UNILATERAL REFUSALS TO SELL OR LICENSE INTELLECTUAL PROPERTY AND THE ANTITRUST DUTY TO DEAL

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INTRODUCTION

Much has changed in the last twenty years in the antitrust approach to intellectual property.[1] Prior to the 1980s, the predominant view of the antitrust and intellectual property laws was that they conflict because the former protects competition while the latter permits monopoly.[2] Courts and academics alike considered intellectual property rights as exceptions to the antitrust law that must be narrowly construed.[3] The notion that the two bodies of law are diametrically opposed has since given way to the perspective that they are complementary, not conflicting, because they share the common goal of promoting innovation and maximizing consumer welfare.[4] However, despite efforts to downplay tensions between

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1 For discussion of the changing trend in this area, see James B. Kobak, Jr., Running the Gauntlet: Antitrust Intellectual Property Pitfalls on the Two Sides of the Atlantic, 64 ANTITRUST L.J. 341, 342-50 (1996); Norman E. Rosen, *Intellectual Property and the Antitrust Pendulum*, 62 ANTITRUST L.J. 669 (1994); Willard K. Tom & Joshua A. Newberg, *Antitrust and Intellectual Property: From Separate Spheres to Unified Field*, 66 ANTITRUST L.J. 167 (1997).

2 *See* Simpson v. United Oil Co., 377 U.S. 13, 24 (1964) ("The patent laws which give a 17-year monopoly on 'making, using or selling the invention' are *in pari materia* with the antitrust laws and modify them *pro tanto*." (citing United States v. General Elec. Co., 272 U.S. 476, 485 (1926))); United States v. Westinghouse Elec. Corp., 648 F.2d 642, 646-47 (9th Cir. 1981) ("There is an obvious tension between the patent laws and antitrust laws. One body of law creates and protects monopoly power while the other seeks to proscribe it.").

3 *See, e.g.*, Walker Process Equip., Inc. v. Food Mach. & Chem. Corp., 382 U.S. 172, 176-77 (1965); United States v. Line Material Co., 333 U.S. 287, 300-04 (1948); United States v. Paramount Pictures, Inc., 334 U.S. 131, 140-41 (1948); International Salt Co. v. United States, 332 U.S. 392, 395-96 (1947); United States v. Masonite Corp., 316 U.S. 265, 280 (1942); United States v. Loew's, Inc., 371 U.S. 38, 45 (1962). *See also* Tom & Newberg, *supra* note 1, at 170-72, 175-83 (discussing cases in the "No-No" era (pre-1980's) and the "No-No" policy, *see infra* note 99, which exemplified the view that antitrust and intellectual property laws existed in "separate spheres").

4 *See* Atari Games Corp. v. Nintendo of Am., Inc., 897 F.2d 1572, 1576 (Fed. Cir. 1990) ("[T]he aims and objectives of patent and antitrust laws may seem, at first glance,

the two bodies of law, conflicts persist and are more deep-seated than is generally acknowledged. For example, conflict arises when a monopolist[5] unilaterally refuses to sell or license a patent or copyright,[6] especially when the refusal to deal is intended to exclude competition in adjacent, or complementary, markets.

Part I of this paper discusses the antitrust rule on unilateral refusals to deal in general cases, where no intellectual property interests are at issue. It notes that, while the statutory protections of patent and copyright laws necessarily affect that general rule, the extent of the effect is unclear from the statutes themselves. Part II assesses the legal scope of patent and copyright grants through an examination of recent case law. While the Supreme Court has never expressly defined a patent grant, it has said the grant does have limits beyond which there is no antitrust immunity. Part III analyzes a provision in the Patent Interference and Misuse Reform Act of 1988 ("Patent Reform Act")[7] relating to refusals to deal in patent cases. The provision states that refusals to license a patent will not be considered patent misuse in a patent infringement case. This paper discusses why the provision has no application to antitrust cases and does not bar refusals to license a patent from serving as a basis for antitrust claims. Finally, because neither statutory nor case law is clear on the issue, part IV looks to policy considerations to see if antitrust law should limit a patentee's right of refusal to deal. This part questions a common assumption often made about the application of antitrust principles to intellectual property rights, namely, that it would reduce innovation and subvert the purposes of the intellectual property system. It also contends that competition itself plays an important role in fostering inno-

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wholly at odds. However, the two bodies of law are actually complementary, as both are aimed at encouraging innovation, industry, and competition."); DOJ & FTC Antitrust Guidelines for the Licensing of Intellectual Property § 1 (1995), *reprinted in* 4 Trade Reg. Rep. (CCH) 20,733 at ¶ 13,132, § 1 (April 11, 1995) [hereinafter *IP Guidelines*] ("The intellectual property laws and the antitrust laws share the common purpose of promoting innovation and enhancing consumer welfare."). The change in perspective was greatly influenced by the work of Professor Ward Bowman and other scholars. *See* WARD S. BOWMAN, JR., PATENT & ANTITRUST LAW: A LEGAL & ECONOMIC APPRAISAL (1973) (hereinafter BOWMAN, PATENT & ANTITRUST LAW). Bowman refutes the idea that antitrust and patent law stand in "diametric opposition" since they share "a common central economic goal: to maximize wealth by producing what consumers want at the lowest cost." *Id.* at 1.

[5] As used throughout this paper, "monopolist" refers to an economic monopolist, i.e., a firm having substantial market power in a properly defined relevant market; it does not mean a firm having simply what older cases termed a "patent monopoly," i.e., the exclusive rights over a patent (or copyright).

[6] For simplicity, unless the context indicates otherwise, I will use "patent" expansively in this paper to include copyright. Similarly, the term "sale" or "license" will include sale, license, lease, and all other transfers; and reference to "products" or "goods" will include services.

[7] Pub. L. No. 100-703, 102 Stat. 4674 (1988) (codified as amended at 35 U.S.C. § 271(d)(4)-(5) (1988)).

vation, and that the current approach to reconciling antitrust and intellectual property laws has undervalued this role. Overall, this paper concludes that imposing the general antitrust duty to deal on patent holders in limited circumstances—to prohibit the use of the practice to leverage power in the patent market into multiple markets—may actually encourage, rather than deter, innovation.

I. UNILATERAL REFUSALS TO DEAL

A. REFUSALS TO DEAL IN GENERAL CASES

Section 2 of the Sherman Act proscribes monopolization or attempted monopolization, whether perpetrated through unilateral or concerted activity.[8] Monopolization requires proof of two elements: monopoly power and "exclusionary" conduct.[9] Monopoly power, often defined as the ability "to control prices or exclude competition," is determined based on market share in a relevant market and other factors such as barriers to entry.[10] Exclusionary conduct refers to the use of monopoly power to foreclose competition or otherwise gain a competitive advantage over a competitor.[11] Accordingly, if unilateral refusals to deal by a dominant firm constitute exclusionary conduct, the dominant firm may be found to have violated the antitrust law against monopolization or attempted monopolization if it engages in that type of behavior.

Monopoly leveraging is a form of monopolization; it refers to a company with power in a relevant market using, or leveraging, that power to monopolize or gain an unmerited competitive advantage in another related, or complementary, market.[12] This theory is often associated with tying arrangements—a firm's use of its power in one market

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[8] 15 U.S.C § 2 (1988) (condemning "every person who shall monopolize, or attempt to monopolize, or combine or conspire with any other person or persons to monopolize any part of the trade or commerce among the several States").

[9] *See* United States v. Grinnell Corp., 384 U.S. 563, 570-71 (1966).

[10] *See* United States v. E.I. duPont de Nemours & Co., 351 U.S. 377, 391 (1956).

[11] *See id.*; Image Technical Servs., Inc. v. Eastman Kodak Co., 504 U.S. 451, 482-83 (1992) ("Kodak I").

[12] *See* Alaska Airlines Inc. v. United Airlines Inc., 948 F.2d 536, 547 (9th Cir. 1991). Whether monopoly leveraging can be an independent violation of § 2 of the Sherman Act is somewhat controversial. Some courts take a broad view of the theory and accept the existence of monopoly leveraging as a distinct offense, apart from traditional monopolization claims. Under this view, unlawful monopoly leveraging occurs when a firm with power in one market uses that power to gain a competitive advantage in a related market, without necessarily monopolizing or threatening to monopolize the related market. *See, e.g.*, Berkey Photo, Inc. v. Eastman Kodak Co., 603 F.2d 263, 276 (2d Cir. 1979). Other courts reject the notion that monopoly leveraging exists as an independent § 2 violation. Under this restrictive view, there is no unlawful leveraging until the dominant firm's efforts in the related market give it a monopoly or a high probability of success in monopolizing the related market. *See, e.g.*, Fineman v. Armstrong World Indus., Inc., 980 F.2d 171, 206 (3d Cir. 1992). *See also infra* notes 132-38 and accompanying text.

(the tying market) to affect competition in a complementary market (the tied market) by effectively coercing buyers of the tying product to also buy from it the tied product, regardless of the buyer's wishes.[13]

Monopoly leveraging is also linked to unilateral refusals to deal in some situations, such as when a firm, dominant in a primary market, refuses to sell that product (needed for competition in a complementary market) to its competitors in the complementary market, thereby precluding competition in that market.[14] Unilateral refusals to deal, unlike tying, do not necessarily involve coercion, but may achieve the same effect.[15] For example, if the dominant firm in a primary market excludes competition in a complementary market by denying competitors in that market access to its primary product, the dominant firm essentially forces buyers of the primary product to also buy from it the complementary product because the lack of competition in the complementary market leaves buyers with no other choice. In effect, unilateral refusals to deal can accomplish indirectly what tying arrangements accomplish directly, although without coercing any buyer's choice.

Absent intellectual property issues, the law on unilateral refusals to deal is relatively clear. Firms without market power have no antitrust duty to deal; they have an unrestricted right to choose with whom they do business or *not* do business, so long as their action is truly independent.[16] However, at least since *Aspen Skiing Co. v. Aspen Highlands Skiing Corp.*,[17] the Supreme Court has held that firms with substantial market power do not have such unfettered freedom.[18] In *Aspen Skiing*,

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[13] Tying arrangements may be unlawful, under either § 1 or § 2 of the Sherman Act if: the alleged tying and tied products are in fact two distinct products; the defendant has sufficient market power in the tying market to distort choices for the tied product; and the tie forecloses a "not insubstantial" amount of commerce in the tied market. *See* Jefferson Parish Hospital Dist. No. 2 v. Hyde, 466 U.S. 2, 2-3 (1984). For an "efficiency" challenge to the leverage theory as applied to tying arrangements, see generally Ward S. Bowman, Jr., *Tying Arrangements and the Leverage Problem*, 67 YALE L.J. 19 (1957) (asserting that if, as assumed, a tying monopolist is already maximizing his profits on the tying sale, a tying arrangement would not produce additional monopoly effect).

[14] One of the most difficult issues in monopoly leveraging cases is determining what constitutes one market. If the alleged primary and complementary markets in fact constitute only a single integrated market, there would be no monopoly leveraging. On the discussion of markets, see *infra* notes 45-49, 59-61 and accompanying text.

[15] *See infra* notes 36-61.

[16] By definition, § 1 of the Sherman Act does not prohibit unilateral conduct, since only "contracts, combinations . . . and conspiracies" in restraint of trade is condemned. 15 U.S.C. § 1 (1988). *See* Monsanto Co. v. Spray-Rite Serv. Corp., 465 U.S. 752, 761 (1984).

[17] 472 U.S. 585 (1985).

[18] *See id.* at 601-03. Before *Aspen Skiing Co.*, the case that came closest to prohibiting a monopolist's unilateral refusal to deal was *Otter Tail Power Co. v. United States*. In *Otter Tail Power Co.*, the Court found a wholesale power supplier's refusal to either sell wholesale power or "wheel" power to municipalities, in order to prevent municipalities from competing in the distribution of power, violated the antitrust laws. 410 U.S. 366, 366, 368-69 (1973).

the defendant, a ski resort operator who owned three of the four ski mountains in Vail, Colorado, discontinued a joint marketing arrangement with the plaintiff, its much smaller and only competitor. The action was apparently taken to drive the plaintiff out of business and to monopolize the ski resort business in Vail.[19] In finding for the plaintiff, the Supreme Court said that a dominant firm's right of refusal to deal is not absolute. Where the defendant has substantial market power, its refusal to continue doing business with its competitor, in the absence of any legitimate business justification, constituted exclusionary conduct and a violation of § 2 of the Sherman Act.[20] But because intellectual property issues were not involved, *Aspen Skiing* provides no guidance on whether and to what extent its rule on the antitrust duty to deal would, or should, extend to cases where those issues are raised.

B. STATUTORY PROTECTIONS OF INTELLECTUAL PROPERTY AND THE GENERAL RULE ON UNILATERAL REFUSALS TO DEAL

Because of the statutory protections of the federal patent and copyright laws, the antitrust law obviously cannot treat all refusals to license intellectual property like any other refusal to deal. The Patent Act expressly confers on a patentee an exclusive right to use or otherwise exploit its patent and to exclude others from the field claimed by the invention for a limited time.[21] The Copyright Act similarly grants a copyright owner an exclusive right to reproduce the copyrighted work and otherwise exploit the work for a specified period of time.[22]

From the language of exclusion and exclusivity in these statutes, one can infer a right to *not* license its patent, if a patentee so chooses, in order to maintain exclusively for itself the area claimed by the invention. In other words, the Patent Act does not compel a manufacturer of a patented widget, for example, to license its patented technology to others so that they, too, may produce widgets, even if the manufacturer is a monopolist (because no reasonable substitutes for widgets are available). Nor would the Copyright Act compel a software developer to allow others to copy its copyrighted source code in order to introduce competition in the relevant software market, even if the copyright owner has power in the relevant market and consumers would greatly benefit from competition. Given that the federal intellectual property laws authorize refusals to deal in the examples just described, because they are definitely within the field claimed by the invention or creation, it would be incongruous to apply *Aspen Skiing* to require an antitrust duty to deal in

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19 *See Aspen Skiing*, 472 U.S. at 586.

20 *See id.* at 597.

21 35 U.S.C. §§ 101, 154 (1994 & Supp. II 1996).

22 17 U.S.C. § 106 (1994 & Supp. III 1997).

the same context. To do so would directly contravene the explicit statutory protections of the federal intellectual property system.

However, the patent and copyright statutes do not articulate the *reach* of the right of exclusion and exclusivity. In other words, they do not specify the *scope* of a patent or copyright grant beyond which the statutory right of exclusion would not apply. Specifically, they do not answer the question whether a firm's refusal to license a patent may be considered an antitrust violation if the practice does not merely bar competitors from the particular area of the invention, but also excludes them from a related antitrust market in which the firm would otherwise have faced competition. The following part II sketches the legal parameters of a patent grant, within which *Aspen Skiing* would not apply but outside of which it should apply.

II. LEGAL SCOPE OF PATENT AND COPYRIGHT GRANTS

A. CASELAW HISTORY: PATENT AND COPYRIGHT GRANTS HAVE LIMITS

Numerous Supreme Court cases have held that the scope of a patent or copyright is limited.[23] The Court has said, for example, that the "scope of every patent is limited to the invention described in the claims contained in it";[24] that a patent grant "is limited to the invention which it defines";[25] that the patentee may not "extend the monopoly of his patent to derive a benefit not attributable to use of the patent's teachings";[26] that the extent of a patentee's right "is limited by the definition of his invention, as its boundaries are marked by the specifications and claims of the patent";[27] and that "the boundary of a patent monopoly is to be limited by the literal scope of the patent claims."[28] While these formulations may not tell us precisely where the lines for a patent or copyright grant should be drawn, they leave little doubt that the Supreme Court has consistently found intellectual property protections to be limited to the area of the grant.

A long line of Supreme Court cases on the legality of tying arrangements involving patents or copyrights also confirms that there are, indeed, boundaries to the area protected by a patent or copyright outside of which antitrust restrictions do apply.[29] It is well established that the anti-

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23 *See infra* notes 24-28 and accompanying text.

24 Motion Picture Patents Co. v. Universal Film Mfg. Co., 243 U.S. 502, 510 (1917).

25 Mercoid Corp. v. Mid-Continent Co., 320 U.S. 661, 666 (1944).

26 Zenith Radio Corp. v. Hazeltine, 395 U.S. 100, 136 (1969).

27 Ethyl Gasoline Corp. v. United States, 309 U.S. 436, 456 (1940) (citing *Motion Picture Patents*, 243 U.S. at 510).

28 Dawson Chem. Co. v. Rohm & Haas Co., 448 U.S. 176, 221 (1980).

29 *See, e.g.*, United States v. Loew's, Inc., 371 U.S. 38 (1962); United States v. Paramount Pictures, Inc., 334 U.S. 131 (1948); International Salt Co. v. United States, 332 U.S.

trust law prohibits illegal tying arrangements involving patents, to the same extent that it prohibits ordinary tying arrangements not involving patents.[30] Thus, if a patent owner with market power in the tying market conditions the sale of its much desired patented (tying) product on a buyer's purchase of an unpatented (tied) product, its conduct may constitute an illegal tying arrangement in violation of the antitrust laws.[31] Similarly, when a copyright owner with market power over a relevant tying market conditions the licensing of its coveted copyright (tying product) to a buyer's purchase of a less desirable (tied) product from the owner, the behavior may be illegal as a tying arrangement under antitrust law.[32] If there were no limits to the scope of a patent or copyright grant, then a patent owner should be free to set the conditions on which it would license its intellectual property and the setting of those conditions would not constitute an antitrust violation. The fact that the Supreme Court has held tying arrangements involving patents to be subject to antitrust restriction, just as any ordinary tying arrangement, indicates that the statutory protections of the patent and copyright laws are not plenary, but are indeed limited to the area of the grant.

The Supreme Court, however, has never directly considered the legality of unilateral refusals to license a patent where the practice is used for monopoly leveraging purposes, *i.e.,* where a monopolist denies access to its patent to competitors in a different antitrust market in order to reduce competition in that market.[33] While the Court has said in a number of cases that a refusal to license a patent is not unlawful since a patentee is doing no more than exercise its lawful rights, all of the cases in which the Court has made this pronouncement have involved pure exclusion[34]—*i.e.*, a simple denial of a license by a patentee so as to maintain the area of the invention exclusively for itself. In none of the cases was the practice used for monopoly leveraging.

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392 (1947); Morton Salt Co. v. G.S. Suppiger Co., 314 U.S. 488 (1942); Motion Picture Patents Co. v. Universal Film Mfg. Co., 243 U.S. 502 (1917).

30 It should be noted, however, that some commentators have criticized the antitrust law on tying on the grounds that tying arrangements are generally not anticompetitive and, therefore, should not be prohibited. *See infra* notes 132-138 and accompanying text.

31 *See, e.g., International Salt Co.*, 332 U.S. at 392; *Motion Picture Patents Co.*, 243 U.S. at 502.

32 *See, e.g., Loew's, Inc.*, 371 U.S. at 38; *Paramount Pictures, Inc.*, 334 U.S. at 131.

33 *See* Image Technical Servs., Inc. v. Eastman Kodak Co., 125 F.3d 1195, 1215 (9th Cir. 1997) ("Kodak II").

34 *See, e.g.,* Stewart v. Abend, 495 U.S. 207, 228-29 (1990); Zenith Radio Corp. v. Hazeltine Research, Inc., 395 U.S. 100, 135 (1969); Special Equip. Co. v. Coe, 324 U.S. 370, 378-79 (1945); Fox Film Corp. v. Doyal, 286 U.S. 123, 127 (1932); Continental Paper Bag Co. v. Eastern Paper Bag Co., 210 U.S. 405, 424-25 (1908); Miller Insituform, Inc. v. Insituform of North America, 830 F.2d 606, 609 (6th Cir. 1987); United States v. Westinghouse Elec. Corp., 648 F.2d 642, 647 (9th Cir. 1981); SCM Corp. v. Xerox Corp., 645 F.2d 1195, 1206 (2d Cir. 1981).

In a recent case, *Image Technical Servs. v. Eastman Kodak Co.,* [hereinafter *Kodak I*],[35] the Court did discuss the issue. However, although patent issues were involved in the case, the defendant had not raised them and therefore the Court's decision was not based on an analysis of the intersection of patent and antitrust law. The following section discusses *Kodak I,* as well as recent lower court decisions that have dealt directly with the issue of unilateral refusals to deal involving patents and copyrights.

B. RECENT CASES[36]

1. *Kodak I*

Kodak manufactured photocopiers and had a substantial share of the market for replacement parts for the copiers. It also competed with independent service organizations ("ISOs") in the aftermarket for the service of the copiers. To diminish the ISOs' ability to compete in the service market, Kodak restricted their access to replacement parts, which the ISOs needed for effective competition. The ISOs brought suit alleging that Kodak had illegally tied the purchase of its own service contracts to parts and had used its control over the parts market to monopolize, or attempt to monopolize, the service market.[37]

Kodak argued on appeal that it was entitled to summary judgment. It asserted that it could not, as a matter of law, be found to have market power in the tying market (parts), despite its controlling market share, because the competition it faced in the primary market for copiers precluded Kodak from raising prices in the derivative parts market.[38] And, without market power in the tying market, the argument continued, the

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[35] 504 U.S. 451 (1992).

[36] This paper will not specifically address the Antitrust Division's case against Microsoft, as that case was the subject of the first panel at this Symposium. I will merely note that the primary charge against Microsoft involves the tying of its Web browser (Explorer) to its operating system (Windows), in which Microsoft is alleged to have a monopoly. The district court recently issued its voluminous findings of fact accepting virtually every aspect of the government's case.

See United States v. Microsoft Corp., No. 38-1232TPJ, 1999 WL 1001148 (D.D.C., Nov. 5, 1999). The court found, for example, that Microsoft possessed monopoly power in the operating systems market, *id.* at *9; that consumer preferences and competitor responses indicate that Web browsers and operating systems are separate products, *id.* at *41 - *42; and that Microsoft's bundling of its Explorer browser to its Windows operating system was undertaken not to add a desirable feature to Windows but as the key to preserving its monopoly, *id.* at *36 - *38. The court's conclusions of law, which have just been issued, find that Microsoft illegally maintained its monopoly power in the OS market through anticompetitive means; that it attempted to monopolize the browser market; and that it illegally bundled its browser to Windows. United States v. Microsoft Corp., 87 F. Supp.2d 30 (2000). In a bold move, the court ordered divestiture (and interim conduct remedies), United States v. Microsoft, 97 F.Supp. 2d 59 (2000), but stayed all sanctions pending appeal.

[37] *See Kodak I,* 504 U.S. at 456-60.

[38] *See id.* at 463, 465.

tying claim could not stand.[39] The Court rejected Kodak's assertion on the grounds that there were insufficient facts to support its claim.[40]

Although many of Kodak's parts were patented, Kodak did not raise the issue of its intellectual property rights and the Court, therefore, did not have occasion to specifically address that issue. However, in affirming denial of summary judgment to Kodak, the Supreme Court noted that a manufacturer with "inherent power" in one market is not immunized from the antitrust laws in another market, and that "power gained through some natural and legal advantage such as a patent, copyright . . . can give rise to liability if 'a seller exploits his dominant position in one market to expand his empire into the next.'"[41] The Court's remarks in the now famous footnote were made in a discussion of the ISOs' tying claim,[42] not its monopolization claim[43] based on Kodak's unilateral refusal to deal.[44] Still, the breadth of the language leaves little doubt that the legitimate scope of an intellectual property grant, in the Court's view, extends only to the protected work in its relevant market but not to other markets. The Court did not say, however, how the relevant market for patent protection (the patent market) is to be defined, although it seemed to assume that the tests developed for determining a relevant *antitrust* market would apply.

To define a relevant antitrust market, we look to economic conditions and apply the tests of elasticity of demand and supply.[45] To determine the tying market in a tying claim, for example, we would see if reasonable substitutes exist for the alleged tying product. If there are reasonable substitutes, the relevant tying market would include not only the tying product but also its reasonable substitutes. If the alleged tying product is so unique or attractive that it faces no real competition, then that product alone may form the tying market.

As to whether the tying market and an alleged tied market are truly distinct, and not merely a single integrated market, the Court looks to consumer demand for the two products.[46] If consumer demand is sufficient for competitors to efficiently offer the two products separately, then

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39 *See id.*

40 *See id.* at 477.

41 *Id.* at 480 n.29 (quoting Times-Picayune Publ'g Co. v. United States, 345 U.S. 594, 611 (1953)).

42 15 U.S.C. § 1 (1988).

43 *Id.* § 2.

44 *Kodak I*, 504 U.S. at 479.

45 *See, e.g.*, United States v. E.I. du Pont de Nemours & Co., 351 U.S. 377, 400 (1956) (stating that the relevant product market is defined by the "cross elasticity of demand between products" and the reasonable interchangeability of the products); Telex Corp. v. IBM Corp., 510 F.2d 894, 917 (10th Cir. 1975) (relying on the cross-elasticity of supply to determine the relevant product market).

46 *See* Jefferson Parish Hosp. Dist. No. 2 v. Hyde, 466 U.S. 2, 21-22 (1984).

there are indeed two products and two relevant antitrust markets, despite the fact that the products may be functionally linked.[47] In the case of *Kodak*, parts and services were considered to be in two distinct antitrust markets because enough consumers wished to buy services separately from parts that it was efficient for competitors, such as the ISOs, to offer service independent of parts.[48]

If an antitrust market legally defines the *patent* market as well, then Kodak's right of exclusion under its patents for parts would be limited to the *parts* market. As such, its refusal to sell its patented parts to the ISOs, so as to bar competition in the *service* market, would *not* be exempt from antitrust scrutiny. While this position seems to be implicit in footnote 29 in *Kodak I*, the Supreme Court never explicitly so held.[49]

2. *Image Technical Services Inc. v. Eastman Kodak Co. [hereinafter Kodak II]*[50]

After the Supreme Court in *Kodak I* remanded the case for trial, the ISOs withdrew their tying claim and ultimately prevailed at trial on their monopolization theory, which was premised on Kodak's unilateral refusal to sell its patented parts to them.[51] On appeal to the Ninth Circuit, Kodak raised the issue of its patent rights. One of its assertions was that a patent holder had a right not to sell or license its patents and, therefore, Kodak's refusal to sell its patented parts to the ISOs could not be unlawful.[52] In affirming a jury decision against Kodak, the Ninth Circuit rejected Kodak's argument and held that a monopolist's refusal to sell or license a patent in order to exclude competition in another market may constitute exclusionary conduct in a Sherman Act § 2 monopoly leveraging claim.[53] According to the court, the "basic right of exclusion [bestowed by a patent] does have limits" and it does not "protect an attempt to extend a lawful monopoly beyond the grant of a patent."[54] Although the holding was qualified to the extent that a patentee's desire to protect its intellectual property was deemed a presumptively valid business justi-

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47 *See id.*; *Kodak I*, 504 U.S. at 462.

48 *See Kodak I*, 504 U.S at 462.

49 *See id.* at 480 n.29 (stating that the patent law provides no antitrust immunity if a patent holder exploits "his dominant position in one market" gained from a patent or copyright to "expand his empire into the next").

50 125 F.3d 1195 (9th Cir. 1997).

51 *See id.* at 1201. The opinion does not reveal the reason for the plaintiff's withdrawal of its § 1 tying claim under the Sherman Act, 15 U.S.C. § 1, although it is likely that there was insufficient evidence of Kodak's conditioning the sale of parts to the end-users' purchase of Kodak services—end-users were free to purchase parts from Kodak for self-service.

52 *See id.* at 1212.

53 *See id.* at 1217.

54 *Id.* at 1216.

fication,[55] the Ninth Circuit said that the presumption may be rebutted[56] and was rebutted in the case by evidence of pretext.[57] The Ninth Circuit decision relied heavily on the Supreme Court's footnote 29 in *Kodak I* which said that a manufacturer's possession of "inherent power" in a market, derived from a patent, does not immunize that manufacturer from the antitrust laws in another market.[58]

The Ninth Circuit recognized that the issue of liability in *Kodak II* depended greatly "on the definition of the patent grant and the relevant market."[59] Parts and service were proven to be separate antitrust markets in the case.[60] If the *patent* market coincides with the antitrust market for parts, then Kodak's refusal to deal in order to control the *service* antitrust market would fall outside the scope of the patent grant and would be unprotected. However, if the patent market includes not only the parts market but also the service market, then Kodak's conduct would be within the scope of protection afforded by its patents. The Ninth Circuit found that patent (or copyright) law, not antitrust, determines the patent (or copyright) grant, and thus the fact that parts and services were proven to be separate antitrust markets did not help define the extent of the patent grant.[61] But having said this, the opinion is unclear as to how the Ninth Circuit ultimately defined the patent grant. However, since it found that the unilateral refusal to deal in question exceeded the scope of that grant, the Ninth Circuit clearly had to have found that parts and service were in two separate markets, not only for antitrust purposes, but also for patent purposes. And, the result of the case was the same as if the antitrust market definition had been applied to define the patent market.

3. *In re Independent Service Organizations Antitrust Litigation (hereinafter Xerox)*[62]

In *Xerox,* a case strikingly similar to *Kodak I* and *II*, a district court in the Tenth Circuit expressly declined to follow the Ninth Circuit's

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55 *See id.* at 1218 ("'[W]hile exclusionary conduct can include a monopolist's unilateral refusal to license a [patent or] copyright,' or to sell its patented or copyrighted work, a monopolist's 'desire to exclude others from its [protected] work is a presumptively valid business justification for any immediate harm to consumers.'" (citing Data General v. Grumman Sys. Support, 36 F.3d 1147, 1187 (1st Cir. 1994))).

56 *See Kodak II*, 125 F.3d at 1219 ("Nonetheless, this presumption is rebuttable.").

57 *Id.* (stating that Kodak's willingness to permit self-service undercut its quality control claim and was evidence of pretext, thereby rebutting the presumption of valid business justification).

58 *See id.* at 1215-16.

59 *Id.* at 1216.

60 *See id.* at 1217.

61 *See id.* at 1216-17.

62 989 F. Supp. 1131 (D. Kan. 1997).

holding in *Kodak II*.[63] The case involved Xerox's refusal to sell its patented parts to its competitors in the service market, in order to preclude competition in that market.[64] The competitors, also known as ISOs, contended that Xerox's refusal to deal constituted unlawful leveraging of Xerox's undisputed monopoly power in the parts market into the service market.[65] In rejecting that argument, the court held that Xerox's actions did not constitute monopoly leveraging because refusing to license a patent is a right inherent under the patent grant, which is not limited to a particular antitrust market.[66] In other words, according to the *Xerox* court, a patentee's right to exclude others from its invention is absolute and is not confined to the antitrust market covering the patented product, in this case, parts.[67] The court noted that the "rationale of the patent system" mandated such a conclusion.[68]

The courts in *Kodak II* and *Xerox* reached opposite conclusions, on very similar facts, primarily because of their different views on the extent of a patent grant. The Ninth Circuit essentially treated the patent grant, or the patent market, as defined by the parts market, which constitutes a distinct antitrust market. The district court in *Xerox*, however, considered the patent market to be limitless and not confined to a specific antitrust market.[69] Under the *Xerox* approach, when a patent owner excludes competition and acquires monopolies in multiple antitrust markets by refusing to license its patents, it is not engaging in unlawful monopoly leveraging but is merely exercising its rights under the Patent Act.[70] Xerox's preclusion of competition in a different antitrust market (*e.g.*, service) would simply be attributable to its absolute and inherent rights of exclusion flowing from the patents, and not to any unlawful monopoly leveraging behavior.

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63 *See id.*

64 *See id.*

65 *See id.*

66 *See id.* at 1135-38.

67 *See id.* at 1136. ("We believe that a patent holder can lawfully acquire more than one "inherent" or "economic" monopoly by exercising the exclusionary power of a single patent.").

68 *Id.* at 1138. The court also based its decision on the Patent Interference and Misuse Reform Act of 1988 ("Patent Reform Act") that amended the patent laws. Pub. L. No. 100-703, 102 Stat. 4674 (1988) (codified as amended at 35 U.S.C. § 271(d)(4)-(5) (1988). The Act included a provision expressly stating that unilateral refusals to license or use a patent shall not be considered patent misuse and asserted as a defense in a patent infringement case. 35 U.S.C. § 271(d)(4) (1988). *See* discussion *infra* part III.

69 *See Xerox*, 989 F. Supp. at 1138 (stating that "the patent holder's reward, his exclusive right to practice an invention, is unlimited by the law; the only limits on the patent holder's exercise of its right are created by the demand for the product which embodies the invention.").

70 *See id.* at 1135-39.

The *Xerox* court's definition of a patent market seems overly broad, and it also directly contradicts the Supreme Court's statement in *Kodak I* that a manufacturer's monopoly, even if it is derived from a patent, does not "immunize [the manufacturer] from the antitrust laws in another market."[71] While the Supreme Court's statement does not explicitly define the market for patent purposes or expressly adopt the antitrust test, it shows, at the very least, that the Court considers a patent market to be subject to limits.[72]

4. *Copyright Cases*

In addition to the patent-related cases discussed above, there is a series of recent tying and refusal-to-deal cases concerning copyrights.[73] Each of these cases involved, with minor factual variations, the manufacturer of a line of computer systems and developer of software for that system who also engaged in servicing the computer systems. To preclude competition in the service market, the manufacturer denied independent service operators licenses to the manufacturer's copyrighted software.[74] The manufacturer's copyright license with end-users for the software also prohibited any third-party use of the software.[75] In each case, the courts upheld the manufacturers' claims that an ISO's act of running the software licensed to the customer on the customer's own

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71 *Kodak I*, 504 U.S. at 480 n.29.

72 Another lower court, in *Intergraph Corp. v. Intel Corp.*, 3 F. Supp. 2d 1255 (N.D. Ala. 1998), *vacated* 195 F.3d 1346 (Fed. Cir. 1999), followed the Ninth Circuit's holding in *Kodak II*. The facts underlying that case form part of the basis of the FTC's recently settled suit against Intel. *See In re* Intel Corp., FTC Complaint (No. 9288) (visited Aug. 26, 1999) <http://www.ftc.gov/os/1998/9806/intelfin.cmp.htm>. Both cases involved Intel's refusal to provide certain manufacturers of Intel-chip computers with its patented sample chips and with proprietary information about those chips that were needed to build the Intel computers. Intel's behavior was primarily a "hardball" tactic intended to force concessions from Intergraph and two other computer manufacturers in unrelated disputes between Intel and those companies. In granting a preliminary injunction against Intel in *Intergraph*, the district court agreed with the Ninth Circuit that a monopolist's unilateral refusal to grant intellectual property rights may constitute exclusionary conduct. *See Intergraph Corp.*, 3 F. Supp. 2d at 1279. The court stated that patent rights "do not confer an absolute immunity from antitrust claims," and that unlawful "exclusionary conduct can include a monopolist's unilateral refusal to license a [patent or] copyright or to sell a patented or copyrighted work." *Id.* (internal citations omitted). The Court of Appeals for the Federal Circuit, however, has just reversed the granting of the injunction on grounds that the relationship between Intergraph and Intel is that of customer and supplier, not competitors, and thus the antitrust laws have no application. *See* Intergraph Corp. v. Intel Corp., 195 F.3d 1346 (Fed. Cir. 1999).

73 *See* Triad Sys. Corp. v. Southeastern Express Co., 64 F.3d 1330 (9th Cir. 1995); Data Gen. Corp. v. Grumman Sys. Support Corp., 36 F.3d 1147 (1st Cir. 1994); MAI Systems Corp. v. Peak Computer, Inc., 991 F.2d 551 (9th Cir. 1993); Service & Training, Inc. v. Data Gen. Corp., 963 F.2d 680 (4th Cir. 1992); Advanced Computer Servs. of Michigan, Inc. v. MAI Sys. Corp., 845 F. Supp. 356 (E.D. Va. 1994).

74 *See, e.g., Triad Sys. Corp.*, 64 F.3d at 1333.

75 *See id.*

computer, in order to service the system, constituted copyright infringement because unauthorized "copying" occurred when the program is loaded from the hard drive into the computer's random access memory (RAM).[76] The courts also uniformly rejected the ISOs' tying claims on grounds that the manufacturers did not coerce the customer into using the manufacturers' tied product (service),[77] and rejected their monopolization claims on grounds that the manufacturer may lawfully license, or *not* license, its software to whomever it chooses.[78]

The clash between *Kodak I* and *Kodak II* on the one hand and *Xerox* and the copyright cases on the other is breathtaking. The conflict demonstrates that case law has not clarified the legal contours of a patent or copyright grant, which would determine whether the exclusionary right of such a grant extends into other antitrust markets.

III. PATENT REFORM ACT DOES NOT ELIMINATE REFUSAL TO DEAL AS BASIS FOR ANTITRUST LIABILITY

A few lower courts have suggested that the Patent Interference and Misuse Reform Act of 1988 ("Patent Reform Act")[79] has effectively removed unilateral refusals to license a patent as a basis for any antitrust liability.[80] That is, in my view, an inaccurate interpretation of the pertinent provision of the Act. The Patent Reform Act, passed by Congress in 1988, amended the patent laws by adding § 271(d)(4) to provide that "[n]o patent owner otherwise entitled to relief" in a patent infringement case will be denied relief "by reason of his having . . . refused to license or use any rights to the patent."[81] The language of this subsection clearly deals with what will *not* constitute a defense so as to bar a patent owner's recovery in a patent infringement action. The statutory language makes no reference at all to antitrust claims, or to refusals to license patents in the context of antitrust claims.

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[76] *See id.* at 1135.

[77] *Id.* at 1137. The manufacturers simply left end users with no other choice in service by making it impossible for anyone other than the manufacturer (or the end user) to service the system with the accompanying software, since one obviously cannot check the system and maintain the software without running the software in question on the computer.

[78] *See id. See also Grumman Sys. Support Corp.*, 36 F.3d at 1187 (stating that "desire to exclude others from use of its copyrighted work is a presumptively valid business justification. . . ."); *Service & Training, Inc.*, 963 F.2d at 686 (holding that a decision not to license its software to independent service operators is "not evidence of an illegal tying agreement" and that "Data General may lawfully license [its copyrighted software] to whomever it chooses.").

[79] Pub. L. No. 100-703, 102 Stat. 4674 (1988) (codified as amended at 35 U.S.C. § 271 (d)(4)-(5) (1988).

[80] *See, e.g., In re* Independent Serv. Orgs. Antitrust Litig., 989 F.Supp. 1131, 1135-36 (D. Kansas 1997); *Grumman Sys. Support Corp.*, 36 F.3d at 118; Polysius Corp. v. Fuller Co., 709 F.Supp. 560, 575 (E.D. Pa.), *aff'd*, 889 F.2d 1100 (Fed. Cir. 1989).

[81] 35 U.S.C. § 271(d)(4) (1988).

Historically, various misdeeds that may be committed by a patentee are deemed patent "misuse" and may be asserted as a defense by an alleged infringer in a patent infringement case brought by the patentee.[82] These misdeeds, or patent misuse, include fraud or other improprieties in applying for a patent, or tying the sale of unpatented products with the sale of patented products.[83] Establishing patent misuse on the part of the patentee is a complete defense to an infringement action; a defendant invoking the misuse defense does not have to show injury or anticompetitive effect.[84] The misuse defense in a patent infringement case, if proven, precludes a patentee, on an unclean hands theory, from enforcing the patent against anyone until the misuse has been purged.[85] Any defendant in a patent infringement case may assert the defense, even an undisputed infringer who was not touched by the alleged misuse at all.[86]

Conduct underlying a patent misuse defense in a patent infringement case may also serve as a basis for antitrust liability. However, in antitrust cases based on such conduct, proving the conduct that is considered patent misuse does not establish an antitrust violation.[87] Ordinary antitrust principles require the plaintiff to show, not only the *fact* of misuse, but also all other elements of an antitrust claim, as well as antitrust injury.[88] For example, to prove a Sherman Act § 2 case based on patent misuse, the plaintiff must show not only the misuse which would constitute the exclusionary conduct, but also the defendant's monopoly power. Furthermore, if the conduct considered patent misuse was directed against someone other than the antitrust plaintiff, the plaintiff will not prevail. Stated differently, a misuse defense in a patent infringement case requires only proof of the misuse by the patent holder, while an antitrust claim based on conduct that constitutes patent misuse requires proof of much more than that.

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82 *See, e.g.*, Precision Instrument Mfg. Co. v. Automotive Maintenance Mach. Co., 342 U.S. 806 (1945) (denying enforceability of patent obtained by fraud); J.P. Stevens & Co. v. Lex Tex, 747 F.2d 1553 (Fed. Cir. 1984) (denying enforceability of patent because of patentee's inequitable conduct in the patent application process); Morton Salt Co. v. G.S. Suppiger Co., 314 U.S. 488 (1942) (holding that the patentee's tying the sale of its patented machine to the buyer's purchase of unpatented salt tablets from the patentee constituted patent "misuse" rendering the patent unenforceable).

83 *See supra* note 82.

84 *See* Zenith Radio Corp. v. Hazeltine Research, 395 U.S. 100, 140 (1969) (explaining that the challenged practice could constitute a misuse without regard to injury to the plaintiff).

85 *See Morton Salt Co.*, 314 U.S. at 493. *See also* B.B. Chem. Co. v. Ellis, 314 U.S. 495, 498 (1942) (stating that enforcement of a patent can be resumed once the patentee ceases the offending misuse).

86 *See Morton Salt Co.*, 314 U.S. 488.

87 *See* Walker Process Equip. v. Food Machinery & Chem. Corp., 382 U.S. 172, 177-78 (1965) (holding that fraud in the procurement of a patent is a misuse which renders a patent unenforceable but would constitute a Sherman Act § 2 violation only with proof of anticompetitive effect in a relevant market).

88 *Id.*

Despite the fact that patent misuse as a defense in patent infringement cases and patent misuse as a basis for antitrust liability are not identical legal theories requiring identical standards of proof, some courts have inappropriately conflated their treatment of the two theories by applying § 271(d)(4) to antitrust cases as well. Although the statutory language of the section merely provides that unilateral refusals to license or use a patent may not serve as the basis of a patent misuse defense in a patent infringement case, these cases have extended its application to bar antitrust claims based on refusals to license a patent.[89] They reasoned that the section would be rendered "virtually meaningless" otherwise, as it would "make little sense to preclude an infringer from asserting a misuse defense based on a patent holder's refusal to deal" while allowing recovery under the antitrust laws for the same conduct.[90]

A close look at the language of the statute in question and its legislative history shows that these cases and their rationale are incorrect. The normal principles of statutory interpretation require examining the language of a statute as the starting point.[91] As discussed, § 271(d)(4) provides that a patentee will not be denied relief in a patent infringement action on the basis of a refusal to license a patent. In other words, the section addresses what will or will not constitute an appropriate defense in a patent infringement case. The statute does not, however, address antitrust claims or the impact of refusals to license patents on those claims. Furthermore, although there was little congressional discussion concerning § 271(d)(4) itself, the overall legislative history of the Patent Reform Act shows that Congress did consider, but specifically rejected, a broader version of the Act which would have clearly implicated antitrust laws.[92] That Congress chose to adopt a narrower bill, which studiously

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89 *See, e.g., In re* Independent Serv. Orgs. Antitrust Litig., 989 F.Supp. at 1135-36; Data Gen. Corp. v. Grumman Systems Support Corp., 36 F.3d 1147, 1187 (1st Cir. 1994) (suggesting that § 271(d) "may even herald the prohibition of all antitrust claims and counterclaims premised on a refusal to license a patent."); Polysius Corp. v. Fuller Co., 709 F.Supp. 560, 575 (E.D. Pa.) (stating that pursuant to § 271(d), "Congress has mandated . . . [that] plaintiffs cannot be guilty of either antitrust violations or patent misuse"), *aff'd*, 889 F.2d 1100 (Fed. Cir. 1989).

90 *See Independent Serv. Orgs. Antitrust Litig.*, 989 F.Supp. at 1136.

91 *See, e.g.,* City of Chicago v. Environmental Defense Fund, 114 S.Ct. 1588, 1591 (1994) (adhering to the plain meaning of the statutory language); Central Bank v. First Interstate Bank, 114 S.Ct. 1439, 1446 (1994) (stating that following the statutory language is the starting point in any case involving statutory interpretation); United States v. Ron Pair Enters., 489 U.S. 235, 241 (1989) (noting that statutory interpretation begins "with the language of the statute itself").

92 The Senate's version of the bill, which was ultimately rejected in favor of that of the House, had provided that ownership of a patent or copyright shall not create a presumption of market power under antitrust law. S. 438, § 102, 100th Cong., 2d Sess. (1988) ("In any action in which the conduct of an owner, licensee, or other holder of an intellectual property right is alleged to be a violation of the antitrust laws in connection with the marketing or distribution of a product or service protected by such a right, such right shall not be presumed to define a

avoided any reference to antitrust law, demonstrates that Congress intended to confine the application of the amendments to patent cases, without affecting antitrust rules.

Apart from statutory language and legislative history, there are other reasons for different treatment of the patent misuse defense in infringement cases and an antitrust claim based on conduct underlying the misuse. As discussed, a patent misuse defense has much broader reach than antitrust claims based on the misuse. Patent misuse as an infringement defense serves as a complete defense even for an acknowledged infringer who was totally unaffected by a patentee's misuse against someone else.[93] Given the breadth of this doctrine, § 271(d)(4) placed limits on its use by providing that a patentee's refusal to license a patent may not be considered patent misuse for patent purposes. Antitrust claims based on conduct considered to be patent misuse, however, demand more than proof of the misuse.[94] Accordingly, such claims are harder to establish and there is, correspondingly, less of a need to rein them in. Seen in this light, there is no inherent inconsistency in a statutory provision that bars an alleged infringer from asserting a misuse defense based on a patentee's mere refusal to deal and yet allows an antitrust claim against a monopolist to be based on the same behavior.

IV. POLICY CONSIDERATIONS: INNOVATION, INTELLECTUAL PROPERTY PROTECTION, AND COMPETITION

To the extent that neither statutory nor case law establishes clearly the legal scope of an intellectual property grant, one should also look to policy concerns in determining whether unilateral refusals to license patents should ever be considered antitrust violations. There is no definitive test for deciding the optimal level of protection for intellectual property. Logically, the law should not place antitrust constraints on a monopolist's right to refuse to license if such constraints would undermine the intellectual property laws. Conversely, the law should not give intellectual property holders carte blanche to refuse to license if that would re-

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market or to establish market power, including economic power and product uniqueness or distinctiveness, or monopoly power."). The corresponding section in the House Bill, eventually adopted as the Patent Reform Act, merely provides that, in a patent infringement case, a patentee's tying arrangement will constitute a defense only if there is proof of the patentee's market power in the tying market, *i.e.*, the ownership of a patent or copyright does not create a presumption of market power in the tying market when tying is raised as a defense to patent infringement. *See* 35 U.S.C. § 271(d)(5). *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, 192-97 (1989).

93 *See supra* notes 82-86 and accompanying text.

94 *See supra* notes 87-88 and accompanying text.

sult in frustrating the very objectives that intellectual property laws seek to achieve. The following discusses the purposes of the intellectual property laws, and explores the link between innovation, intellectual property protection, and competition to determine if imposing an antitrust duty to deal on patent holders in limited circumstances would subvert those purposes.

A. PURPOSES OF THE INTELLECTUAL PROPERTY LAWS

As already noted, until the late 1970s, it was common to stress the conflict between antitrust and intellectual property laws. Courts viewed patents and copyrights as creating monopolies "restrictive of a free economy,"[95] and antitrust law as restraining monopolies and preserving competition.[96] To reconcile the seemingly antithetical objectives of the two laws, the cases strictly limited the "monopoly" granted under a patent or copyright.[97] Within the explicit statutory grant of the patent law, a patent holder could fully exploit its patent, but any use beyond that express grant would be unprotected and subject to antitrust scrutiny.[98] This approach to intellectual property was evident, not only in the case law, but also in the government's antitrust enforcement policy. The Antitrust Division of the U.S. Department of Justice clearly expressed its restrictive position on intellectual property rights in the infamous "Nine No-No's"

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95 United States v. Masonite Corp., 316 U.S. 265, 280 (1942) (describing patents as "privileges restrictive of a free economy[;] the rights which Congress has attached to them must be strictly construed"). *See* United States v. Univis Lens Co., 316 U.S. 241, 250 (1942) (referring to a patent as a "limited monopoly"); Leitch Mfg. Co. v. Barber Co., 302 U.S. 458, 463 (1938) (speaking as if a patent conferred a "monopoly"); Motion Picture Patents Co. v. Universal Film Mfg. Co., 243 U.S. 502, 518 (1917) (speaking as if a patent conferred a "monopoly").

96 *See* Standard Oil Co. v. United States, 221 U.S. 1, 58 (1911) (observing that antitrust law seeks to promote and protect a competitive marketplace for society's benefit).

97 *See Univis Lens Co.*, 316 U.S. at 250 (referring to a patent as "a limited monopoly"); *Masonite Corp.*, 316 U.S. at 277.

98 *See* United States v. Line Material, 333 U.S. 287, 300-04 (1948); International Salt Co. v. United States, 332 U.S. 392, 395-96 (1947); *Motion Picture Patents Co.*, 243 U.S. at 510. For a discussion of cases in this era, see Tom & Newberg, *supra* note 1, at 170-77. The general distrust of patents is also seen in cases that allowed licensees to challenge the validity of their licensors' patents, broadly applied the patent misuse doctrine, or presumed the existence of market power from a patent or copyright. *See, e.g.*, Blonder-Tongue Labs., Inc. v. University of Ill. Found., 402 U.S. 313, 313 (1971) (holding patentee bound by finding of invalidity but not protected by finding of validity in subsequent patent infringement suits brought against different infringers); Lear, Inc. v. Adkins, 395 U.S. 653, 653 (1969) (finding that a licensee may seek to invalidate its licensor's patent despite the doctrine of licensee estoppel because of the countervailing policy of ensuring the validity of patents granted); United States v. Loew's, Inc., 371 U.S. 38, 44-45 (1962) (presuming market power from a copyrighted movie); United States v. Paramount Pictures, Inc., 334 U.S. 131, 143 (1948) (presuming market power from a copyrighted movie).

listing various intellectual property licensing practices that the Division considered suspect and scrutinized closely during that era.[99]

There has been a policy shift in recent years. Many policymakers now perceive intellectual property protection as a necessary incentive for innovation,[100] which is generally recognized as critical to economic growth.[101] On the legislative front, Congress has passed new legislative measures, such as the Patent Reform Act,[102] strengthening the value of patents. On the antitrust enforcement front, the Antitrust Division and the FTC now take a more lenient approach toward conduct involving intellectual property.[103] Court decisions, particularly from the Court of Appeals for the Federal Circuit,[104] also tend to give more weight to intel-

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99 In 1970 the Antitrust Division of the Department of Justice articulated what became known as the "Nine No-No's" in intellectual property licensing: 1) tying of unpatented purchases to a patent license; 2) mandatory grantbacks; 3) post-sale restrictions on resale by purchasers of patented goods; 4) tie-outs; veto power of licensee over the patentee's grant of additional licenses; 5) mandatory package licensing; compulsory royalty payments that are not reasonably related to the sales of the patented goods; 6) restrictions on sales of unpatented goods made by a patented process; and 7) fixing a licensee's resale prices of the patented goods. *See* Bruce P. Wilson, Remarks Before Michigan State Bar Antitrust Law Section and Patent Trademark and Copyright Law Section (Sept. 21, 1972), *in* [1969-1983 Current Comment Transfer Binder] Trade Reg. Rep. (CCH) ¶ 50,146 at 55,248 (Oct. 9, 1972). The Antitrust Division subsequently repudiated the Nine No-No's. *See* Abbott B. Lipsky, Jr., Current Antitrust Division Views on Patent Licensing Practices, Remarks Before the American Bar Ass'n Antitrust Section (Nov. 5-6, 1981), *in* 50 ANTITRUST L.J. 517 (1981).

100 *See* Twentieth Century Music Corp. v. Aiken, 422 U.S. 151, 156 (1975) (stating that the "ultimate aim" of copyright law is "to stimulate artistic creativity for the general public good" by giving a "fair return for an author's creative labor"). *See also* Sony Corp. of Am. v. Universal City Studios, Inc., 464 U.S. 417, 429 (1984) (observing that the purpose of patent and copyright laws is to promote creative activity on the part of [authors] and inventors); Kewanee Oil Co. v. Bicron Corp., 416 U.S. 470, 485 (1974) ("Trade secret law will encourage invention in areas where patent law does not reach, and will prompt the independent innovator to proceed with the discovery and exploitation of his invention.").

101 *See* Joseph F. Brodley, *The Economic Goals of Antitrust: Efficiency, Consumer Welfare, and Technological Progress*, 62 N.Y.U. L. REV. 1020, 1026 (1987) ("[T]echnological progress is the single most important factor in the growth of real output in the United States and the rest of the industrialized world."). *See also* Kenneth W. Dam, *The Economic Underpinnings of Patent Law*, 23 J. LEGAL STUD. 247 (1994); Janusz A. Ordover, *A Patent System for Both Diffusion and Exclusion*, 5 J. ECON. PERSP. 43 (1991).

102 35 U.S.C. § 271(d) (1988). The Patent Reform Act abolished the market power presumption of patents with respect to patent misuse defenses based on tying claims. *Id.* § 271(d)(5). It also expressly provided that unilateral refusals to sell or license a patent shall not constitute patent misuse as a defense in patent cases. *Id.* § 271(d)(4). It should be noted, however, that Congress considered but rejected extending the change to antitrust actions. *See* discussion *supra* part III.

103 *See IP Guidelines, supra* note 4. The Guidelines express three core principles: 1) that antitrust agencies will apply the same antitrust principles to the analysis of conduct involving intellectual property as to any other form of property; 2) that intellectual property will not create a presumption of market power in the antitrust context; and 3) that the agencies recognize that licensing arrangements are generally procompetitive. *Id.* at § 2.0.

104 The Federal Circuit was created in 1982 to have exclusive appellate jurisdiction in patent-related cases. *See* 28 U.S.C. §§ 1292, 1295 (1993 & West Supp. 1996).

lectual property interests, by broadly interpreting and strongly enforcing those claims.[105]

The emphasis in antitrust law, in general, has also shifted in the last twenty years. For better or worse, the Chicago School approach to antitrust law has generally prevailed,[106] and efficiency and wealth maximization principles now predominantly, if not exclusively, drive antitrust policy. Because the ultimate objectives of antitrust and intellectual property law have seemingly converged, the earlier notion that the two bodies of law are in conflict has given way to the revisionist view that they are complementary because both serve the common purpose of maximizing consumer welfare.[107] The two bodies of law are seen as simply seeking to achieve the same goal through different means: by preserving the competitive marketplace in the case of antitrust; and by

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105 *See, e.g., In re* Alappat, 33 F.3d 1526, 1542 (Fed. Cir. 1994) (sustaining broad patent claims of computer-related inventions); Paper Converting Mach. Co. v. Magna-Graphics Corp., 745 F.2d 11, 23 (Fed. Cir. 1984) (applying liberal damage rules for patent infringement); Whelan Assocs. v. Jaslow Dental Lab., Inc., 797 F.2d 1222, 1248 (3d Cir. 1986) (providing broad copyright protection to utilitarian software); *see also* Jon F. Merz & Nicholas M. Pace, *Trends in Patent Litigation: The Apparent Influence of Strengthened Patents Attributable to the Court of Appeals for the Federal Circuit,* 76 J. PAT. [& TRADEMARK] OFF. SOC'Y 579 (concluding that the Federal Circuit tends to uphold broad patents, and that more than two-thirds of patents which are litigated are found valid and infringed whereas ten years ago, approximately two-thirds were found invalid); Stanley M. Besen & Leo J. Raskind, *The Law and Economics of Intellectual Property,* 5 J. ECON. PERSP. 3, 8 (1991).

106 The Chicago School believes that the exclusive purpose of antitrust law should be to promote allocative efficiency. Thus, the Sherman Act should punish only practices that restrict output, since only output restrictions are inefficient under price theory. The Chicago School also assumes that all businesses are rational and that the objective of all rational businesses is to maximize profits. Therefore, no self-interested company (who is not a monopolist) would engage in a practice that would restrict output because that would only reduce the manufacturer's net revenues. According to the Chicago School, there are only two avenues toward profit maximization: capturing more sales at the competitive price, or exercising monopoly power to limit output and raise prices above the competitive level. The practices and strategies of all businesses, being rational profit maximizers, so the argument goes, must be seen as steps either toward efficiency (*i.e.,* more sales) or toward monopoly. But because rational businesses also know that monopoly is extremely difficult to attain, the Chicago School contends that most business conduct must be seen as strategies to enhance efficiency. For extended expositions of the Chicago approach to antitrust, *see* ROBERT H. BORK, THE ANTITRUST PARADOX: A POLICY AT WAR WITH ITSELF (1979); RICHARD A. POSNER, ANTITRUST LAW: AN ECONOMIC PERSPECTIVE (1979); Frank H. Easterbrook, *Workable Antitrust Policy,* 84 MICH. L. REV. 1696 (1986).

107 *See* BOWMAN, PATENT & ANTITRUST LAW, *supra* note 4 at 1 (refuting the idea that antitrust and patent law stood in "diametric opposition" because they share "a common central economic goal: to maximize wealth by producing what consumers want at the lowest cost"). *See also* Atari Games Corp. v. Nintendo of Am., Inc., 897 F.2d 1572, 1576 (Fed. Cir. 1990) ("[T]he aims and objectives of patent and antitrust laws may seem, at first glance, wholly at odds. However, the two bodies of law are actually complementary, as both are aimed at encouraging innovation, industry, and competition."); *IP Guidelines, supra* note 4, § 1 ("The intellectual property laws and the antitrust laws share the common purpose of promoting innovation and enhancing the consumer welfare.").

protecting the rights of inventors and creators in the case of intellectual property.[108]

However, although the overall goals of antitrust and intellectual property laws may be in basic harmony, the two bodies of law are not completely complementary and tensions do exist, as the discussion in the preceding section explores. The predominant issue is whether applying antitrust law (*i.e.,* the *Aspen Skiing* rule) to a monopolist's refusal to license its patent, when the refusal is used to restrict competition in other antitrust markets, would undermine the objectives of the intellectual property regime. Close examination of the purposes of the patent and copyright laws suggests that such limited application of antitrust principles would not subvert those purposes.

Patents and copyrights are not fundamental natural rights that must be protected against any encroachment for their own sake. The constitutional purpose behind the federal intellectual property scheme is to promote "the Progress of Science and useful Arts."[109] The system protects intellectual property, not because it is sacrosanct, but because protection promotes innovation and economic growth. Thus, the protection afforded by the intellectual property laws should only be broad enough to carry out the objective of stimulating innovation. Unless limiting a patent owner's right to leverage its patent power into another antitrust market would result in a net loss in innovation, such limits would not defeat the purposes of the intellectual property laws.

B. INTELLECTUAL PROPERTY PROTECTION, INNOVATION, AND COMPETITION

The intellectual property laws are intended to encourage innovation by correcting the "public good" problem of intellectual property.[110] A public good is something that one person may take from the owner at minimal cost and without hindering the owner's use. For example, if it were legally permissible, an imitator could duplicate an inventor's new process or a software developer's new program at marginal cost, making it difficult for the innovator to recoup its innovation costs, much less profit from its innovation. Unless an innovator can recover its costs and profit from its investment, there would be less incentive to innovate. An owner's legal right to exclude others under a patent or copyright effectively remedies the public good problem of intellectual property by giv-

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108 *See* SCM Corp. v. Xerox Corp., 645 F.2d 1195, 1203 (2d Cir. 1981).

109 U.S. CONST. art. I, § 8, cl. 8 (granting Congress the power "[t]o promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries").

110 For a list of some of the literature discussing the public good characteristics of intellectual property, see Marina Lao, *Federalizing Trade Secrets Law in an Information Economy*, 59 OHIO ST. L.J. 1633, 1639-40 nn.38-39 (1998).

ing inventors "lead time," during which they are free from competition, to realize the profits from their inventions. This, in turn, provides an economic incentive for innovation, which ultimately maximizes consumer welfare.

Of course, a patent or copyright "monopoly" imposes certain social costs in that it deprives the market of competition in the patented product for the duration of the patent. If the system overcompensates the inventor, the protection may actually impede innovation by denying competitors (and users) access to needed information and basic inventions that could serve as building blocks for further progress. In short, because competition also plays a role in fostering innovation, overprotection of a patent holder from competition may perversely result in less, rather than more, innovation.

Optimally, intellectual property rights should be allowed only to the extent that societal benefits exceed the costs of protection. Unfortunately, no precise formula exists for making that determination. Several scholars have proposed different theoretical tests in an attempt to find the proper balance. The tests include Professor Ward Bowman's "competitive superiority" test, Professor William Baxter's "comparability" test, and Professor Louis Kaplow's "ratio" test. Bowman's test essentially allows any reward to the patent holder to the extent that the reward "measures the patented product's competitive superiority over substitutes."[111] In other words, the more superior the product over the alternatives, the more rights are attached. Baxter's test provides that "a patentee is entitled to extract monopoly income by restricting utilization of his invention . . . provided that in each case he confines the restriction to his invention as narrowly and specifically as the technology of his situation and the practicalities of administration permit."[112] Professor Kaplow has criticized Bowman's test for being overly focused on reward to the inventor without sufficient consideration of the social loss associated with monopolies,[113] and Baxter's test for being primarily concerned with minimizing social loss without paying adequate attention to rewarding the inventor.[114] Kaplow's own test looks at the ratio of gross reward (patentee reward) to loss resulting from the practice—the higher the ratio, the more desirable the practice that is contemplated by the patent holder.[115] A practical problem with Kaplow's test, however, is that the information needed to apply it reasonably well will usually not be available.

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111 BOWMAN, PATENT AND ANTITRUST LAW, *supra* note 4, at x.

112 William F. Baxter, *Legal Restrictions on Exploitation of the Patent Monopoly: An Economic Analysis*, 76 YALE L.J. 267, 313 (1966).

113 *See* Louis Kaplow, *The Patent-Antitrust Intersection: A Reappraisal*, 97 HARV. L. REV. 1813, 1851-52 (1984).

114 *See id.* at 1853.

115 *See id.* at 1831.

As these tests show, a dependable formula for determining the optimal scope of protection for intellectual property, that would help resolve the issue of antitrust limits on intellectual property rights from a policy perspective, is hard to derive. In theory, imposing antitrust limitations should be desirable unless they result in a net decrease in innovation. Applying this principle in practice is difficult because there is no reliable way to assess how much innovation is truly attributable to intellectual property protection and how much is attributable to competition. Nor is there a reasonably accurate method to determine whether antitrust restrictions on intellectual property rights actually deter and reduce innovation by devaluing those rights, or whether they enhance innovation by permitting competition outside of the field protected by the patent.

Proving conclusively what would have occurred without patents or copyrights is, of course, virtually impossible. However, studies conducted by a noted economist, Professor F.M. Scherer, suggest that the often-presumed strong correlation between patent protection and inventions is actually quite weak in most industries, and that the basic incentive to invent is not the reward promised by patents but the very existence of competition.[116] The research of several other scholars also supports Scherer's conclusions. For example, a study of 130 industries conducted by Professor Richard Levin and others showed that, except in five industries, most firms surveyed did not consider patents to be very important assets or strong incentives for innovation.[117] Professor Edwin Mansfield's study, which surveyed 100 firms from 12 industries, reported that 86% of all innovations (produced from 1981-83) would have been developed even without patent protection, and that patent protection was considered not essential at all for innovations in four industries.[118]

These works suggest that much of the impetus for innovation comes from factors other than patent protection, such as the desire to be first on the market with an invention and reap the benefits from its head start, or simply the need to innovate to remain competitive. We can draw a few

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116 *See Special Report*, 69 Antitrust & Trade Reg. Rep. (BNA) No. 1741, at 670 (Dec. 7, 1995); F.M. Scherer, *Outline of FTC Testimony*, (Nov. 29, 1995), *in Hearings On Global And Innovation-Based Competition Before The Federal Trade Commission*, (visited site Aug. 26, 1999) <http://www.ftc.gov/opp/global/scherer.htm> (referring to his study showing that most companies surveyed ranked patent protection the least important factor in R&D decisions, with competition being the most important, and that the only firms which tended to view patents as a major incentive for R&D were in the pharmaceutical, agricultural, and chemical industries).

117 Richard C. Levin, et. al., *Appropriating the Returns from Industrial Research and Development*, BROOKINGS PAPERS ON ECONOMIC ACTIVITY, 783, 795-96 (1987).

118 Edwin Mansfield, *Patents and Innovation: An Empirical Study*, 32 MGMT. SCI. 173 (1986). The four industries for which patent protection was deemed not essential for innovations were office equipment, motor vehicles, rubber products, and textiles. The industries for which patent protection was perceived as being more important for innovation were the pharmaceutical and chemical industries. *Id.* at 175.

implications from the results of these surveys. If patents are *not* strong incentives for innovation except in a few select industries, then circumscribing the scope of patent rights would not necessarily deter innovation. Moreover, if the reward promised by a patent was hardly an incentive for invention at the outset, then an antitrust rule that limits the patent reward to some extent should not be a significant disincentive for innovation. Finally, if competition is as much, if not more, of a stimulus for innovation as patent protection, then less intellectual property protection might actually increase, not decrease, innovation.

A provocative book recently published comparing the Silicon Valley and the Route 128 high-technology region of Massachusetts[119] appears to confirm the findings of these studies. Professor AnnaLee Saxenian, the author and an urban planner, attributes much of the Silicon Valley's success to a culture that promotes informal sharing of technical know-how, amidst intense competition, among the many small firms that populate the area. In contrast, the staid, larger, and more vertically integrated, firms located in the Route 128 region near Boston prefer traditional self-reliance and secrecy. According to Saxenian, this difference between the two regions with a common genesis is a major reason for Silicon Valley's phenomenal growth and Route 128's relative stagnancy.[120] Her exhaustively researched and documented observations should cause one to rethink some of the general assumptions often made about intellectual property protection, such as "the more protection the better for innovation." The observations should also lead one to ask whether the current approach to intellectual property adequately values the role of competition in encouraging innovation.

Even if we were to discount this collection of findings and conclude that intellectual property protection does play a significant role in generating intellectual property, it does not necessarily follow that the broader the *scope* of protection, the higher the rate of innovation.[121] Construing too liberally rights under the intellectual property laws has its dangers. Overly broad patent grants decrease the economic opportunities for potential follow-on innovators,[122] which may lead to less future innova-

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119 ANNALEE SAXENIAN, REGIONAL ADVANTAGE: CULTURE AND COMPETITION IN SILICON VALLEY AND ROUTE 128 (1996).

120 *See id.* at 2-4.

121 Strong protection is not the equivalent of a broad scope of protection, and it is possible to have strong protection of narrow intellectual property rights. For example, vigilantly enforcing the law against software counterfeiting represents strong enforcement of the copyright law, but it does not reflect *broad* protection because even the narrowest interpretation of a copyright grant would necessarily include a prohibition against counterfeiting.

122 *See* John H. Barton, *Patents and Antitrust: A Rethinking in Light of Patent Breadth and Sequential Innovation*, 65 ANTITRUST L.J. 449, 451 (1997); Richard J. Gilbert, Deputy Attorney General, Antitrust Division, Antitrust Policy in High Technology Markets, Address Before the Ass'n of American Law Schools (Jan. 7, 1994) *in* Rosen, *supra* note 1, at 671-72.

tions. Advocates for greater rewards for the initial innovator generally argue that broad rights are needed to allow the initial innovator to shape the industry.[123] But there is little or no evidence that an initial innovator will more efficiently pursue follow-on improvements than others attempting to enter the peripheral areas.[124] To be sure, Joseph Schumpeter suggested that one advantage to monopolies is that they are more conducive to innovation than competitive markets.[125] If that were true, then preserving for the inventor broad segments of the market surrounding the innovation might make economic sense. However, Schumpeter's hypothesis is now regarded as largely discredited.[126] One has to only look at the numerous telephone-related products developed since the termination of AT&T's control over the interconnecting systems in 1984, for example, to know that strengthening opportunities for follow-on innovators will often yield more product variety and innovation than increasing rewards for the initial inventor.[127]

For a patent holder whose invention dominates or monopolizes its relevant antitrust market, receiving monopoly profits and having the right to control its invention in that antitrust market should be sufficient reward, and incentive, for innovation. There should be no need to give the monopolist additional incentives by permitting the leveraging of its power in that antitrust market into another market through a refusal to

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123 *See generally* Edmund W. Kitch, *The Nature and Function of the Patent System*, 20 J.L. & ECON. 265, 266 (1977).

124 *See* Robert P. Merges & Richard R. Nelson, *Market Structure and Technical Advance: The Role of Patent Scope Decisions*, *in* ANTITRUST, INNOVATION, AND COMPETITIVENESS 185 (Thomas M. Jorde & David J. Teece eds., 1992).

125 JOSEPH A. SCHUMPETER, CAPITALISM, SOCIALISM AND DEMOCRACY 81-106 (3d ed. 1950) (hypothesizing that monopolies and oligopolies are more conducive to innovation than competitive markets because monopoly conditions offer monopoly rents to compensate for the risks of innovation); JOSEPH A. SCHUMPETER, THE THEORY OF ECONOMIC DEVELOPMENT 61-74 (Harvard Univ. Press 1951).

126 *See* F.M. SCHERER, INNOVATION AND GROWTH: SCHUMPETERIAN PERSPECTIVES 246-47 (1984) (concluding from empirical studies that entrenched monopolists tend to be averse to innovation for fear that the new products will cannibalize revenues from the monopolists' existing products); MICHAEL E. PORTER, THE COMPETITIVE ADVANTAGE OF NATIONS, 527-30, 577-89 (1990) (showing that monopolists in mature markets have an incentive to suppress new technology so as to protect the monopolists' sales revenues from existing products in the markets that they dominate).

127 United States v. AT&T, 552 F.Supp. 131 (D.D.C. 1982). In the late 1970s, the Department of Justice brought a Sherman Act § 2 action against AT&T which had a monopoly over both local and long distance telephone service. The suit ended in a consent decree requiring AT&T to divest itself of its local telephone companies, the Bell Operating Companies (BOC), popularly known as the Baby Bells. Prior to the divestiture, AT&T had refused to allow MCI, Sprint and other aspiring long-distance carriers to connect to its network interconnection, and without such connection, the carriers could not provide long-distance service. After the divestiture, the Baby Bells, which now owned the network interconnections, allowed all carriers to have access to them, thereby opening up the long-distance telephone market to MCI, Sprint and others.

license its intellectual property to its competitors in the second market. Some might argue, perhaps, that disallowing the patent holder from reaping monopoly profits from complementary markets would cause economic harm to the patent holder, "reduce" its proprietary reward, and discourage further innovation by the patent holder. While there is no way to completely dispel such claims, past experience shows that these fears are unfounded or, at least, exaggerated. For example, in 1956, in a case remarkably similar to *Kodak I* and *II*, IBM entered into a consent decree with the United States agreeing to sell its parts to ISOs who competed with IBM in the market for servicing IBM equipment.[128] If dire predictions about the effect of "reducing" incentives for innovation were correct, IBM would not have continued to be one of the most successful computer companies in the country for the over forty years following the entry of the consent decree.[129]

Allowing a patent holder with monopoly power in the patented market to refuse to deal with competitors in complementary markets would eliminate competition and reduce innovation and consumer choice in the complementary markets; and those markets would become dominated by a single firm—the monopolist in the patent market. In the long run, such an expansive interpretation of the rights of a patent grant would only *diminish*, not enhance, innovation in the complementary markets.

Indeed, a blanket antitrust exemption for all unilateral refusals to license intellectual property, including refusals that are used to prevent competition in complementary markets, may discourage innovation, not just in the unprotected complementary markets, but also in the patented market. That is because potential entrants into the patented market would be required to enter at two levels if there is no viable competition in the complementary market. Not only would they have to develop a competing product in the patented market, but they would also have to introduce a product in the downstream, or complementary, market in order to compete effectively with the dominant firm. Unless there is evidence that greater incentives for dominant firms in a patented market will induce innovations that more than offset decreases in innovation by smaller firms in complementary markets and by potential entrants into the protected market, limiting the dominant firms' right to refuse to license its patents would seem to be economically desirable.

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128 United States v. International Bus. Machs. Corp., 1956 Trade Cas. (CCH) ¶ 68,245 (S.D.N.Y. Jan. 25, 1956).

129 Another example is Xerox, which entered into a consent decree with the FTC in 1975 agreeing to license its copier patents, for a nominal license fee, to its competitors. *See In re* Xerox Corp., 86 F.T.C. 364, 373 (1975). Xerox has obviously continued to innovate and compete successfully in the market since then.

C. COMPETITION AS AN INDEPENDENT VALUE IN COMPLEMENTARY MARKETS

In addition to enhancing innovation, competition has value in its own right in complementary markets. Indeed, it is to preserve competition in these (tied) markets that certain tying arrangements have long been prohibited, with no exceptions made for patents or copyrights.[130] In fact, many of the earliest condemnations of tying were patent-related, involving a patentee's tying the sale of unpatented, or less desirable, items to the sale of its coveted patented goods.[131] These tying practices, at least by those with monopoly power in the tying (or protected) markets, are prohibited because they allow firms dominant in one market to leverage their power into other markets and to foreclose competition in those markets.

Admittedly, the validity of the monopoly leveraging theory, which underlies the law on tying, is a subject of some debate. A group of commentators, rooted in the Chicago School, have argued that the leverage theory should not be a basis for antitrust liability because the extension of monopoly power to complementary markets cannot possibly be harmful to competition.[132] Their argument is based on the economic theory that a monopolist can only earn a single monopoly profit, whether or not it succeeds in dominating a complementary market.[133] If a monopolist cannot hope to gain additional monopoly profits by excluding competition in the tied (or complementary) market, it necessarily follows that the conduct that we call "tying" or "leveraging" must not be anticompetitive and may, in fact, be benign or even efficient.

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130 *See supra* notes 29-32 and accompanying text.

131 *See, e.g.*, United States v. Loew's, Inc., 371 U.S. 38, 55 (1962) (finding unlawful the defendant's tying of the licensing of commercially popular copyrighted films to the TV stations' acceptance of a block of unattractive films); International Salt Co. v. United States, 332 U.S. 392, 415 (1947) (finding unlawful the defendant's conditioning the lease of a patented salt machine on the lessee's purchase of salt from the defendant); Motion Picture Patents Co. v. Universal Film Mfg. Co., 243 U.S. 502, 514 (1917) (refusing to sanction a tie-in restriction in a patent infringement suit).

132 *See* ROBERT H. BORK, THE ANTITRUST PARADOX: A POLICY AT WAR WITH ITSELF 372-75 (1978); RICHARD A. POSNER, ANTITRUST LAW: AN ECONOMIC PERSPECTIVE 171-73 (1976); BOWMAN, *supra* note 13, at 20, 25-27.

133 The explanation for this theory goes like this: Suppose firm *A* has a monopoly in the bolt market, but not in the nut market. The user of nuts and bolts has no use for one without the other, and therefore values the products as a "package" (e.g., $1 per bolt-nut set) but is indifferent as to the price of each component. Suppose further that the competitive price of nuts is $0.10 and the profit maximizing price of bolts is $0.90. As a monopolist in the bolt market, *A* would charge the profit maximizing price of $0.90. If *A* successfully leverages its dominance in the bolt market into the nut market so that it controls both markets, it would still be able to charge only $1 for the nut-bolt "package." To the extent that *A* raises the price of nuts, *A* would have to lower the price of bolts.

This attack on the leverage theory has, in turn, been challenged as simplistic in more recent scholarship.[134] Professor Louis Kaplow, for example, contends that leveraging can be anticompetitive, and he points to flaws in the critics' analysis.[135] He argues, in part, that leverage theory critics used "static models," which do not show long-term effects, and therefore conclusions drawn from the models, e.g., that monopolists do not gain additional benefits from market extension, are suspect.[136] Kaplow also challenges the critics' assumption of perfect markets when markets, in reality, do not fit neatly within the mold of an economic model.[137] There is clearly no consensus among economists or antitrust commentators on this matter. *Kodak I* demonstrates that the Supreme Court has not abandoned the rule prohibiting the extension of monopoly power through leverage,[138] as it should not, because the law and economics theory claiming that monopoly leveraging is necessarily harmless is controverted and unproven.

Unilateral refusals to deal in the *Kodak* context raise antitrust concerns that are similar to those arising from tying arrangements. The practice is a corollary of tying in that it can be used to achieve indirectly the same effects that tying achieves directly in the tied market. There is little difference in competitive outcome between the practice of denying ISOs access to patented parts that they need to service Kodak copiers, which effectively forces Kodak users to purchase Kodak's repair service because there are no other alternatives (except self-service), and simply tying the sale of service to the sale of patented parts to end-users. The foreclosure of competition in the service market is the same whether it is done through a unilateral refusal to deal or a tying arrangement.

In essence, maintaining competition in the complementary market is valuable in its own right for all the usual reasons that competition is generally favored. Competition increases buyer choice and product variety. It puts pressure on every participant in the market to cut costs, increase productive efficiency, and improve the quality of its product or service in order to stay competitive. Finally, a competitive complementary market is less likely to stagnate than a non-competitive one.

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134 *See* Louis Kaplow, *Extension of Monopoly Power Through Leveraging*, 85 COLUM. L. REV. 515, 526-38 (1985); Thomas G. Krattenmaker & Steven C. Salop, *Anticompetitive Exclusion: Raising Rivals' Costs to Achieve Power Over Price*, 96 YALE L.J. 209, 289-93 (1986).

135 *See* Kaplow, *supra* note 134, at 526-38.

136 *See id.* at 527-30.

137 *See id.* at 536-38.

138 *See* Image Technical Servs., Inc. v. Eastman Kodak Co., 504 U.S. 451, 452 (1992).

CONCLUSION

Our law is currently focused on intellectual property holders and their rights to exclusive control of their property. Many people are wary of allowing any antitrust "abridgement" of those rights. These fears are seemingly based on the perception that strong enforcement of broad intellectual property rights is needed to maintain American competitiveness in the global marketplace, and that any reduction in the reward given the innovator would discourage innovation and harm our economy. There is reason to be skeptical of the breadth of that premise. There is also reason to question the wisdom of overlooking potential drawbacks of overly expansive intellectual property protection, and of undervaluing both the role of competition in stimulating innovation and the importance of competition in its own right. The contemporary debate on the reconciliation of antitrust and intellectual property laws seems to be framed mostly in intellectual property terms. Yet, refusals to license intellectual property can substantially impact competition in various markets. It is time to shift the focus slightly to viewing this practice from antitrust lenses and to recognize that imposing a limited antitrust duty to deal on patent owners is unlikely to reduce innovation and may in fact enhance it.