); *KSR Int'l Co. v. Teleflex Inc.*, 127 S. Ct. 1727 (2007) (strengthening the nonobviousness standard for obtaining a patent); *MedImmune, Inc. v. Genentech, Inc.* 127 S. Ct. 764 (2007) (granting standing to licensees to challenge validity of patents); *eBay, Inc. v. MercExchange, L.L.C.*, 547 U.S. 388 (2006) (rejecting rule that patent infringement should always be enjoined); *Lab. Corp. of Am. Holdings v. Metabolite Labs, Inc.*, 548 U.S. 124 (2006) (considering whether a medical correlation is patentable) (dismissed as improvidently granted with dissenting opinion); *Merck KGaA v. Integra LifeSciences I, Ltd.*, 545 U.S. 193 (2005) (concerning scope of research exemption to patent infringement for research related to government submissions).

important to develop a more nuanced understanding of the shades of meaning in patent law and how those differ from antitrust.

II. THE HISTORY OF THE RELATIONSHIP

¶7 Tension between patent and antitrust law erupted almost from the inception of antitrust law in the late nineteenth and early twentieth centuries.⁶ This tension was not surprising. It was inevitable that courts would have to navigate the boundary between the two areas, given that patent law encourages monopoly and antitrust law opposes monopolization.

¶8 Note, I did not say that antitrust law opposes monopoly, but only monopolization. It is true that some early antitrust strains manifested an inclination to go after anything considered too big. Modern antitrust law, however, has no problem with a monopoly earned the good old-fashioned way.⁷ The problem is not being bigger or stronger than everyone else if that strength is gained through legitimate competition. Rather, antitrust law focuses its wrath on companies that try to gain or maintain monopoly power by inappropriately suppressing competition.⁸ It is this behavior that one can think of as monopolization, and it is this behavior that antitrust law abhors.

¶9 Nor did I say that patent law necessarily grants monopolies. As will be discussed below, patent law grants only a negative right—the right to exclude. That right brings the possibility of obtaining a monopoly in a given market, but a patent is certainly no guarantee of a monopoly, and the vast majority of patents result in no such thing. What patent law does grant is the opportunity to develop a monopoly by excluding others. Thus, patent law grants the right to exclude competition, while antitrust law targets some who do.

¶10 Clashes between the two bodies of law arose almost from the inception of antitrust law in the late nineteenth century.⁹ Early cases tried to separate the two domains, concluding that patents and agreements related to patents were simply beyond the reach of antitrust laws.¹⁰ This approach posed both practical and theoretical

⁶ For a more extensive discussion of the history of the intersection between patent and antitrust law, see Feldman, *supra* note 1, at 402-31.

⁷ See, e.g., *United States v. Am. Can Co.*, 256 U.S. 706 (1921); *United States v. U.S. Steel Corp.*, 251 U.S. 417 (1920).

⁸ See, e.g., *Standard Oil Co. v. United States*, 221 U.S. 1 (1911); *United States v. Am. Tobacco Co.*, 221 U.S. 106 (1911); *United States v. Aluminum Co. of Am.*, 148 F.2d 416 (2d Cir. 1945).

⁹ See, e.g., *Henry v. A.B. Dick Co.*, 224 U.S. 1 (1912) (tying); *Bement v. Nat'l Harrow Co.*, 186 U.S. 70 (1902) (price-fixing); *Heaton-Peninsular Button-Fastener Co. v. Eureka Specialty Co.*, 77 F. 288 (6th Cir. 1896) (tying).

¹⁰ The logic flowed from the patent holder's power to refuse to license. If a patent holder can find that no terms are acceptable, surely a patent holder should be able to choose any term desired. Under this theory, the greater right to refuse to license must necessarily encompass the lesser right to insist on any specific terms. See, e.g., *Henry*, 224 U.S. at 19, 23; see also *Carbice Corp. v. Am. Patents Dev. Corp.*, 283 U.S. 27 (1931); *United States v. Gen. Elec. Co.*, 272 U.S. 476 (1926). *But cf.* *United States v. Line Material Co.*, 333 U.S. 287, 317, 319 (1948) (Douglas, J., concurring); *Mercoid Corp. v. Mid-Continent Inv. Co.*, 320 U.S. 661, 666 (1947).

problems. It cannot be that a patent holder can choose *any* terms. For example, the law would not look kindly upon a patent holder who insists that anyone who wants to license the invention must agree to murder the inventor's mother-in-law. Courts had to find some limits to the power of a patent, not just because of uncomfortable hypotheticals but also because patents were turning into a handy way to avoid the antitrust laws. As one German witness commented during Senate hearings, there was no reason to view American antitrust law as an impediment, because one could simply do the same things through patent licensing.¹¹

¶ 11 In the 1930s and 1940s, the Supreme Court rejected the isolation of patents from antitrust law. In an inspired attempt to reconcile the two bodies of law, the Court reasoned that antitrust law is free to operate when patent holders reach beyond the boundaries inherent in the patent grant.¹² Thus, antitrust law could be applied to behavior by patent holders, but only when those patent holders tried to exceed the power of the patent grant. The solution would have been quite satisfying if patent theory had a robust concept of the boundaries inherent in the patent grant. It did not, however, and the concept would elude courts and scholars in the century to follow.

¶ 12 The operative question is simply how should one delineate the boundaries of acceptable behavior by patent holders? Does one find those boundaries by applying patent law, antitrust law, or both?

¶ 13 In particular, patent misuse, the doctrine in which patent law punishes inappropriate behavior by patent holders, has been the focal point of much of the debate.¹³ Must behavior violate the antitrust laws to constitute patent misuse?¹⁴

¶ 14 The trend since the late 1980s has been to try to harmonize the two bodies of law by folding antitrust doctrines into patent law. This harmonization movement has advanced and retreated, but the rough trend is clearly toward subsuming patent under antitrust law.

¶ 15 In 1986, for example, the Federal Circuit rewrote patent misuse so that it would essentially follow antitrust law. In the *Windsurfing* case, the court held that patent misuse required not only a finding that the patent holder tried to reach beyond the time or scope

¹¹ See FRITZ MACHLUP, SUBCOMM. ON PATENTS, TRADEMARKS, AND COPYRIGHTS OF S. COMM. ON JUDICIARY, 85TH CONG., AN ECONOMIC REVIEW OF THE PATENT SYSTEM 15 n.56 (Comm. Print 1958) (citing *Hearing on S. 2303 and S. 2491 Before the S. Comm. on Patents*, 77th Cong., pt. 3, 1318 (1942)).

¹² See *Carbice Corp.*, 283 U.S. at 34 n.4 (noting that an attempt to use a patent to unreasonably restrain commerce is both beyond the scope of the patent and a direct violation of the antitrust laws); see also *Int'l Salt Co. v. United States*, 332 U.S. 392 (1947); *Mercoid Corp. v. Mid-Continent Inv. Co.*, 320 U.S. 661 (1944); *United States v. Masonite Corp.*, 316 U.S. 265 (1942); *Morton Salt Co. v. G.S. Suppiger Co.*, 314 U.S. 488 (1942).

¹³ See, e.g., *Windsurfing Int'l Inc. v. AMF, Inc.*, 782 F.2d 995, 1001 (Fed. Cir. 1986); *USM Corp. v. SPS Technologies, Inc.*, 694 F.2d 505, 510 (7th Cir. 1982); Andewelt, *supra* note 4; Lemley, *supra* note 4; see also Note, *supra* note 4, at 1938-39 (arguing that although the substantive test for misuse should be subsumed under an antitrust analysis, the relaxed standing requirements of misuse should be maintained). But see Kaplow, *supra* note 4.

¹⁴ See Feldman, *supra* note 1, at 431-38, for a discussion of this question.

of the patent grant but also a finding of anticompetitive effect.¹⁵ Nine months later, the court retreated, noting that such a change would require Supreme Court or congressional action.¹⁶ Answering the call two years later, the Senate passed a bill that would have prohibited finding patent misuse unless the patent holder's actions would violate the antitrust laws.¹⁷ The final language of the 1988 Patent Act, however, was much narrower. It affected only one type of patent misuse claim and only one element of that claim. Specifically, the final Act declared that a patent holder could not be guilty of patent misuse based on a claim of tying¹⁸ unless the patent holder had market power.¹⁹

¶16 Other language proposed for the 1988 Patent Act would have found that there is no presumption of market power in antitrust cases concerning patents.²⁰ Such a provision would have put patent holders on the same footing as other commercial actors facing antitrust scrutiny. The language, however, was not adopted, and Congress has failed to adopt similar language introduced at other times.

¶17 In the years since the 1988 Patent Act, the courts have taken up the mantle that Congress failed to adopt. Ignoring its earlier retreat after *Windsurfing*, the Federal Circuit returned to the *Windsurfing* language in a 1992 case, *Mallinckrodt v. Medipart*.²¹ Citing *Windsurfing*, but not retreating from *Windsurfing*, the Federal Circuit in *Mallinckrodt* found that patent misuse requires not only a finding that the patent holder

¹⁵ 782 F.2d at 1001.

¹⁶ See *Senza-Gel Corp. v. Seiffhart*, 803 F.2d 661, 665 n.5 (Fed. Cir. 1986); see also Robert J. Hoerner, *The Decline (and Fall?) of the Patent Misuse Doctrine in the Federal Circuit*, 69 ANTITRUST L.J. 669, 673-74 (2002); William J. Gilbreth & William H. Steinmetz, *The Patent Misuse Defense—Its Expansion and Contraction*, J. PROPRIETARY RTS. 7, 13 (1992).

¹⁷ Jere M. Webb & Lawrence A. Locke, *Intellectual Property Misuse: Developments in the Misuse Doctrine*, 4 HARV. J.L. & TECH. 257, 264 (citing Intellectual Property Antitrust Protection Act of 1988, S. 438, 100th Cong. § 201 (1988)); S. REP. NO. 100-83, at 67 (reporting on a bill embodying the approach passed by the Senate but not adopted).

¹⁸ Tying occurs when a firm agrees to sell a product only on the condition that the buyer either purchase a different product as well or agree not to purchase the second product from another supplier. Robin C. Feldman, *Defensive Leveraging in Antitrust*, 87 GEO. L.J. 2079, 2081 (1999).

¹⁹ The relevant language prohibits a finding of misuse upon “condition[ing] the license of any rights to the patent or the sale of the patented product on the acquisition of a license to rights in another patent or purchase of a separate product, unless, in view of the circumstances, the patent owner has market power in the relevant market for the patent or patented product on which the license or sale is conditioned.” 35 U.S.C. § 271(d)(5) (2000). The final bill also prohibits finding misuse for a complete refusal to license or use rights. *Id.* § 271(d)(4) (“No patent owner otherwise entitled to relief for infringement or contributory infringement of a patent shall be denied relief or deemed guilty of misuse or illegal extension of the patent right by reason of his having . . . refused to license or use any rights to the patent.”). This issue relates to suppression of an invention, which is not the focus of the current article. For a discussion of the issue, see Kurt M. Saunders, *Patent Nonuse and the Role of Public Interest as a Deterrent to Technology Suppression*, 15 HARV. J.L. & TECH. 389 (2002); Seungwoo Son, *Selective Refusals to Sell Patented Goods: The Relationship Between Patent Rights and Antitrust Law*, 2002 U. ILL. J.L., TECH. & POL’Y 109 (2002).

²⁰ For a detailed description of the path of House and Senate versions and the final compromise language, see Kenneth J. Burchfiel, *Patent Misuse and Antitrust Reform: “Blessed be the Tie?”*, 4 HARV. J.L. & TECH. 1, 2 n.9 (1991). See also Bennett, *Patent Misuse: Must an Alleged Infringer Prove an Antitrust Violation?*, 17 AIPLA Q.J. 1 (1989); Webb & Locke, *supra* note 17.

²¹ 976 F.2d 700, 708-9 (1992).

tried to reach beyond the patent grant but also a finding of anticompetitive effect.²² Later cases have tried to harmonize *Mallinckrodt* with Supreme Court precedent, leaving the Federal Circuit doctrine somewhat confused.²³

¶ 18 Although the Supreme Court has not waded into the messy *Mallinckrodt* area of patent misuse, the Court has moved forward on another front. In the 2006 *Independent Ink* case, the Supreme Court held that there is no presumption of market power in an antitrust case concerning patents.²⁴

¶ 19 All of these developments, in Congress and the courts, are in the spirit of harmonizing patent and antitrust law, generally in the direction of subsuming patent law under antitrust law. From the perspective of providing clarity and certainty for those who are the targets of patent and antitrust suits, harmonization has much appeal. Nevertheless, true harmonization of patent and antitrust will require a far subtler understanding of the two areas than is often evidenced.

¶ 20 The problem is not only that different doctrinal requirements exist for each, or even that one encourages monopoly while the other limits it. A deeper problem is that patent and antitrust law use similar concepts and terminology with differing meanings and contexts. Thus, although harmonization seems tantalizingly close, the divide is far greater than it appears. Successful harmonization of the two areas will require a far more nuanced understanding of their differing shades of meaning.

III. THE CONCEPT OF EXCLUSIVITY

¶ 21 The most important conceptual divergence between patent and antitrust law concerns the notion of exclusivity. In antitrust law, the notion of exclusivity takes on its ordinary meaning of permitting one party to the exclusion of all others. For example, exclusive dealing agreements, which may come under scrutiny in antitrust laws, are agreements in which a party promises to deal only with one firm and not with that firm's competitors.²⁵ In other words, the antitrust notion of exclusion is based on an image of occupying a competitive sphere and policing that sphere to prevent the incursion of potential rivals. Of course, implicit in that image is the fact that the firm has the power to

²² *Id.* at 706.

²³ See, e.g., *C.R. Bard, Inc. v. M3 Sys., Inc.*, 157 F.3d 1340, 1372 (Fed. Cir. 1998) ("Patent misuse is viewed as a broader wrong than antitrust violation because of the economic power that may be derived from the patentee's right to exclude. Thus, misuse may arise when the conditions of antitrust violation are not met.") (opinion written by Judge Newman, who also wrote the *Mallinckrodt* opinion); *Va. Panel Corp. v. Mac Panel Co.*, 133 F.3d 860, 869 (Fed. Cir. 1997) (citing antitrust cases and holding that a rule of reason analysis is required unless a practice has been declared per se misuse or per se not misuse); *B. Braun Med., Inc. v. Abbott Labs.*, 124 F.3d 1419, 1426-27 (Fed. Cir. 1997) (instructing the lower court to use a rule-of-reason analysis to evaluate the restriction on remand). For a full description of the Federal Circuit's path to its modern case law, see Feldman, *supra* note 1, at 418-31.

²⁴ See *Ill. Tool Works, Inc. v. Indep. Ink, Inc.*, 547 U.S. 28, 45-46 (2006).

²⁵ See A. Douglas Melamed, *Exclusive Dealing Agreements and Other Exclusionary Conduct—Are There Unifying Principles?*, 73 ANTITRUST L.J. 375, 375 (2006).

exclude its rivals. We are less likely to worry about behavior that is destined to fail.²⁶ Thus, the antitrust image of exclusion is based on the notion that a firm with power in a competitive sphere keeps out those who would enter the sphere to compete.

¶ 22 One might imagine that this notion of exclusivity would translate quite well into patent law, and the language of many antitrust cases assumes that it does.²⁷ In particular, antitrust law describes patents as granting exclusive rights and analyzes patents as if those rights keep everyone out of the sphere defined by the patent.²⁸

¶ 23 A patent does indeed grant the right to exclude, but the notion of exclusion in patent law is quite different from that in antitrust. As a starting point, it is important to understand that a patent is a negative right, rather than a positive right. Contrary to the sloppy language that one sees all too frequently, a patent does not grant the right to make, use, and sell the invention.²⁹ A patent does not confer any affirmative rights at all. Rather, a patent gives the right to *exclude others* from making, using, and selling the invention, with the caveat that some of those others may have their own rights to exclude.³⁰

¶ 24 In particular, a patent grants the right to exclude others, but that does not give one an exclusive sphere—not even in the space defined in the patent itself. I am not talking about the notion that patent holders do not necessarily have a monopoly because there may be other substitutes for their inventions. I am talking about something far more fundamental.

¶ 25 There is a common misconception that a patent creates the right to keep all others out of the space defined in the patent grant. While that is frequently true, it is not always true. Even within the circle of what is specifically covered in the patent, there still may be others standing in the circle. This constraint reveals much about the limited nature of the patent grant.

¶ 26 For example, consider an inventor who creates a substance that can be used as an industrial cleaner. Having identified a use for the substance, the inventor can get a patent on that substance.³¹ The patent covers any use of the substance, not just the industrial

²⁶ See *Spectrum Sports, Inc. v. McQuillan*, 506 U.S. 447, 459 (1993) (holding that defendants cannot be liable “under § 2 of the Sherman Act absent proof of a dangerous probability that they would monopolize a particular market and specific intent to monopolize”); 15 U.S.C. § 2 (2000).

²⁷ See, e.g., *In re Indep. Serv. Orgs. Antitrust Litig. (CSU, L.L.C. v. Xerox Corp.)*, 203 F.3d 1322, 1325 (Fed. Cir. 2000) (cautioning that one should give “due consideration to the exclusivity that inheres in the patent grant”); *Abbott Labs. v. Brennan*, 952 F.2d 1346, 1354-55 (Fed. Cir. 1991) (noting that “due consideration should be given to the exclusivity that inheres in the patent grant”).

²⁸ *Id.*

²⁹ See, e.g., Brief for Respondent at 24, *Independent Ink*, 547 U.S. 28 (No. 04-1329) (arguing that “[p]atents confer such market power by granting exclusive rights over the manufacturing, sale, and use of patented inventions”).

³⁰ 35 U.S.C. § 154(a)(1) (2000).

³¹ 35 U.S.C. § 101 (2000) (“Whoever invents . . . any new and useful . . . composition of matter . . . may obtain a patent therefor, subject to the conditions and requirements of this title.”)

cleaning use identified in the patent application.³²

¶ 27 Suppose another inventor, Mary, discovers that the substance cures breast cancer. Mary can get a patent covering the use of the substance for the specific purpose of treating breast cancer.³³

¶ 28 At this point, the original inventor holds a patent that covers any use of the product. Mary holds a patent covering a particular use of the product. Each can exclude the other, and anyone who wants to use the product to treat breast cancer must negotiate with both patent holders. Moreover, neither patent holder can use the product to treat breast cancer without consent of the other.³⁴ In other words, the original inventor may be standing in a large circle of rights, but someone else can be standing in a part of that circle as well.

¶ 29 Improvement patents have the same effect. Suppose an original inventor holds a patent on a method of making gasoline, and Mary receives a patent on an improvement to the basic method. The most appealing commercial space would be the one occupied by the improved method. In other words, all things being equal, a buyer should prefer to purchase the improved method. Once again, both the original inventor and Mary hold rights in that space, and neither one can operate without the agreement of the other.

¶ 30 Company in that circle, of course, is not limited to two. Another inventor may patent an alternative improvement, creating a complex web of negotiations and competition among the parties.

¶ 31 This is not to suggest that open competition will exist in such configurations. Nevertheless, for all practical purposes, patent law's right to exclude still leaves patent holders negotiating with others who have overlapping rights to exclude. That is a far less powerful concept than the idea that one can claim complete control over the space covered by one's patent. Antitrust courts fail to notice this limitation, treating patents as if they were some all-powerful right to lock others out of the space granted in the patent.³⁵ Commentators themselves fall prey to the same confusion.³⁶

³² 35 U.S.C. § 154(a)(1) (2000) (“[T]he 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, offering 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.”). See Henry E. Smith, *Intellectual Property as Property: Delineating Entitlements in Information*, 162 YALE L.J. 1742, 1795-96 (2007); see also Robin C. Feldman, *Rethinking Rights in Biospace*, 79 S. CAL. L. REV. 1, 9-10 (2005).

³³ 35 U.S.C. § 101 (“or any new and useful improvement thereof”). See, e.g., *Allegheny Drop Forge Co. v. Portec, Inc.*, 541 F.2d 383, 386 (3d Cir. 1976) (“A new use for an old process or product is patentable if the new use or application is itself not ‘obvious’ to one skilled in the art.”).

³⁴ Cf. 5 DONALD S. CHISUM, CHISUM ON PATENTS §16.02[1][a] (Matthew Bender 2006) (1978) (“Two patents may be valid when the second is an improvement on the first, in which event, if the second includes the first, neither of the two patentees can lawfully use the invention of the other without the other’s consent.”) (quoting *Cantrell v. Wallick*, 117 U.S. 689, 695 (1886)).

³⁵ See cases cited *supra* note 27.

³⁶ See, e.g., Henry C. Su, *Intellectual Property Rights and Market Power*, 877 PATS., COPYRIGHTS, TRADEMARKS, & LITERARY PROP. COURSE HANDBOOK SERIES 135, 144 n.2 (2006) (noting that

¶32 The problem is more than a confusion of semantics. The misperception of the power of the patent grant leads courts to give too much deference to agreements related to patents. One can see language in recent decisions suggesting that markets related to patent rights should be treated more gently under antitrust laws because such markets are likely to be dominated anyway.³⁷ It is an eerie throwback to court language in the early 1900s, when patents were considered sacred and courts thought that antitrust laws could not apply to agreements related to patents.

¶33 The tendency toward overprotection of patents flows from general misconceptions about the power of the patent grant, both in terms of the fact that a patent is not necessarily exclusive and, as I will describe below, in terms of the economic power that comes with a patent grant.³⁸

IV. THE PATENT MONOPOLY

¶34 In antitrust terms, the notion of a monopoly is based on a firm that has sufficient power to raise prices and restrict output. Antitrust law measures such power by looking at a firm's share of a properly defined market. Early cases assumed that a patent confers a monopoly in the antitrust sense of the word. Courts spoke explicitly in terms of "the patent monopoly" and found the existence of a valid patent sufficient to establish market power in certain antitrust cases.³⁹

¶35 A patent, however, is no guarantee of power in a properly defined market.⁴⁰ There may be substitutes available for the patented product in a given market, or there may be sufficient cross-market elasticity.⁴¹ The holder of a patent on margarine, for

"[h]istorically, patents and copyrights have garnered the most attention from the standpoint of antitrust law because they literally comprise a bundle of exclusive rights").

³⁷ See *Schering-Plough Corp. v. FTC*, 402 F.3d 1056, 1075 (11th Cir. 2005) ("[W]e must recognize '[a] suitable accommodation between antitrust law's free competition requirement and the patent regime's incentive system.'"); *Broadcom v. Qualcomm, Inc.*, No. 05-3350, 2006 WL 2528545, at *8 (D.N.J. Aug. 31, 2006) ("Due consideration must be given to the 'exclusivity that inheres in the patent grant when determining whether a patentee has monopolized or attempted to monopolize a market.'").

³⁸ For an in-depth discussion of the economic power that comes with a patent grant, see Louis Kaplow, *The Patent-Antitrust Intersection: A Reappraisal*, 97 HARV. L. REV. 1813 (1984). See also articles cited *infra* note 42.

³⁹ See, e.g., *U.S. Steel Corp. v. Fortner Enters., Inc.*, 429 U.S. 610, 619 (1977); *Int'l Salt Co. v. United States*, 332 U.S. 392, 395 (1947); *United States v. Loew's Inc.*, 371 U.S. 38, 46 (1962); *Fortner Enters., Inc. v. U.S. Steel Corp.*, 394 U.S. 495, 505 n.2 (1969).

⁴⁰ *Ill. Tool Works Inc. v. Indep. Ink, Inc.*, 547 U.S. 28, 45 (2006).

⁴¹ To test for cross-market elasticity, the DOJ Guidelines provide for a simple test to determine the relevant product market in an antitrust action:

A market is defined as a product or group of products and a geographic area in which it is produced or sold such that a hypothetical profit-maximizing firm, not subject to price regulation, that was the only present and future producer or seller of those products in that area likely would impose at least a "small but significant and nontransitory" increase in price, assuming the terms of sale of all other products are held constant. A relevant market is a group of products and a geographic area that is no bigger than necessary to satisfy this test.

example, must still compete with those who sell butter.

¶36 The vast majority of patents create no monetary return for the patent holder.⁴² Even patents that become highly valuable may confer no market power, although some parties have tried to argue that value translates into power.⁴³ For example, the patent for the chemical compound in ibuprofen may have been extremely valuable, but the patent holder still faced competition from those who produced acetaminophen and aspirin products. Apple may hold extremely valuable patents in its operating system but it does not have power in the operating-system market given Microsoft's 90 percent market share.⁴⁴ The relevant question is not whether a patent has value but whether there are substitutes available.

¶37 Most important, a patent itself is no more than the grant of an opportunity. There is no guarantee that anyone will be interested in the invention or that the inventor will be successful in capturing that interest. Under ordinary circumstances, an incompetent monopolist will create opportunities for others to enter and compete, a process that can lead to erosion of the monopoly and more effective competition. With patents, however, we tolerate foolish and failed patent holders, at least for the term of the patent.

U.S. DEP'T OF JUSTICE & FED. TRADE COMM'N, HORIZONTAL MERGER GUIDELINES § 1.0 (1992), *reprinted* in 4 Trade. Reg. Rep. (CCH) ¶ 13,104 (1992).

If, in response to the price increase, the reduction in sales of the product would be large enough that a hypothetical monopolist would not find it profitable to impose such an increase in price, then the Agency will add to the product group the product that is the next-best substitute for the merging firm's product. . . . The price increase question is then asked for a hypothetical monopolist controlling the expanded product group. . . . This process will continue until a group of products is identified such that a hypothetical monopolist over that group of products would profitably impose at least a "small but significant and nontransitory" increase ["SSNIP"], including the price of a product of one of the merging firms.

Id. § 1.11.

⁴² See Gideon Parchomovsky & R. Polk Wagner, *Patent Portfolios*, 154 U. PA. L. REV. 1, 5, 5 n.3, 14-15 (2005). For an in-depth analysis of the value of patents, see John R. Allison et al., *Valuable Patents*, 92 GEO. L.J. 435 (2004); and John R. Allison & Thomas W. Sager, *Valuable Patents Redux: On the Enduring Merit of Using Patent Characteristics to Identify Valuable Patents*, 85 TEX. L. REV. 1769 (2007).

⁴³ Compare Brief for Respondent at 23, *Ill. Tool Works, Inc. v. Indep. Ink, Inc.*, 547 U.S. 28 (2006) (No. 04-1329) (arguing that valuable patents warrant an assumption of market power); with HERBERT HOVENKAMP, *ECONOMICS AND FEDERAL ANTITRUST LAW* § 8.3, at 219 (1985) ("Many patents confer absolutely no market power on their owners. . . . The economic case for 'presuming' sufficient market power . . . is very weak."); Nat'l Inst. on Indus. & Intellectual Prop., *The Value of Patents and Other Legally Protected Commercial Rights*, 53 ANTITRUST L.J. 535, 547 (1985) ("Statistical studies suggest that the vast majority of all patents confer very little monopoly power."); William Montgomery, *The Presumption of Economic Power for Patented and Copyrighted Products in Tying Arrangements*, 85 COLUM. L. REV. 1140, 1156 (1985) ("More often than not, however, a patent or copyright provides little, if any, market power."); *A.I. Root Co. v. Computer/Dynamics, Inc.*, 806 F.2d 673, 676 (6th Cir. 1986) (the court "reject[ed] any absolute presumption of market power for copyright or patented product"); and *USM Corp. v. SPS Techs. Inc.*, 694 F.2d 505, 511-12 (7th Cir. 1982) (noting that not all patents confer market power).

⁴⁴ See *United States v. Microsoft Corp.*, 253 F.3d 34, 52 (D.C. Cir. 2001) (quantifying Microsoft's share of the operating system market even accounting for portions controlled by Apple and Linux).

¶38 Even with brilliant inventions and competent inventors, there is no guarantee that the market will recognize the value of the invention or that the inventor will be able to capture that value during the patent term.⁴⁵ The true genius of an invention and its many applications may not be known until long after the patent has expired. Similarly, the market may not be able to calculate the value of an invention within the patent term. Research-tool patents are the perfect example of patents whose value cannot always be adequately measured and captured during the patent term.⁴⁶

¶39 Modern courts have finally begun to recognize that a patent does not grant market power in the antitrust sense of the phrase. In 2006, the Supreme Court held that a patent, by itself, is insufficient to create a presumption of market power for the purposes of a tying claim.⁴⁷ Prior to the case, some lower courts had begun to acknowledge that patents do not necessarily confer market power, although the conclusion was not applied uniformly and marked a sharp detour from earlier Supreme Court cases.⁴⁸

¶40 In particular, the Supreme Court in the 1962 *Loew's* case concluded the following: Given that one of the objectives of the patent laws is to reward uniqueness, the existence of a patent establishes enough distinctiveness for a finding of sufficient power to create anticompetitive consequences.⁴⁹ As described above, modern courts and commentators have come a long way since the 1960s in concluding that patents do not grant market power in the antitrust sense. There is still insufficient recognition, however, of why a patent does not confer that power and how the patent may be limited and indistinct, even in its own domain. The sphere that a patent holder can occupy is circumscribed by prior art, shared with those who have overlapping patent rights, frustrated by limitations of the market, and ultimately, truncated by the passage of time. These limitations are essential elements of the patent grant that keep its power in check. In the context of antitrust, a vision of the patent as all-powerful misinterprets the nature of the patent grant and leads courts to amplify those powers by staying the hand of antitrust law.

V. WHAT IS A PRODUCT?

¶41 The question of what a product is, in the context of a patent, provides tremendous challenges for the patent-antitrust interface. Antitrust law certainly has faced its own challenges in this arena.⁵⁰ Nevertheless, patents further complicate the question.

⁴⁵ See Feldman, *supra* note 1, at 437.

⁴⁶ *Id.* at 444-46 (arguing that while reach-through royalties for tool patents solve a market evaluation problem, they violate basic notions of time and scope limitation in patent law).

⁴⁷ *Independent Ink*, 547 U.S. at 45-46.

⁴⁸ See, e.g., *Indep. Ink, Inc. v. Illinois Tool Works, Inc.*, 396 F.3d 1342 (Fed. Cir. 2005).

⁴⁹ See *United States v. Loew's Inc.*, 371 U.S. 38, 46 (1962); see also *Fortner Enters., Inc. v. U.S. Steel Corp.*, 394 U.S. 495, 505 n.2 (1969); *Int'l Salt Co. v. United States*, 332 U.S. 392 (1947).

⁵⁰ See, e.g., *Eastman Kodak Co. v. Image Tech. Servs., Inc.*, 504 U.S. 451 (1992) (determining that camera repair services and the parts for camera repair were two different products); *Jefferson Parish Hosp. Dist. No. 2 v. Hyde*, 466 U.S. 2 (1984) (finding surgical care and anesthesiological services to be separate products); *Times-Picayune Publ'g Co. v. United States*, 345 U.S. 594 (1953) (establishing separate products issue as a distinct element of the test for illegal tying and holding that ads sold in the morning edition of a paper were separate products from ads sold in the evening edition); *Motion Picture Patents Co.*

¶42 The product notion touches on one of the most important and hotly debated areas of antitrust theory. For almost a century, antitrust scholars have argued about the competitive implications of behavior in which one firm tries to combine, in other words, to “tie,” two products together.⁵¹ Many ways of combining products may be perfectly innocent, not to mention quite desirable for consumers. Consumers, for example, are unlikely to be grateful for a rule requiring the sale of automobiles separate from their electrical wiring.

¶43 In an effort to keep antitrust law from trampling over perfectly acceptable combination activity, courts have developed the separate-products rule. The rule provides that tying cannot be a violation of antitrust law unless it involves two separate products.⁵²

¶44 The rule presupposes an understanding of what constitutes a product, an issue that has been reasonably straightforward in some antitrust cases and tremendously difficult in others.⁵³ Patents, however, do not fit well into traditional notions of a product and provide challenging twists on the product notion.

¶45 One might expect the notion of a product to translate reasonably smoothly into the patent domain. One could conceptualize “the product” as the patent itself, an item that can be sold or upon which licenses can be based.

¶46 Alternatively, one could conceptualize “the product” as the finished item embodying the invention. For example, if an inventor holds a patent on the chemical formula for a drug, the product could be the pill embodying the chemical formula. Neither concept, however, fully captures the dynamics of a patent. The variations are critical for the ways in which we apply antitrust law.

¶47 Conceptualizing the product as the patent would be incomplete. One cannot engage in a full analysis of a patent by looking at the patent as a single entity. In many circumstances, it is the interaction among patents that gives a patent its power and capacity, and the full implications of patents can be understood only when patents are considered in combination.

¶48 Consider defensive patenting, which is standard practice for many inventors. With defensive patenting, a patent holder tries to anticipate and patent all potential variations of the patented product. This is not behavior that exists within all types of products or even with all types of intellectual property. When an author writes a novel,

v. Universal Film Mfg. Co., 243 U.S. 502 (1917) (holding movie projectors and film to be separate products); *United States v. Microsoft Corp.*, 253 F.3d 34 (D.C. Cir. 2001) (cautioning against finding separate products where there is integration of advanced technology); *United States v. Aluminum Co. of Am.*, 148 F.2d 416 (2d Cir. 1945) (debating between definition of relevant product market as “virgin ingot” or all ingot, including aftermarket aluminum).

⁵¹ See *Independent Ink*, 547 U.S. 28; *Eastman Kodak*, 504 U.S. 451; *Jefferson Parish*, 466 U.S. 2; *N. Pac. Ry. Co. v. United States*, 356 U.S. 1 (1958); *Int’l Salt*, 332 U.S. 392; *Microsoft Corp.*, 253 F.3d 34; see also Robin Cooper Feldman, *Defensive Leveraging in Antitrust*, 87 GEO. L.J. 2079, 2079 (1999).

⁵² *Eastman Kodak*, 504 U.S. at 462.

⁵³ See cases cited *supra* note 50 and accompanying text.

for example, the author does not try to write every similar expression of the idea to control all alternatives, yet the behavior is quite common in the patent realm.

¶49 One could argue that defensive patenting is an understandable behavior. Defensive patenting may respond to flaws in the patent system that make it difficult to properly control the invention and its equivalents. On the other hand, one could argue that defensive patenting is essentially an attempt to monopolize a market that includes each of the patented alternatives. From that perspective, one could then argue about whether the behavior falls within the bounds of permissible patent behavior. Regardless of the conclusions of these questions, one cannot properly analyze any one of the patents in a defensive grouping without thinking about its relationship to the group.

¶50 Some patents can stand alone. Nevertheless, to do anything effective with most patents, they must be used in combination with other patents. In fact, the true value of a patent may emerge only as part of a portfolio.⁵⁴ For example, biotech firms may hold numerous patents on approaches to different problems. Following a behavior that I would call “selective suppression,” the firm may choose to hold many of those patents in reserve while working on only a few at a time.⁵⁵ That choice may be perfectly rational from a competitive standpoint, but the value of those patents and the appropriateness of the competitive behavior related to those patents can be understood only by looking at the portfolio as a whole.⁵⁶

¶51 Under antitrust law, we would not allow a firm to buy up all firms that sell potential substitutes. Such behavior would constitute an illegitimate means of obtaining a monopoly, thus violating Section 2 of the Sherman Act and its prohibition against monopolization. Would we, however, allow a firm to build a patent portfolio by buying up all of the potential substitutes? If we find “empire by portfolio” to be a troubling phenomenon, how do we draw the line between that and a firm that patents as many substitutes as possible? The point is simply that the notion of an individual product, implicit in much antitrust law, cannot capture the full implications of patents. Without understanding patents as interrelated, the law cannot contemplate what short-term competitive harm may be contemplated by patent law and what behavior falls outside of those bounds.

¶52 Similar issues arise with patent pools. A number of scholars have commented on both the procompetitive and the anticompetitive potential of patent pools.⁵⁷ In addition,

⁵⁴ Parchomovsky & Wagner, *supra* note 42, at 5.

⁵⁵ *Id.*

⁵⁶ *Id.*

⁵⁷ See, e.g., Richard J. Gilbert, *Antitrust for Patent Pools: A Century of Policy Evolution*, 2004 STAN. TECH. L. REV. 3 (2004) (noting three types of hazards to competition posed by patent pools: (i) patents in a pool, and the holders of those patents, could be foreclosed from competing with each other; (ii) vertical restrictions in the license terms can stifle competition among licensees; and (iii) the pools can stifle competition by providing a medium for cooperative patent defense and cartel-like agreements not to license the patents. However, the article also notes that joint-patent defense can be profit maximizing and that royalty-free cross-licensing can increase access to efficient technologies.); Roger B. Andewelt, *Analysis of Patent Pools under the Antitrust Laws*, 53 ANTITRUST L.J. 611 (1984) (discussing procompetitive effects from immunity from lawsuits, resolution of legal conflicts, access to more efficient technologies, and ease

the rapidly changing nature of technology leaves open the possibility that what may be a procompetitive benefit of a patent pool today can be an anticompetitive effect the next day. It is worth noting that understanding the multiplicity effects of patents requires thinking about patent combinations among firms, as well as within a single firm.

¶ 53 The issue of multiplicity has arisen in some areas of antitrust, but its appearance has been limited. Some antitrust scholars, for example, have described the potential for market actors, under certain limited circumstances, to use the power of multiple markets in anticompetitive ways.⁵⁸ With patents, however, the power of multiplicity is far more important, perhaps even intrinsic, to their operation in modern markets.

¶ 54 In short, patent portfolios and patent pools may be effective vehicles for overcoming market imperfections, or they may be effective vehicles for anticompetitive behavior and collusion among competitors. Nevertheless, patents frequently exist in such combinations, and they must be analyzed in the context of these combinations, not as analogous to individual products. To conceptualize a patent as an individual product would be missing much of the operation of patents in a modern marketplace.

¶ 55 Taking a completely different approach, one could try to conceptualize the product as the finished item that embodies the patented invention. In other words, if the patent covers a method for making a stronger version of plastic, the product would be the stronger plastic.

¶ 56 Analyzing the product as the finished item that embodies the patented invention, however, does not solve multiplicity problems. These problems just appear in different forms. For example, consider the case of a pharmaceutical company that was facing imminent generic entry as the patent on its most profitable drug expired. The company struggled mightily to get FDA approval for a chewable version of the drug.⁵⁹ Using

of licensing, and anticompetitive effects from facilitation of collusion, disincentive to invest in R&D, tying, naked restraints, overly restrictive licensing terms); Carl Shapiro, *Navigating the Patent Thicket: Cross Licenses, Patent Pools, and Standard-Setting*, in *INNOVATION POLICY & THE ECONOMY* 119 (Adam B. Jaffe et al., eds., 2001); Josh Lerner & Jean Tirole, *Efficient Patent Pools*, 94 *AM. ECON. REV.* 691, 691 (2004), available at <http://www.people.hbs.edu/jlerner/AER-PP-March4-04.pdf> (discussing the spectrum, from perfectly complementary patents, which produce mostly procompetitive effects when pooled, and perfectly substitute patents, which produce mostly anticompetitive effects when pooled, as well as the reality of patent pools, in which almost nothing is “perfect”); Philip B. Nelson, *Patent Pools: An Economic Assessment of Current Law and Policy*, 38 *RUTGERS L.J.* 539, 541-42 (2007) (noting procompetitive effects—increased access to technology, lower marginal royalty costs, and elimination of hold-ups—and anticompetitive potentials—facilitation of collusion and/or tying and foreclosure of competition by alternatives—of patent pools).

⁵⁸ See Herbert Hovenkamp, *Antitrust Policy after Chicago*, 84 *MICH. L. REV.* 213, 269 (1985) (describing how a monopolist can use a price squeeze against smaller vertical rivals with higher sunk costs to effectively transfer to itself the smaller firm’s return on the fixed-cost part of the investment); Janusz A. Ordover et al., *Non Price Anticompetitive Behavior by Dominant Firms Towards Producers of Complementary Products*, Discussion Paper in Economics no. 67, Woodrow Wilson School of Public and International Affairs 8-9, 10-11 (1984) (describing a complex strategy that a monopolist can use when rivals making inferior substitutes block full exploitation of the monopoly).

⁵⁹ See *FTC v. Warner-Chilcott Holdings Co. III, Ltd.*, Civ. A. No. 05-2179 (CKK), WL 158746 (D.D.C. Jan. 22, 2007).

various maneuvers related to approval for generics, the company could use the “new” product to block any generic entry of the old pill into the market. For the purposes of identifying anticompetitive behavior that might raise antitrust concerns in this example, one cannot look simply from the perspective of the finished product embodying the patent. From that perspective, there would be two separate patents—one on a chewable pill and one on a pill to be swallowed—and therefore two separate products. The company is not forcing anyone to buy both a chewable pill and a pill to be swallowed, and therefore, the company arguably is not leveraging sales from one market into another. Nevertheless, it is the relationship of the two products that allows the company to block entry beyond the expiration of the patent. One has to think beyond the notion of the finished item embodying a particular patent to properly analyze the behavior.⁶⁰

¶ 57 Similar maneuvering is alleged in a claim recently filed in the Southern District of New York. The case concerns a dispute that arose over generic entry into the market for the birth control medication Yasmin.⁶¹

¶ 58 Bayer holds the patent on Yasmin. Another company filed for approval of a generic version, asserting that Bayer’s patents were invalid or did not apply to the drug. Bayer filed suit alleging infringement of its product patent, related to the chemical formulation of the drug, but not on its process patent, related to using the drug for birth control. The parties entered into a settlement that gave the generic the right to produce a generic version in return for payments to Bayer.⁶²

¶ 59 Generic entry into a market significantly lowers the price of a medication. When a single generic manufacturer enters, the price tends to fall by 10 percent. When a second generic manufacturer enters, the price can fall by as much as 30 to 50 percent.⁶³ Thus, both parties to the settlement had an interest in keeping other generics out in order to keep the price roughly at the rate of a 10 percent discount.

¶ 60 Under the complex rules for approval of generics, the generic company here, as the first generic filer, gets a six-month exclusivity period in which no other generics are permitted to enter the market.⁶⁴ After that point, other generics may enter.

¶ 61 With this in mind, a second generic hopeful, Sandoz, filed for approval of its version of the drug. Bayer responded with a suit against Sandoz asserting infringement of its process patent relating to using the drug for birth control. As described above, this is a different patent from the one Bayer asserted in its suit against the first generic

⁶⁰ For a similar case involving attempts to prevent generic entry, see *Abbott Labs. v. Teva Pharm., Inc.*, 432 F. Supp. 2d 408, 421 (D. Del. 2006) (where Abbott was sued for repeatedly reformulating its drug, TriCor, in order to prevent generic entry, and additionally for bringing frivolous patent infringement lawsuits, thus enacting a mandatory thirty-month stay on generic entry under the Hatch-Waxman Act).

⁶¹ For a description of the pending case, see Answer, Affirmative Defenses, and Counterclaims, *Bayer Schering Pharma. Ag. v. Sandoz, Inc.*, No. 1:08 CV 3710 (S.D.N.Y.) (entered July 11, 2008).

⁶² See *id.* at 29-30.

⁶³ *Id.* at 23.

⁶⁴ See *id.* at 23.

company.⁶⁵

¶ 62 Under the rules structure, once the suit is filed, a thirty-month stay moves into place.⁶⁶ Sandoz cannot produce its drug during this period while the litigation progresses. As a result, Bayer and the first generic now get thirty months rather than six months before another generic can enter the market and lower the price, giving them five times as long as they would have been able to maintain the higher price. Bayer is able to create this favorable result by filing suit against the first generic filer based on only one of its patents, rather than both.

¶ 63 In this case, there is only one finished product, the Yasmin medication. Thus, there are no separate products upon which a leverage claim can be based. Nevertheless, it is the multiplicity effect of the patents on that single innovation that allows the patent holder to extend power in the marketplace. Once again, one has to think beyond the notion of the finished item embodying a particular patent to understand the implications of the behavior.

¶ 64 In addition to multiplicity problems, thinking of the product as the finished item embodying the invention poses its own set of problems in the context of the separate products doctrine. As described above, the separate-products doctrine tries to help distinguish between benign combination behavior and anticompetitive combinations. For example, selling shoes combined with shoelaces might be perfectly reasonable, while forcing consumers to buy all the shoes they need from you when they buy your heart medication might not.

¶ 65 This problem is not unique to patents. One could certainly try to craft two products into one without ever applying for a patent. Nor is the problem entirely new to antitrust.⁶⁷ Nevertheless, for the markets in which many patents operate, the boundaries of a product are remarkably malleable. With modern technologies, inventions can be combined or altered to adjust the number of so-called products. For example, one could sell a computer operating system as a package with a Web browser and a media player, integrating them into one product by intertwining their functions and the underlying programming code.⁶⁸ In fact, courts have granted deference to packaged products where high-technology products are integrated arguably for consumer ease, despite the fact that this might be tying.⁶⁹

¶ 66 Consider an example from the pharmaceutical industry. In 2005, a

⁶⁵ See *id.* at 24 (the “’652 patent is the only patent asserted against Sandoz), 25 (the ’652 patent relates only to methods of use), and 29-30 (comparing claims brought against first generic filer to claims brought against Sandoz).

⁶⁶ See *id.* at 30.

⁶⁷ See *Ill. Tool Works Inc. v. Indep. Ink, Inc.*, 547 U.S. 28 (2006); *Eastman Kodak Co. v. Image Tech. Servs., Inc.*, 504 U.S. 451 (1992); *Jefferson Parish Hosp. Dist. No. 2 v. Hyde*, 466 U.S. 2 (1984); *N. Pac. Ry. Co. v. United States*, 356 U.S. 1 (1958); *Int’l Salt Co. v. United States*, 332 U.S. 392 (1947); *United States v. Microsoft Corp.*, 253 F.3d 34 (D.C. Cir. 2001); see also Robin Cooper Feldman, *Defensive Leveraging in Antitrust*, 87 GEO. L.J. 2079, 2079 (1999).

⁶⁸ *Microsoft*, 253 F.3d at 67.

⁶⁹ *Id.* (cautioning against finding separate products where there is integration of advanced technology).

pharmaceutical house announced a plan to combine an existing drug, which was losing market share, with a new blockbuster drug. The two drugs would be sold only in a combined formulation.⁷⁰ After considerable public outcry, however, the company agreed to forgo its plans and sell the two drugs separately.

¶ 67 The example is troubling for the following reasons. Suppose the company sold the two drugs as separate pills but required that consumers who bought one pill also had to purchase the other. In that circumstance, the company could have faced charges of illegal tying under antitrust law. Reconfiguring the drug as a combined formula potentially creates only one product on the shelves, although it may have the same anticompetitive effect. Thus, particularly in light of the *Microsoft* court's deference to integration of technologically advanced products, such activity can act as an end-run method to avoid antitrust scrutiny. The notion of a product may become even more amorphous in the biotech world. Suppose inventions are bioengineered so that they can be used effectively only in combination with each other? Or suppose inventions are bioengineered so that they combine two of the company's inventions? In circumstances such as these, what is the product, and how many products do we have?

¶ 68 In short, the confluence of antitrust law's underdeveloped notion of separate products with the patent realm of invention may serve to magnify the problem of what a product is. In the patent field, where the goal is to invent and the practice is to invent around things, courts and agencies must grapple with efforts to invent around the antitrust laws. Separating these efforts from legitimate, competitive inventions will require development of a much more nuanced analysis of product definition than currently exists in antitrust law.

VI. MONOPOLIZATION

¶ 69 Modern antitrust law does not condemn a firm for gaining or maintaining monopoly power through skill, luck, or hard work.⁷¹ Rather, antitrust law defines certain types of behavior that are forbidden on the road to domination. This behavior is described as monopolization or attempted monopolization.⁷²

¶ 70 Modern courts and commentators differ on what measurements to use to define the forbidden conduct.⁷³ The varying tests, however, are all aimed at identifying

⁷⁰ See Alex Berenson, *Pfizer Plans to Sell Heart Drugs Only as Pair*, N.Y. TIMES, Mar. 7, 2005, at A1, available at http://www.nytimes.com/2005/03/07/business/07pfizer.html?_r=1&scp=2&sq=Pfizer+&st=nyt&oref=slogin.

⁷¹ *United States v. Grinnell Corp.*, 384 U.S. 563, 570-71 (1966). See 15 U.S.C. § 2 (2000); *Aspen Skiing Co. v. Aspen Highlands Skiing Corp.* 472 U.S. 585 (1985); Mark S. Popofsky, *Defining Exclusionary Conduct: Section 2, The Rule of Reason, and the Unifying Principle Underlying Antitrust Rules*, 73 ANTITRUST L.J. 435, 438 (2006) ("It is settled that Section 2, as applied to rival-impeding conduct, condemns only 'exclusionary' conduct and does not invalidate monopoly power acquired or maintained through superior skill, foresight, or industry.").

⁷² See *Id.*

⁷³ See, e.g., Popofsky, *supra*, note 71; A. Douglas Melamed, *Exclusive Dealing Agreements and Other Exclusionary Conduct—Are There Unifying Principles?*, 73 ANTITRUST L.J. 375, 376 (2006); Gregory J. Werden, *Identifying Exclusionary Conduct Under Section 2: The "No Economic Sense" Test*, 73

behavior that seeks to keep rivals from entering the competitive sphere and competing on the merits.⁷⁴

¶ 71 Antitrust law has a fairly robust notion of what it means to compete on the merits and what a competitive market looks like. One can argue about whether harm to that ideal should be measured in terms of harm to total surplus or some variation, or whether and how potential innovation could be added into the calculation.⁷⁵ One can also argue about the extent to which fully competitive markets actually exist. Nonetheless, antitrust law has a robust notion of the competitive ideal from which to begin debating what an intolerable deviation might look like.

¶ 72 Patent law lacks such a robust concept. In some circumstances, we can be reasonably confident that the behavior would push beyond the bounds of the patent, however those bounds are conceived. For example, using a patent on one product to force the purchase of another unpatented product would clearly exceed the bounds of the patent.⁷⁶ Nevertheless, it is difficult to measure deviation, even in the abstract, without an agreed-upon norm.

¶ 73 We do not have a clear conception of how broadly the footprint of a patent should reach or how much market damage is contemplated in the context of a patent grant, as optimally conceived. Unless we can fill this conceptual void, we cannot talk coherently about the limits of acceptable behavior by patent holders, irrespective of whether the doctrinal rules for the discussion flow from antitrust or patent law. Thus, even if we were to more fully harmonize patent and antitrust law by finding that patent-holder behavior is acceptable unless there are anticompetitive effects, our problems would not be solved. If we do not have a robust notion of what economic effects are anticipated with a patent, how can we know what effects reach beyond what is contemplated and into the realm of anticompetition? The concept itself has insufficient meaning in patent law and theory.

¶ 74 One other variation is important to acknowledge in any effort to compare the competitive harms contemplated in the patent grant to those tolerated in a monopoly setting. Within the concept of a monopolist in the antitrust setting, it is implicit that some consumers are enjoying the benefit of the product. When a monopoly exists, the price may be so high that not all consumers who would purchase the product do purchase the product. Nevertheless, it is assumed that a product exists.

¶ 75 In contrast, patent law does not implicitly assume that consumers will get anything. Rather, patent law traditionally has allowed patent holders to suppress their inventions, with the result that consumers will get nothing, at least for the term of the

ANTITRUST L.J. 413, 414 (2006); Steven C. Salop, *Exclusionary Conduct, Effect on Consumers, and the Flawed Profit-Sacrifice Standard*, 73 ANTITRUST L.J. 311, 313, 329-30 (2006).

⁷⁴ For examples of different types of exclusionary conduct prohibited by the antitrust laws, see Popofsky, *supra* note 71, at 438-39, nn.16-19.

⁷⁵ See Daniel A. Farber & Brett H. McDonnell, *Why (and How) Fairness Matters at the IP/Antitrust Interface*, 87 MINN. L. REV. 1817 (2003) (consumer and producer surplus, consumer welfare); Herbert Hovencamp, *Restraints on Innovation*, 29 CARDOZO L. REV. 247 (2007) (innovation).

⁷⁶ See, e.g., *Int'l Salt Co. v. United States*, 332 U.S. 392 (1947) (holding that the patent grant does not extend to requiring the purchase of nonpatented items).

patent. Thus, the notion that a patent holder is like a monopolist, a notion frequently bandied about, underestimates the amount of damage that we would allow from a patent holder.

¶ 76 One could argue that this discrepancy suggests we should give more leeway to patent holders under antitrust law in light of the greater short-term damage contemplated in the image of a patent than in the image of a monopolist. Thus, we might not allow a monopolist to stifle innovation toward a potential substitute, but we might allow a patent holder, who has patented a variety of approaches to a given problem, to pursue only one of those approaches and suppress the rest.

¶ 77 In contrast, one could argue that the suppression discrepancy suggests we should be strict about the behavior of patent holders given the enhanced short-term harm of patents. This might be particularly true for behavior that could extend or enhance the patent. One cannot properly evaluate patent behavior in an antitrust setting, however, without fully considering the implications of the suppression discrepancy.

¶ 78 This issue will become more important because the suppression doctrine is in flux. In 2006, the Supreme Court in *eBay Inc. v. MercExchange L.L.C.* rejected the general rule that a patent holder is automatically entitled to an injunction, instructing lower courts to apply the four-factor test traditionally used to determine equitable relief in other types of cases.⁷⁷ This development seems to have eroded the traditional notion of the patent holder's absolute power to suppress. At this point, it is unclear how broadly the exception to injunctions will be applied. Thus, identifying the harms permitted by the patent grant will be challenging not only because we lack a robust concept of the ideal but also because that ideal is changing.

VII. CONCLUSION

¶ 79 The intersection of patent and antitrust has frustrated courts and scholars since the inception of antitrust law more than a century ago. The trend across time has been to try to harmonize the two, most recently in the direction of subsuming patent doctrines under antitrust doctrines. Harmonization in any direction, however, is far more challenging than it has appeared. Difficulties are enhanced by the fact that the two fields use concepts with similar terminology but with differing meanings, contexts, and implications. Understanding these different shades of meaning will be critical for navigating the intersection between patent and antitrust. Trying to slide blithely between the two without understanding the divergences could distort the essence of each.

⁷⁷ See *eBay Inc. v. MercExchange L.L.C.*, 547 U.S. 388 (2006).