

Article

The Anticompetitive Effects of Unenforced Invalid Patents

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INTRODUCTION

Courts and scholars have long debated the proper balance between antitrust law and intellectual property rights. Proponents of strong intellectual property rights and those of vigilant antitrust enforcement often find themselves at opposite ends of the debate. Some scholars and intellectual property owners re-

sist the encroachment of antitrust law into the intellectual property arena. Antitrust advocates view with suspicion the potential exercise of market power by intellectual property owners in a manner that expands the legitimate power of a patent in an illegitimate way. While the vast majority of patents do not confer monopoly power, antitrust principles are implicated in those markets where monopolists do in fact maintain their dominant position through patents.

Amidst the discord, relative consensus prevails in one area. Even supporters of strong patent protection have generally not quarreled with antitrust law's treatment of patents procured through fraud. The Sherman Antitrust Act (Sherman Act)¹ proscribes the use of invalid patents to secure a monopoly, and the patent system has little interest in protecting the ability of firms to acquire and enforce invalid patents.²

But antitrust law's current treatment of invalid patents remains inadequate. While antitrust law recognizes that enforcing invalid patents can constitute illegal monopolization or attempted monopolization, courts have refused to consider the anticompetitive effects of simply *having* an invalid patent. This Article argues that, under certain circumstances, a monopolist's possession of a patent that it knows to be invalid, which it holds out to the world as valid, should violate the Sherman Act's prohibition on monopolization.

Part One lays out the current state of the law regarding when the use of an invalid patent violates the Sherman Act. Invalid patents can give rise to antitrust liability when a monopolist commits fraud against the Patent Office or brings an infringement lawsuit based on a fraudulently procured patent. These are, respectively, the *Walker Process* and the *Handgards* theories of recovery. Under either cause of action, the antitrust plaintiff must show that the defendant actually enforced its invalid patent.

Part Two argues that this current doctrine, by limiting liability to instances of actual enforcement of an invalid patent, is too constricted. Mere possession of an invalid patent can help maintain an illegitimate monopoly even if the monopolist patent-holder takes no affirmative steps to enforce its patent. The

1. 15 U.S.C. §§ 1–7 (2000) (amended 2004).

2. This Article focuses on those invalid patents either that are procured by the applicant's fraud on the Patent and Trademark Office, or that the patent owner later discovers should not have been issued because the patent (or one of its claims) failed one of the patentability requirements.

fear of infringement litigation can deter entry into the monopolist's market, even if the potential competitor strongly believes that the patent at issue is invalid. Invalid patents can also increase entry costs by compelling rivals to research the patent's validity, to attempt to design around the patent, or to pay (unnecessary) licensing fees. Even a monopolist's suspect patents can deter its competitors' customers, business partners, and venture capitalists from doing business with them. In some cases, firms may avoid entire fields of research out of fear of infringement litigation, a phenomenon that can distort innovation and reduce long term competition even further. Part Two concludes by showing that all of these anticompetitive consequences occur even if competitors are aware of the critical patent's suspect validity.

Part Three demonstrates that currently neither patent law nor antitrust law can adequately cleanse the marketplace of those invalid patents that injure competition and reduce social welfare. Within patent law, none of the mechanisms designed to eliminate invalid patents—public use proceedings, reexaminations, and declaratory judgment actions—functions as intended. Unrealistic standing thresholds, insufficient penalties, and collective action problems prevent each mechanism from being a truly effective method to detect and deter patent fraud. Current antitrust law also fails to solve the problem of anticompetitive invalid patents. Antitrust liability is contingent on the patentee actually enforcing its invalid patent, but enforcement is narrowly defined. This condition allows some monopolists to exercise the exclusionary power of an invalid patent without inviting antitrust litigation.

Part Four explains why and when a monopolist's knowing maintenance of an invalid patent should constitute exclusionary conduct sufficient to violate Section Two of the Sherman Act. Antitrust law does not condemn firms for having monopoly power—the power to raise prices and exclude competitors. It only proscribes the maintenance or acquisition of monopoly power through anticompetitive conduct, as opposed to through business acumen or the development of a superior product. If a monopolist secures its market power by keeping competitors at bay through the maintenance of an invalid patent, it engages in quintessential exclusionary conduct without any redeeming value. Part Four argues that if the defendant has monopoly power in a relevant market, then a *prima facie* Section Two case is established if an antitrust plaintiff can show three ele-

ments: (1) the monopolist's patent is invalid, (2) the monopolist *knew* that its patent was invalid, and (3) the monopolist did not sufficiently disavow its invalid patent. Taken together, these three elements satisfy the conduct requirement for illegal monopolization. Of course, any private plaintiff would also have to establish that it suffered causal antitrust injury in order to succeed in its suit. Liability is contingent on the excluded competitor proving that it was aware of the monopolist's patent and that but for the fear of infringement the competitor would have entered the market. Finally, Part Four explains the increased efficiency of addressing the problem of invalid patents through antitrust jurisprudence rather than relying exclusively on patent law.

Part Five addresses arguments against treating the knowing possession of invalid patents by a monopolist as the basis for Section Two liability. After rebutting the objection that an expanded cause of action is unnecessary, Part Five argues that expanded antitrust liability will not lead to false positives or nuisance suits. While recognizing that any new cause of action creates the risk of mistakes and abuse, Part Five notes that a number of factors should serve to filter out false positives and nuisance suits, including heightened pleading and evidentiary standards. In sum, treating possession of invalid patents as exclusionary conduct would not unreasonably interfere with the patent system or the innovation it is intended to encourage.

Ultimately, this Article does not argue that greater antitrust liability will eliminate all invalid patents. But, expanding the contours of the current *Walker Process* doctrine will expose at least some invalid patents and reduce the incentives to acquire or maintain others. It will also focus attention on those invalid patents that are most likely to injure competition, without deterring the acquisition of legitimate patents or allowing the harassment of innocent patentees. However, expanded antitrust liability does provide a meaningful opportunity to deter both fraud upon the Patent Office and the maintenance of powerful patents that are later discovered by the patentee to be invalid.

I. ANTITRUST LAW AND INVALID PATENTS

Thousands of patents issue every year in the United States. Unfortunately, many of these patents are, in fact, invalid. In a recent study on the number of invalidated patents, Professors Allison and Lemley found that forty-six percent of

litigated patents were held invalid.³ Though much lower than those numbers found by other studies of earlier time periods,⁴ the number of invalid patents found by Professors Allison and Lemley is nonetheless high.

Upon reflection, it is hardly surprising that so many invalid patents issue. Even the most rational, cost-effective patent system would issue some invalid patents, but flaws in the American system unnecessarily increase that number.⁵ After an inventor files a patent application, the Patent and Trademark Office (PTO) assigns an examiner who reviews the application and decides whether to grant the patent.⁶ The examiner is constrained by many factors that decrease her ability to weed out applications that should not result in patents. One such constraint is time. In recent Federal Trade Commission (FTC) hearings on competition and patent law, witnesses “estimated that patent examiners have from 8 to 25 hours to read and understand each application, search for prior art, evaluate patentability, communicate with the applicant, work out necessary revisions, and reach and write up conclusions.”⁷ This is often an

3. John R. Allison & Mark A. Lemley, *Empirical Evidence on the Validity of Litigated Patents*, 26 AIPLA Q.J. 185, 205 (1998); see also Mark A. Lemley, *An Empirical Study of the Twenty-Year Patent Term*, 22 AIPLA Q.J. 369, 420 (1994).

4. See *Carter-Wallace, Inc. v. Davis-Edwards Pharmacal Corp.*, 443 F.2d 867, 872 (2d Cir. 1971) (“[T]he bald fact is that more than 80% of patent infringement actions on appeal result in a determination that the patent sued upon is invalid.” (citing Roger M. Milgrim, *Sears to Lear to Painton: Of Whales and Other Matters*, 46 N.Y.U. L. REV. 17, 31 & n.62 (1971))); GLORIA K. KOENIG, *PATENT INVALIDITY: A STATISTICAL AND SUBSTANTIVE ANALYSIS* 4-41, n.35.2 (rev. ed. 1980) (using data from 1953–77 and noting that patents were held valid only 35% of the time); P.J. Federico, *Adjudicated Patents, 1948–54*, 38 J. PAT. OFF. SOC’Y 233, 236 (1956) (using data from 1948–54 and noting that patents were held valid in only 30–40% of the cases where validity was an issue).

5. For a provocative argument in defense of the current system see Mark A. Lemley, *Rational Ignorance at the Patent Office*, 95 NW. U. L. REV. 1495 (2001).

6. James C. De Vellis, *Patenting Industry Standards: Balancing the Rights of Patent Holders with the Need for Industry-Wide Standards*, 31 AIPLA Q.J. 301, 313 (2003).

7. FED. TRADE COMM’N, *TO PROMOTE INNOVATION: THE PROPER BALANCE OF COMPETITION AND PATENT LAW AND POLICY*, Executive Summary, at 10 (2003) [hereinafter *FTC INNOVATION REPORT*]; see Lemley, *supra* note 5, at 1500 n.19 (noting an estimate of an average of eighteen hours per application); John R. Thomas, *Collusion and Collective Action in the Patent System: A Proposal for Patent Bounties*, 2001 U. ILL. L. REV. 305, 314 (2001) (“[T]he average time allocated for an examiner to address one application is understood to be between sixteen and seventeen hours.”).

insufficient amount of time to discover relevant prior art or other facts that would lead the examiner to reject the application, and this problem is exacerbated as the number and complexity of patent applications increases.⁸

Exacerbating the time pressure are information constraints. In some cases, examiners are not adequately trained in the necessary technical field of a particular patent application.⁹ Examiners are also unable to conduct comprehensive searches of the prior art for every patent application,¹⁰ so, they often must rely on the representations made in the patent application, which are presumed to be true.¹¹ Of course, the examiner is almost completely dependent on the applicant's assertions of such important dates as the date of first invention or the date of first sale.¹² Although the patent rules require the applicant to disclose whatever prior art might be material to the patent application, the applicant is not required to conduct

8. *C.f.* FTC INNOVATION REPORT, *supra* note 7, Executive Summary, at 9–10 (“The PTO’s resources also appear inadequate to allow efficient and accurate screening of questionable patent applications. Patent applications have doubled in the last twelve years and are increasing at about 10% per year. With yearly applications approximating 300,000, they arrive at the rate of about 1,000 each working day.”).

9. *See, e.g.*, Lemley, *supra* note 5, at 1495 n.2. (“This criticism has a great deal of force with respect to software patents, where the PTO clearly missed the ball for over a decade, failing to hire examiners skilled in the software arts or to allow software engineers to practice before it, and failing to classify software prior art well.”).

10. Although examiners routinely search patent databases, in some fields the relevant prior art is not patented. *See* Robert P. Merges, *As Many as Six Impossible Patents Before Breakfast: Property Rights for Business Concepts and Patent System Reform*, 14 BERKELEY TECH. L.J. 577, 589 (1999) (noting that for software and business methods “patents have only recently become available” and that “[t]here is every reason to believe that there is a vast volume of non-patent prior art” in these fields).

11. *See* Norton v. Curtiss, 433 F.2d 779, 794 (C.C.P.A. 1970) (“[The PTO] must rely on applicants for many of the facts upon which its decisions are based.”).

12. *See* Tiegel Mfg. Co. v. Farmer Mold & Mach. Works, Inc., 225 U.S.P.Q. 1051, 1061 (M.D. Fla. 1984) (“The PTO is particularly dependent upon a patent applicant for prior art information that is uniquely within the knowledge of the applicant.”); Thomas, *supra* note 7, at 314 (“Absent the ability to compel the disclosure of pertinent facts, examiners are virtually unable to locate undocumented or secret prior art. Examiners must also take applicants at their word when they attest to such significant facts as dates of inventive activity, indicia of nonobviousness or the derivation of a prior art reference.” (citations omitted)).

searches for relevant prior art.¹³ Indeed, given the strict penalties for failure to disclose known prior art that the PTO or federal judges might later conclude was material, patent applicants have a strong disincentive to research the prior art themselves.¹⁴ Competing firms that would be negatively affected by the PTO granting the patent have a meaningful incentive to discover prior art, but the patent application procedure is *ex parte*, so adverse parties are generally unable to present relevant prior art or to advance other arguments against patent issuance.¹⁵

Evidentiary standards provide an additional obstacle to PTO examiners denying patent applications. The examiner essentially has the burden of proving nonpatentability rather than the applicant being compelled to establish patentability.¹⁶ The FTC concluded in its report that “[t]he allocation of burden, coupled with examiners’ limited ability to probe applicants’ assertions, may explain the significant presumptions that favor applicants during patent examinations. Many of the key issues are rebuttably presumed in the applicant’s favor.”¹⁷ Yet the presumption is extremely difficult to rebut because “the PTO lacks testing facilities, and assertions that cannot be overcome by documentary evidence promptly identifiable by the examiner often must be accepted.”¹⁸ Although theoretically the “issuance of a patent stands for the proposition that the PTO

13. See *FMC Corp. v. Hennessy Indus., Inc.*, 836 F.2d 521, 526 n.6 (Fed. Cir. 1987) (“As a general rule, there is no duty to conduct a prior art search, and thus there is no duty to disclose art of which an applicant could have been aware.”); U.S. PATENT & TRADEMARK OFFICE, MANUAL OF PATENT EXAMINING PROCEDURE § 609, at 600–18 (8th ed. 2001) (“There is no requirement that an applicant for a patent make a patentability search.”); Thomas, *supra* note 7, at 314–15.

14. *C.f.* 6 DONALD S. CHISUM, CHISUM ON PATENTS § 19.03[2][b][i], at 19-177 (2005) (“[A]n applicant and his or her patent attorney [are] under no duty to conduct a search of the prior art.”); see also Thomas, *supra* note 7, at 314–15 (noting that because applicants have no duty to search for prior art, “[c]oupled with the draconian consequences of a holding of inequitable conduct, many applicants are discouraged from conducting prior art searches in the first place” (footnote omitted)).

15. See Rochelle Cooper Dreyfuss, *Dethroning Lear: Licensee Estoppel and the Incentive to Innovate*, 72 VA. L. REV. 677, 755 (1986) (“[T]he absence of an interested party adverse to the patentee makes it improbable that every argument against patentability will be considered in every case.”).

16. *C.f.* 35 U.S.C. § 102 (2000) (providing that “[a] person shall be entitled to a patent *unless*” prior art invalidates the patent (emphasis added)).

17. FTC INNOVATION REPORT, *supra* note 7, ch. 5, at 9.

18. *Id.*

has reviewed the information contained in a patent and declared that it describes something new, useful, and nonobvious,” the constraints of time, information, and evidentiary standards create a situation where “[t]he PTO’s evaluation of a patent may be so poor or hurried as to be near meaningless.”¹⁹ The result is the issuance of invalid patents.²⁰

Invalid patents are most often exposed through litigation; patent invalidity is a commonly asserted response to charges of patent infringement. The defendant in such a suit generally makes two distinct arguments regarding the invalidity of the plaintiff’s patent.²¹ First, it may argue that the patent is invalid as a traditional defense (i.e., “I did not unlawfully infringe the patent because the patent is invalid.”). Second, the patent infringement defendant may assert an antitrust counterclaim based on the patentee’s enforcement of a fraudulently procured (or known invalid) patent.²² Antitrust law allows for

19. Clarisa Long, *Patent Signals*, 69 U. CHI. L. REV. 625, 667–68 (2002); see also John A. Jeffery, *Preserving the Presumption of Patent Validity: An Alternative to Outsourcing the U.S. Patent Examiner’s Prior Art Search*, 52 CATH. U. L. REV. 761, 772 (2003) (“Critics cite high examiner turnover, lack of experience in certain areas (e.g., business methods), and ignorance of relevant prior art due to time pressure. Critics have also alleged that examiners give only cursory consideration to non-patent literature in areas where such literature is more important to the prior art search than patents.” (footnotes omitted)).

20. Technically, it would be more accurate to talk about invalid claims rather than invalid patents. CHISUM, *supra* note 14, § 19.02, at 19-13. Most patents have multiple claims. It is possible that some claims are valid while others are not. Nevertheless, this Article will use the terminology of invalid patents for three reasons. First, that is the convention of the scholarship in this area. Second, for better or worse, juries generally make validity determinations at the patent level, not the claim level. Third, courts themselves rarely disaggregate claims, doing so only in 2.3% of litigated cases. Allison & Lemley, *supra* note 3, at 228.

21. It is possible for a patent to be unenforceable due to inequitable conduct, even though the patent may still be valid in the sense that it meets the requirements of patentability. See CHISUM, *supra* note 14, § 19.03. This Article does not address such patents, but rather focuses only on those patents that should not have issued because the claims are invalid.

22. See *Nobelpharma AB v. Implant Innovations, Inc.*, 141 F.3d 1059, 1067 (Fed. Cir. 1998) (“[A]n antitrust claim premised on stripping a patentee of its immunity from the antitrust laws is typically raised as a counterclaim by a defendant in a patent infringement suit.”); *In re Ciprofloxacin Hydrochloride Antitrust Litig.*, 363 F. Supp. 2d 514, 543 (E.D.N.Y. 2005) (“Ordinarily, antitrust claims premised on the enforcement of a fraudulently procured patent are brought by an accused infringer as a counterclaim to the original charge of infringement.” (citing *Nobelpharma*, 141 F.3d at 1067)).

Competitors may also challenge patent validity through a declaratory judgment action. See *infra* notes 199–235 and accompanying text.

two separate causes of action which the alleged infringer may bring based on a monopolist's use of an invalid patent.²³ Because Section Two of the Sherman Act condemns both actual monopolization and attempted monopolization, an antitrust claim can be premised on the patentee's use of an invalid patent either to monopolize a relevant market or to attempt to monopolize such a market.

The Supreme Court first recognized that invalid patents procured through fraud can give rise to Section Two liability in *Walker Process Equipment, Inc. v. Food Machinery & Chemical Corp.*²⁴ Walker Process and Food Machinery & Chemical Corp. (FMC) competed in the manufacture and sale of sewage treatment equipment.²⁵ On September 7, 1943, FMC received a patent for certain aeration equipment—"swing diffusers"—used in sewage treatment systems.²⁶ Thereafter, FMC faced virtually no competition in that market until Walker Process began employing similar equipment that apparently infringed the patent.²⁷ In June 1960, FMC brought an infringement action against Walker Process.²⁸ During its discovery efforts, Walker Process found proof that its earlier suspicions were correct: FMC had made public use of its patented product more than a year before filing its patent application and, therefore, FMC's patent was invalid.²⁹ Walker Process defended against the infringement charge by arguing that the patent was invalid and also counterclaimed, asserting that FMC had illegally monopolized the market.³⁰ It further alleged that FMC had procured its patent by committing fraud against the PTO, namely by concealing prior art, which if known to the PTO would have led it to refuse to issue the patent.³¹ The Court "concluded that the

23. 15 U.S.C. § 2 (2000) (amended 2004) (making it an offense to "monopolize, or attempt to monopolize").

24. 382 U.S. 172, 174 (1965).

25. Brief of Petitioner at 3, *Walker Process Equip., Inc. v. Food Mach. & Chem. Corp.*, 382 U.S. 172 (1964) (No. 602), reprinted in 17 ANTITRUST LAW: MAJOR BRIEFS AND ORAL ARGUMENTS OF THE SUPREME COURT OF THE UNITED STATES 1955 TERM-1975 TERM 655, 661 (Philip B. Kurland & Gerhard Casper eds., 1979) [hereinafter ANTITRUST BRIEFS & ORAL ARGUMENTS].

26. *Id.* at 4, ANTITRUST BRIEFS & ORAL ARGUMENTS, *supra* note 25, at 662.

27. *Id.*

28. *Id.*

29. *Id.*

30. *Walker Process*, 382 U.S. at 174.

31. *Id.*

enforcement of a patent procured by fraud on the Patent Office may be violative of § 2 of the Sherman Act provided the other elements necessary to a § 2 case are present.”³²

Years later, the Ninth Circuit built upon *Walker Process* in *Handgards, Inc. v. Ethicon, Inc.*³³ In *Handgards*, the antitrust defendant’s conduct did not fall within the four corners of *Walker Process* because the defendant did not itself commit any fraud against the PTO in order to obtain its patent.³⁴ *Handgards* recognized that regardless of how a monopolist acquires an invalid patent, if it knows of that patent’s invalidity and still enforces the patent to eliminate competitors, a Section Two violation may lie.³⁵ *Walker Process* and *Handgards* form a cohesive antitrust doctrine that condemns a monopolist’s enforcement of an invalid patent either to acquire or to maintain a monopoly.³⁶

32. *Id.*

33. 601 F.2d 986 (9th Cir. 1979).

34. *Id.* at 994. The Ninth Circuit reasoned that the case was “not a *Walker Process* case.” Rather:

Walker Process stands for the proposition that “the enforcement of a patent procured by fraud on the Patent Office” may give rise to antitrust liability. Plaintiff *Handgards* does not contend that *Ethicon* sought to enforce a fraudulently-procured patent. Instead, *Handgards* asserts that *Ethicon* prosecuted infringement actions in bad faith, that is, with knowledge that the patents, though lawfully-obtained, were invalid.

Id. (quoting *Walker Process*, 382 U.S. at 174).

Handgards operationalizes dicta that appear in *Walker Process*. See *Walker Process*, 382 U.S. at 177 n.5 (“This conclusion [that fraudulent procurement of a patent may ground an antitrust violation] applies with equal force to an assignee who maintains and enforces the patent with knowledge of the patent’s infirmity.”).

35. *Handgards*, 601 F.2d at 996. However, under either a *Walker Process* or *Handgards* claim, antitrust law does not automatically condemn any enforcement of invalid patents. See *Walker Process*, 382 U.S. at 174. The plaintiff must still satisfy both prongs of the *Grinnell* monopolization test, *United States v. Grinnell*, 384 U.S. 563, 570–71 (1966), or all three prongs of the *Spectrum Sports* test for attempted monopolization, *Spectrum Sports, Inc. v. McQuillan*, 506 U.S. 447, 456 (1993). Under both tests, the plaintiff will have to correctly define the relevant product and geographic markets and to prove that the defendant has monopoly power—or that there is a dangerous probability of the defendant acquiring such power in the case of attempted monopolization—in that relevant market. See *Spectrum Sports*, 506 U.S. at 456; *Grinnell*, 384 U.S. at 570–71.

36. *Handgards* also creates a cause of action when the patentee holds a valid patent but brings an infringement suit against a competitor that the patentee knows is not infringing. See, e.g., *Hoffman-LaRoche Inc. v. Genpharm, Inc.*, 50 F. Supp. 2d 367, 380 (D.N.J. 1999).

Under both *Walker Process* and *Handgards*, current law requires that the plaintiff show that the defendant took steps to enforce its invalid patent.³⁷ Enforcement efforts sufficient to trigger a *Walker Process* or *Handgards* claim can take a couple of forms. While suing for infringement clearly constitutes enforcement, so do threatening to sue and sending cease and desist letters.³⁸ However, in the four decades since *Walker Process*, courts have routinely rejected Section Two claims based on an alleged monopolist's possession of invalid patents when the plaintiff could not prove that the defendant affirmatively enforced the patent in question.³⁹ Soon after *Walker Process*, courts elevated enforcement to "the *sine qua non* of a Sherman Act violation [based on] fraud in the procurement of a patent."⁴⁰ Merely obtaining an invalid market-dominating patent—even when that patent was obtained by a monopolist—can not trigger antitrust liability in the absence of enforcement of the patent.⁴¹ An early commentator on *Walker Process* opined:

Inherent in the patent grant is the statutory monopoly right to exclude others from making, using, or selling the invention. Yet, it is not the mere existence of the patent—however fraudulently it has been obtained—which brings antitrust liability to its owner; it is the owner's assertion or enforcement of the patent which brings on antitrust liability. . . . A patent may dominate a significant part of trade or commerce by its claims, yet if its owner did not enforce it and gave royalty-free nonexclusive licenses to all who wished them, it is doubtful if the owner would be subject to antitrust liability.⁴²

37. See, e.g., *K-Lath, Inc. v. Davis Wire Corp.*, 15 F. Supp. 2d 952, 964 (C.D. Cal. 1998).

38. See, e.g., *Agron, Inc. v. Lin*, 72 U.S.P.Q.2d 1714, 1720 (C.D. Cal. 2004); *OpenLCR.com, Inc. v. Rates Tech., Inc.*, 112 F. Supp. 2d 1223, 1228–33 (D. Colo. 2000); *Arcade, Inc. v. Minn. Mining & Mfg. Co.*, No. CIV-1-88-141, 1991 WL 185155, at *3 (E.D. Tenn. July 2, 1991), *aff'd*, 1 F.3d 1253 (Fed. Cir. 1993).

39. See, e.g., *K-Lath*, 15 F. Supp. 2d at 964 ("The Federal Circuit and Supreme Court clearly require the enforcement or assertion of the patent as an element necessary to establish antitrust liability.").

40. *Struthers Scientific & Int'l Corp. v. Gen. Foods Corp.*, 334 F. Supp. 1329, 1331 (D. Del. 1971) ("The Supreme Court's [*Walker Process*] opinion made it clear, however, that the *sine qua non* of a Section 2 Sherman Act violation depends upon the prerequisites of a *fraudulent procurement and enforcement of a patent*.").

41. See *id.* at 1332 ("It is not the mere obtaining of a fraudulent patent which brings antitrust liability to its owner; it is the assertion or enforcement of the issued patent acquired by fraud which creates antitrust liability.").

42. Neil A. Smith, *Fraud Upon the Patent Office as a Violation of the Sherman Antitrust Law* (pt. 2), 53 J. PAT. & TRADEMARK OFF. SOC'Y 423, 434–35 (1971).

Later courts also imposed the requirement, holding that “[w]ithout some effort at enforcement, the patent cannot serve as the foundation of a monopolization case.”⁴³ Indeed, without active enforcement, an antitrust court will not even reach the question of the patent’s validity.⁴⁴

Although the Supreme Court has never articulated a rationale for the enforcement requirement, the unspoken assumption is that absent enforcement, an invalid patent cannot adversely affect competition.⁴⁵ The Federal Circuit has stated this view most forcefully, asserting that “[m]ere procurement of a patent, whatever the conduct of the applicant in the procurement, cannot without more affect the welfare of the consumer and cannot in itself violate the antitrust laws.”⁴⁶ This Article seeks to challenge the Federal Circuit’s assertion—and the widespread assumption that it articulates—as mistaken. Part Two will argue that the mere procurement and possession of an invalid patent can, in fact, injure competition and reduce consumer welfare.

II. MERE POSSESSION OF INVALID PATENTS CAN INJURE COMPETITION

Federal courts have founded current doctrine on the assumption that invalid patents only injure competition when the patent-holder attempts to enforce its patent rights.⁴⁷ Federal courts have never seriously considered whether mere ownership of invalid patents can distort competition; rather they have simply assumed that it cannot.⁴⁸ This section considers the exclusionary effects of patents and argues that some invalid patents can deter market entry and decrease consumer welfare even without active enforcement.

A. THE EXCLUSIONARY EFFECTS OF INVALID PATENTS

The mere presence of a patent distorts markets even if the patent-holder takes no affirmative steps to enforce the patent.

43. *Cal. E. Lab., Inc. v. Gould*, 896 F.2d 400, 403 (9th Cir. 1990).

44. *See Cygnus Therapeutics Sys. v. ALZA Corp.*, 92 F.3d 1153, 1162 (Fed. Cir. 1996), *overruled on other grounds by Nobelpharma AB v. Implant Innovations, Inc.*, 141 F.3d 1059 (Fed. Cir. 1998).

45. *See, e.g., FMC Corp. v. Manitowoc Co.*, 835 F.2d 1411, 1418 n.16 (Fed. Cir. 1987).

46. *Id.*

47. *See supra* notes 37–46 and accompanying text.

48. *See, e.g., FMC*, 835 F.2d at 1418 n.16.

After noting that the primary purpose of patents is to exclude competitors, this section explains how even invalid patents can create unacceptable litigation risks for potential entrants, raise entry costs, delay entry, deter customers and business partners from contracting with new entrants, and impose inefficiencies while distorting innovation.

1. Fear of Litigation

Given the inherent exclusionary potential of patent rights, patent law attempts to strike a balance between apparently competing goals by rewarding innovation without unduly hampering competition.⁴⁹ In exchange for the inventor's disclosure of her discovery to the public, the government grants a bundle of rights to the patent-holder.⁵⁰ While this grant may result in monopoly—an outcome generally condemned by the government—a patent does not confer upon the patent-holder the right to actually practice the patent.⁵¹ Instead, the patent grants the inventor “the right to exclude others from making, using, offering for sale, or selling the invention throughout the United States or importing the invention into the United States” while the patent is in force.⁵²

It is hardly controversial that patents represent a barrier to entry in many markets. When the PTO issues a patent, it provides public notice to would-be competitors that another market participant has already acquired the bundle of exclusionary rights.⁵³ Courts have consistently recognized that these exclusionary rights distort and potentially destroy the competitive marketplace.⁵⁴ Federal judges have opined that “[i]t goes without saying that patents have adverse effects on competi-

49. DONALD S. CHISUM ET AL., PRINCIPLES OF PATENT LAW 6 (1998).

50. *Id.* at 2.

51. *Id.* at 6. For example, in the case of an improvement patent, the patent cannot be exercised without infringing another patent, assuming that the underlying patent and improvement patent are owned by different parties. See ROBERT PATRICK MERGES & JOHN FITZGERALD DUFFY, PATENT LAW AND POLICY: CASES AND MATERIALS 997–98 (3d ed. 2002).

52. 35 U.S.C. § 154(a)(1)–(a)(2) (2000).

53. See, e.g., *Pfizer, Inc. v. Teva Pharms., USA, Inc.*, 429 F.3d 1364, 1379 (Fed. Cir. 2005) (describing the “public notice function of patents”).

54. See, e.g., *Schering-Plough Corp. v. Fed. Trade Comm'n*, 402 F.3d 1056, 1066–67 (11th Cir. 2005) (“[T]he exclusionary power of a patent [seems] incongruous with the goals of antitrust law.”).

tion”⁵⁵ and that “[b]y their nature, patents create an environment of exclusion, and consequently, cripple competition.”⁵⁶

In most instances, the patent barrier to entry is perfectly legal.⁵⁷ Patent-holders can sue infringing competitors in order to exclude them from the market and can pursue actions short of actually filing litigation to enforce their patent rights.⁵⁸ For example, “where a patent is valid, the patentee has the right to give notice to infringers and their customers of the patent and to threaten litigation for infringement without violating the antitrust laws.”⁵⁹ Indeed, the ownership of a valid patent often constitutes a defense to monopolization claims, so long as the patent is valid and the patentee has not exceeded its scope.⁶⁰

Unfortunately, the exclusionary effects of a patent do not completely depend on that patent’s validity. Invalid patents can have the same anticompetitive effects as valid patents. This presents a problem because while our patent system attempts to strike a balance between encouraging innovation and suppressing competition, that balance is thrown off when an invalid patent issues. The invalid patent suppresses competition without enhancing innovation.⁶¹

The monopolist’s possession of a patent—even an invalid one—serves as a head on a pike. Until a court invalidates it, or until the owner explicitly disavows it and dedicates it to the public domain, every patent can give pause to potential com-

55. *In re Ciprofloxacin Hydrochloride Antitrust Litig.*, 363 F. Supp. 2d 514, 523–24 (E.D.N.Y. 2005).

56. *Schering-Plough*, 402 F.3d at 1065–66; *see also* *Dawson Chem. Co. v. Rohm & Haas Co.*, 448 U.S. 176, 215 (1980) (“[T]he essence of a patent grant is the right to exclude others from profiting by the patented invention.”); *Valley Drug Co. v. Geneva Pharms., Inc.*, 344 F.3d 1294, 1306 (11th Cir. 2003) (“[T]he exclusion of infringing competition is the essence of the patent grant.”); Giles S. Rich, *Foreword* to DONALD S. CHISUM ET AL., *PRINCIPLES OF PATENT LAW*, *supra* note 49, at iii, iii (1998) (“The power of the federal courts is made available to patentees for the enforcement of this *right to exclude others*. Who are these ‘others’? Competitors, of course.”).

57. *Baxa Corp. v. McGaw, Inc.*, 996 F. Supp 1044, 1048 (D. Colo. 1997).

58. *See id.*

59. *Id.* (citing *Brown v. Myerberg*, 314 F. Supp. 939, 943 (S.D.N.Y. 1970)).

60. *See id.* (“Therefore, ownership of a valid patent precludes antitrust liability for monopolization of a product or process within the scope of the patent.” (citing *Simpson v. Union Oil Co.*, 377 U.S. 13, 24 (1964))).

61. *See* Ian Ayres & Paul Klemperer, *Limiting Patentees’ Market Power Without Reducing Innovation Incentives: The Perverse Benefits of Uncertainty and Non-Injunctive Remedies*, 97 MICH. L. REV. 985, 1019 (1999) (“Enforcing invalid patents creates ex post pricing distortions without enhancing innovation.”).

petitors who know about it.⁶² In his oft-quoted insight, Judge Learned Hand famously analogized a suspect patent to a scarecrow with the ability to deter competitors even without infringement litigation.⁶³ More recently, the Supreme Court, in discussing the Declaratory Judgment Act,⁶⁴ recognized the risk of the “patent owner [who] engages in a *danse macabre*, brandishing a Damoclean threat with a sheathed sword. . . . [C]ompetitors victimized by that tactic were rendered helpless and immobile so long as the patent owner refused to grasp the nettle and sue.”⁶⁵ The Federal Circuit, too, has noted the “[g]uerrilla-like” attacks of “the patent owner [who] attempts extra-judicial patent enforcement with scare-the-customer-and-run tactics . . . infect the competitive environment of the business community with uncertainty and insecurity.”⁶⁶ While declaratory judgment actions are supposed to prevent such hit-and-run antics which fall short of actual litigation, they currently cannot.⁶⁷

Some may argue that invalid patents should not deter competitors because invalidity would be a complete defense to any infringement suit brought by the patent-holder.⁶⁸ This position underestimates the role of rational fear in market entry decisions.⁶⁹ Patents deter market entry because competitors who sell infringing products could be liable for significant damages including, in the case of willful infringement, treble damages and attorneys’ fees.⁷⁰ These severe consequences deter market entry.⁷¹ Some firms may not risk infringing activity even if they

62. See *infra* notes 68–79 and accompanying text.

63. *Bresnick v. U.S. Vitamin Corp.*, 139 F.2d 239, 242 (2d Cir. 1943).

64. 28 U.S.C. § 2201 (2000).

65. *Cardinal Chem. Co. v. Morton Int’l, Inc.*, 508 U.S. 83, 95–96 (1993) (quoting *Arrowhead Indus. Water, Inc. v. Ecolochem, Inc.*, 846 F.2d 731, 734–35 (Fed. Cir. 1988)).

66. *Arrowhead Indus.*, 846 F.2d at 735.

67. See *infra* notes 199–235 and accompanying text.

68. See *Brunswick Corp. v. Riegel Textile Corp.*, 752 F.2d 261, 265 (7th Cir. 1984) (“[A] patent known to the trade to be invalid will not discourage competitors from making the patented product or using the patented process.”).

69. See Michael J. Meurer, *Controlling Opportunistic and Anticompetitive Intellectual Property Litigation*, 44 B.C. L. REV. 509, 515 (2003).

70. 35 U.S.C. § 284 (2000) (“[T]he court may increase the damages up to three times the amount found.”); 35 U.S.C. § 285 (“The court in exceptional cases may award reasonable attorney fees to the prevailing party.”).

71. See *Dreyfuss*, *supra* note 15, at 755 (“The existence of the patent—and the fear of an infringement action—may deter some potential rivals from com-

believe the dominant firm's patent is invalid because the costs of being wrong are too high.⁷² The probability of foregone entry increases with a firm's level of risk aversion and its lack of knowledge of substantive patent law.⁷³ In some cases, the fear of litigation could encourage particularly risk averse firms to "avoid market or research activities out of recognition of the vagaries of litigation results and the possibility of infringement liability."⁷⁴ More importantly, win or lose, the alleged infringer may end up paying millions in litigation costs. The direct litigation costs for patent litigation in which between \$1 million and \$25 million is at stake averaged \$2 million per side in 2003.⁷⁵ When the stakes rise above \$25 million, the average cost doubles to \$4 million per side.⁷⁶ These figures do not include indirect costs, such as reduced productivity.⁷⁷

Cost-benefit analysis shows how an invalid patent can deter a competitor's entry. The potential costs of entry, as just described, are staggering. In contrast, the potential benefits are diminished by the fact that the entrant will not earn monopoly profits since it will be competing against the current monopolist. Not only are the potential costs of patent-infringing market entry high, the patentee can reduce the potential entrant's perceived benefits of infringing and entering the market by engaging in limit pricing.⁷⁸ In reality, it is difficult for the potential entrant to perform a proper cost-benefit analysis because it is exceedingly difficult to estimate the probability of prevailing on an invalidity defense in a patent infringement suit. Yet, every such firm faces a serious gamble in deciding whether to enter a market and risk patent litigation, including possibly bankrupting damages. As a result, "patents have *in terrorem* effects: no

peting with the patentee and his licensees.").

72. See *infra* notes 156–59 and accompanying text.

73. Gregory Gelfand, *Expanding the Role of the Patent Office in Determining Patent Validity: A Proposal*, 65 CORNELL L. REV. 75, 97 (1979) ("A specious patent will continue to be useful for bluffing and threatening those who do not have the benefit of a patent counsel's advice or the resources to face even a sham lawsuit.").

74. Thomas, *supra* note 7, at 319.

75. AM. INTELLECTUAL PROP. LAW ASS'N., REPORT OF ECONOMIC SURVEY 22 (2003) [hereinafter AIPLA ECONOMIC SURVEY].

76. *Id.*

77. See *id.* at 21.

78. See Dreyfuss, *supra* note 15, at 700 ("If the first producer's pricing strategy is to take only a small profit on the innovation, competitors may decide it is not worth their while to imitate, leaving the field—even for a nonpatented invention—to the innovator and his licensees.").

one wants to invest in a business that cannot succeed without first winning a lawsuit.”⁷⁹

Furthermore, the *in terrorem* effect may extend beyond the firm’s balance sheet to the individual decision makers within the firm who are concerned about their own personal liability. Individual officers and directors can be held liable for inducing their firms to infringe a patent.⁸⁰ While the likelihood of individual liability may seem small, the prospect of personal bankruptcy provides a powerful incentive to avoid the risk of infringement.

The current enforcement requirement in *Walker Process*-type claims fails to appreciate how this fear of patent litigation can deter market entry. For example, the Federal Circuit has completely discounted a competitor’s contention

that a reasonable apprehension of suit arises when a patentee does nothing more than exercise its lawful commercial prerogatives and, in so doing, puts a competitor in the position of having to choose between abandoning a particular business venture or bringing matters to a head by engaging in arguably infringing activity.⁸¹

Yet it would be completely unreasonable for a competitor not to feel apprehensive about being sued if it knew that it was infringing the patent of a dominant firm, even if it believed that patent to be invalid.⁸² Never having entered a market or infringed a patent themselves, most federal judges are simply ill-equipped to understand the decision-making processes of business executives put in such a dilemma by a suspect patent. The *Walker Process* case itself shows how invalid patents can distort competition and allow the patent-holder to act like a monopolist. In its amicus brief in support of the petitioner, Walker

79. Rochelle Cooper Dreyfuss, *Are Business Method Patents Bad for Business?*, 16 SANTA CLARA COMPUTER & HIGH TECH. L.J. 263, 270 (2000).

80. See Mark A. Lemley, *Inducing Patent Infringement*, 39 U.C. DAVIS L. REV. 225, 229 (2005) (citing *Fuji Photo Film Co. v. Jazz Photo Corp.*, 394 F.3d 1368, 1378 (Fed. Cir. 2005); *Ferguson Beauregard/Logic Controls v. Mega Sys., LLC*, 350 F.3d 1327, 1341–42 (Fed. Cir. 2003); *Hoover Group, Inc. v. Custom Metalcraft, Inc.*, 84 F.3d 1408, 1411 (Fed. Cir. 1996); *Manville Sales Corp. v. Paramount Sys. Inc.*, 917 F.2d 544, 552–53 (Fed. Cir. 1990)).

81. *Cygnus Therapeutics Sys. v. ALZA Corp.*, 92 F.3d 1153, 1160 (Fed. Cir. 1996), *overruled on other grounds by Nobelpharma AB v. Implant Innovations, Inc.*, 141 F.3d 1059 (Fed. Cir. 1998).

Nonetheless, the district court in *Cygnus*—in a decision affirmed by the Federal Circuit—dismissed the declarations of doctors familiar with the pharmaceutical industry that reasonable competitors would interpret the patent-holder’s actions as manifesting an intent to sue, because it considered them to be more lay opinions than expert declarations. *Id.* at 1161 n.1.

82. See *supra* notes 78–79 and accompanying text.

Process, the government noted that:

[I]n the present case the record indicates that the patent apparently gave FMC broad market control. An FMC employee stated on deposition that it was “probably correct” that “throughout the life of the patent” FMC had “virtually no competition in the sale of swing diffusers[, the product over which FMC had an invalid patent].”⁸³

FMC’s invalid patent gave it the ability to act like a monopolist. Before its invalid patent expired, FMC charged \$150 per lineal foot of equipment; when the patent expired, the market price fell by two-thirds to \$50.⁸⁴ The facts underlying *Walker Process* demonstrate what patent scholars have long recognized: “[P]atents, even invalid patents, exert an influence on the market.”⁸⁵ There are presumably more instances of invalid patents creating monopoly power even though the patents are not actively enforced. However, firms rarely announce their decision to decline market entry as a result of others’ patents, valid or invalid.

In sum, so long as a would-be competitor believes that a market-dominating patent is valid or may be held valid by a court, it should rationally be deterred from entering the market, even if that patent is, in fact, invalid.⁸⁶

2. Increased Costs of Market Entry Caused by the Existence of Invalid Patents

The mere existence of a patent, valid or not, imposes many additional costs for a new firm considering entry into the market. Normally, start-up costs affect market entry. These costs generally include acquiring necessary physical inputs, hiring employees, raising capital, and the like. In a market dominated by one firm with a critical patent, a competitor cannot enter the market without first determining whether its own product

83. Brief for the United States as Amicus Curiae at 13, *Walker Process Equip., Inc. v. Food Mach. & Chem. Corp.*, 382 U.S. 172 (1965) (No. 602), reprinted in *ANTITRUST BRIEFS & ORAL ARGUMENTS*, *supra* note 25, at 737.

84. See Transcript of Oral Argument at 18, *Walker Process Equip., Inc. v. Food Mach. & Chem. Corp.*, 382 U.S. 172 (1965) (No. 602), reprinted in *ANTITRUST BRIEFS & ORAL ARGUMENTS*, *supra* note 25, at 765, 784 (statement of Charles J. Merriam on behalf of petitioner).

85. Dreyfuss, *supra* note 79, at 274.

86. FTC INNOVATION REPORT, *supra* note 7, ch. 1, at 31 (“In recent testimony before the House Judiciary Committee’s Subcommittee on Courts, the Internet, and Intellectual Property, the AIPLA stated that ‘[l]arge and small companies are increasingly being subjected to litigation (or its threat) on the basis of questionable patents.’ As noted earlier, invalid patents that confer market power unnecessarily thwart competition.” (footnote omitted)).

would infringe the existing patent and, if so, whether that patent is valid.⁸⁷ In short, a new entrant concerned about infringing an existing patent must pay to investigate the patent's scope and validity. Validity searches can be expensive and take a significant amount of time to conduct.⁸⁸ In addition to attorneys' fees, the firm considering market entry may have to pay engineers or others with an appropriate technical background to determine whether a particular patent is valid.⁸⁹ New competitors also must spend money to determine whether their new product will infringe that patent.

All of these costs pose a barrier to entry, and while they may not be an insurmountable barrier, each additional cost increases the risk that a potential entrant will find it uneconomical to compete against the patent-holder. At a minimum, the new market entrant must recoup the money spent on these costs, which will make it a less aggressive price competitor—the greater the start-up costs to recover, the higher the initial product price. The increased price harms consumers and benefits the initial monopolist, who can still charge a higher price than it would if the new competitor had a less expensive market entry.

These costs, as well as the threat of infringement litigation, may lead risk-averse potential competitors—or those unaware of a patent's doubtful validity—to seek licenses from the patent-holder. When the royalty payment demanded by the patentee is below the expected cost of litigation, a new competitor may accede to the demands. As a result, invalid patents also increase competitors' costs by inducing them to pay unjustified license fees.⁹⁰ In its report on patent law and competition, the

87. For a general discussion of why potential infringers should obtain advice of counsel prior to market entry, see *Knorr-Bremse Systeme Fuer Nutzfahrzeuge GmbH v. Dana Corp.*, 383 F.3d 1337 (Fed. Cir. 2004).

88. See Jeffery, *supra* note 19, at 789 (“Such ‘validity searches’ are extremely exhaustive investigations conducted primarily for litigation purposes, span several weeks, and consider every possible relevant publication—no matter how remote.”). *But see* Lemley, *supra* note 5, at 1510 (assuming prior art search costs to be between \$5000 and \$7000).

89. In many cases it would be exceedingly difficult for a new entrant to determine whether a patent is invalid. See *infra* Part II.B.3.

90. See *Blonder-Tongue Labs., Inc. v. Univ. of Ill. Found.*, 402 U.S. 313, 338 (1971) (arguing that “prospective [infringers] will often decide that paying royalties under a license or other settlement is preferable to the costly burden of challenging the patent,” even if they believe that the patent is invalid); *MedImmune Inc. v. Genentech Inc.*, 427 F.3d 958, 962–65 (Fed. Cir. 2005) (noting that plaintiff-appellant MedImmune argued it only continued to pay

FTC noted:

If the royalties are less than the expected value of potential litigation costs, firms may prefer to pay for the license. A number of panelists indicated that small firms, unable to bear the costs of litigation, are particularly likely to be forced to license, although some noted that large firms, with greater exposure, are also subject to *in terrorem* effects. In either case, entering an unnecessary license reduces the licensees' rewards and distorts their incentives to innovate or compete.⁹¹

In the event competitors cannot uncover the flaws of an invalid patent and opt not to take a license, they will have to invest additional funds into creating a noninfringing alternative product in order to enter the market.⁹² Some courts have asserted that one benefit of the patent system is its "so-called 'negative incentive' to 'design around' a competitor's products, even when they are patented, thus bringing a steady flow of innovations to the marketplace."⁹³ But viewing such designing around as a benefit assumes the patent was properly issued. If the patentee knows its patent is invalid while others do not, then compelling its competitors to design around that patent is simply a mechanism to raise rivals' costs illegitimately.⁹⁴ Fur-

royalties to avoid being sued by defendant-appellee, but declining to grant MedImmune standing to challenge the validity of the patent in question), *cert. granted*, 126 S.Ct. 1329 (2006).

91. FTC INNOVATION REPORT, *supra* note 7, ch. 5, at 2–3. The problem is by no means new. One commentator noted:

[T]he major defect of the Patent Act of 1793, which remained the law of the land until 1836, [was] . . . that anyone could obtain a patent for anything, merely by paying the requisite fee and meeting the ministerial requirements imposed. It mattered not that the supposed invention had already been patented or had long been known and used. The threat of litigation was sufficient for the owners of apparently invalid patents to obtain substantial royalties from literally hundreds and thousands of farmers, small businessmen, and artisans for whom it truly was cheaper to pay than to be involved in expensive and perhaps ruinous litigation.

Edward C. Walterscheid, *The Winged Gudgeon—An Early Patent Controversy*, 79 J. PAT. & TRADEMARK OFF. SOC'Y 533, 533 (1997).

92. See, e.g., FTC INNOVATION REPORT, *supra* note 7, ch. 2, at 22.

93. *State Indus., Inc. v. A.O. Smith Corp.*, 751 F.2d 1226, 1236 (Fed. Cir. 1985); see also *WMS Gaming, Inc. v. Int'l Game Tech.*, 184 F.3d 1339, 1355 (Fed. Cir. 1999) ("[P]atent law encourages competitors to design or invent around existing patents.").

94. See *infra* notes 121–26 and accompanying text. Although some argue that it is easy enough to design around a patent, design around attempts nonetheless occasionally result in liability for patent infringement. See Craig Allen Nard, *Certainty, Fence Building, and the Useful Arts*, 74 IND. L.J. 759, 793–94 (1999) (discussing *Westvaco Corp. v. Int'l Paper Co.*, 991 F.2d 735 (Fed. Cir. 1993)).

thermore, in many cases the product created through the design-around process is not better than the existing product (illegitimately protected by an invalid patent) and thus the process creates no social utility despite the significant investment of societal resources.⁹⁵ For example, in the FTC hearings on patents and competition, experts in the software industry “complained that design-around efforts may prove costly, duplicative, wasteful, and sometimes technologically impossible.”⁹⁶ In short, the costs of attempting to invent around an invalid patent constitute a barrier to entry imposed by the holder of the invalid patent.

3. Delay of Market Entry

Even if entry occurs before an invalid patent expires, a dominant firm’s maintenance of an invalid patent can nevertheless delay competitors’ entry into the market. As noted above, a competitor must investigate whether a market-dominating patent is, in fact, valid and likely infringed.⁹⁷ This investigation can delay market entry for months.⁹⁸

Infringement litigation involving invalid patents tends to further delay entry. When there is litigation over the patent’s validity, the time between the filing of litigation and the ultimate invalidation of a patent can be several years.⁹⁹ The ability of invalid patents to so delay entry is hardly new. Over half a century ago, Joseph Borkin described a case in which

95. FTC INNOVATION REPORT, *supra* note 7, ch. 2, at 22 (“In still other contexts the design-around may add little value, merely requiring that competitors ‘work harder to get to the same place.’”).

96. *Id.* ch. 3, at 50.

97. See Mark D. Janis, *Rethinking Reexamination: Toward A Viable Administrative Revocation System for U.S. Patent Law*, 11 HARV. J.L. & TECH. 1, 112–15 (1997) (discussing the benefits of pre-grant publication of patent applications).

98. See Lemley, *supra* note 5, at 1502 (“Validity requires a great deal of attention, however. In contrast to the eighteen hours an examiner will spend on a patent from start to finish, lawyers and technical experts will spend hundreds and perhaps even thousands of hours searching for and reading prior art, poring over the specification and prosecution history, and preparing and defending invalidity arguments.”).

99. See *United States v. Gen. Elec. Co.*, 80 F. Supp. 989, 1003 (S.D.N.Y. 1948) (“The striking feature of the record is that, although the first suit was filed in 1930, the patents were not judicially considered until 1940.”); Lemley, *supra* note 5, at 1520 (“Indeed, the average time between the issuance of a patent that would later be litigated and a final decision on its validity in litigation was 8.6 years. For many patents, the validity decision was not made until thirteen or fourteen years after the patent issued.”).

the almost prohibitory expense involved in the defending of an infringement suit gave the Carboloy Corporation many years time in which to build up an entrenched position in the cemented carbide field—a position based almost entirely on invalid patents. It was only after an unusually tenacious independent, spurning all offers of compromise, had forced Carboloy to carry the patents through to adjudication that the door was finally opened to competition. It is to be regretted that this result did not occur some twelve years earlier.¹⁰⁰

Being denied a license can delay competitors from entering a market controlled by a patent.¹⁰¹ But even if a competitor seeks to avoid patent infringement litigation by acquiring a license, this too introduces delay.¹⁰² Engaging in the process of negotiating for a license costs competitors money and delays market entry, regardless of the negotiation's outcome.¹⁰³

Case law illustrates how invalid patents can delay market entry. Again, *Walker Process* is instructive. Although there were rumors that FMC's patents were invalid, no other competitor entered the market, and it took four years after hearing these rumors for Walker Process to work up the courage to roll the dice and sell an infringing device.¹⁰⁴ In short, for several years FMC's invalid patent successfully delayed market entry.¹⁰⁵

A monopolist can profit handsomely by delaying competitor entry into the market. In the pharmaceutical reverse-payment cases, the makers of a patented drug were willing to pay tens of millions of dollars to the makers of generic drugs in exchange for delaying market entry for a few months.¹⁰⁶ Delayed entry is particularly important in those technology markets where the useful life of the patented product is less than five years. In such cases, by the time that competitors enter the market, the patent-holder has often extracted all of the value from the exclusionary power of the patent, even though it was invalid.

100. Joseph Borkin, *The Patent Infringement Suit—Ordeal by Trial*, 17 U. CHI. L. REV. 634, 644 (1950).

101. See *Cygnus Therapeutics Sys. v. ALZA Corp.*, 92 F.3d 1153, 1157–58 (Fed. Cir. 1996).

102. *Id.*

103. *Id.* at 1158.

104. Transcript of Oral Argument, *supra* note 84, at 3, reprinted in ANTI-TRUST BRIEFS & ORAL ARGUMENTS, *supra* note 25, at 745 (statement of Charles J. Merriam on behalf of petitioner).

105. Astonishingly, FMC brought an infringement suit, even though its invalid patent would expire in a few months. *Id.*

106. See, e.g., *Valley Drug Co. v. Geneva Pharms., Inc.*, 344 F.3d 1294, 1297, 1300–01 (11th Cir. 2003).

But the holder of the invalid patent can, by delaying competitors' entry, gain more than simply short-term profits until competitors eventually enter the market. In general, there is often a first-mover advantage in business.¹⁰⁷ Maintaining a patent—even an invalid patent—that increases the patentee's lead time can thus increase profits both immediately and in the long run. Even if the patent is later invalidated, the delay in competitors' market entry may give the patentee a significant advantage. Between the time the patent is issued and the time it is invalidated, consumer loyalty and other business relationships may take hold.¹⁰⁸ The longer an invalid patent remains in the market, the greater the chance for longer-term anticompetitive effects. Discussing business method patents, Professor Rochelle Dreyfuss noted that in the period between patent issuance and invalidation, a market can experience shake outs in which efficient firms are driven from the market.¹⁰⁹ Unfortunately, firms can employ invalid patents to create such profit-increasing inefficiencies.

If the holder of the invalid patent secures a sufficient lead time under some market structures, the invalidation of the patent may still not afford competitors a meaningful opportunity to compete. Most notably, in markets characterized by network effects,¹¹⁰ a patented product may become entrenched as the standard and remain the standard even upon patent invalidation or expiration. This result may be particularly prevalent with business method patents.¹¹¹ Thus, if there are network or lock-in effects, invalidating the patent will not necessarily reduce a patentee's sales significantly even after the patent is invalidated.

In sum, even if an invalid patent does not foreclose competition completely, the maintenance of an invalid patent can de-

107. See Dreyfuss, *supra* note 79, at 270.

108. See, e.g., *id.* ("In some fields, there is another, more enduring, problem. Take law and medicine: substantial relationships are built (lawyer and client, doctor and patient). Once loyalty develops, whatever business method drew the client to the provider becomes irrelevant . . .").

109. See *id.*

110. See Michael L. Katz & Carl Shapiro, *Network Externalities, Competition, and Compatibility*, 75 AM. ECON. REV. 424, 424 (1985) (describing network effects as a characteristic of "products for which the utility that a user derives from consumption of the good increases with the number of other agents consuming the good").

111. Dreyfuss, *supra* note 79, at 271–72; see also Thomas, *supra* note 7, at 321 ("In sum, patent rights, even ones of dubious validity and limited lifespan, appear to accelerate the anticompetitive aspects of information products.").

ter market entry. Because delayed entry is inefficient and anti-competitive, courts have held that “improperly prolonging a monopoly is as much an offense against the Sherman Act as is wrongfully acquiring market power in the first place.”¹¹² This insight should be applied to *Walker Process* jurisprudence.

4. Scaring Away Competitors’ Customers and Venture Capital

The presence of an invalid patent can also prevent a market entrant from entering into necessary business relationships. A patent-holder is within its rights to “distribute circulars notifying a competitor’s customers of the pendency of an infringement suit and warning them of similar actions,” so long as the patentee’s communications are accurate and its patent is valid.¹¹³ However, holders of invalid patents sometimes threaten to sue the prospective customers of their competitors for patent infringement.¹¹⁴ A patent-holder’s statements to the market regarding its intent to enforce its patent can deter customers from doing business with a potential competitor because the customer could possibly be liable for patent infringement.¹¹⁵ But the patentee need not make explicit threats to disrupt the business relationships of its competitors with their customers. Rumor and innuendo alone can make customers skittish about doing business with a potential infringer.¹¹⁶ No actual enforce-

112. *Xechem, Inc. v. Bristol-Myers Squibb Co.*, 372 F.3d 899, 902 (7th Cir. 2004).

113. *Chromium Indus., Inc v. Mirror Polishing & Plating Co.*, 448 F. Supp. 544, 558–59 (N.D. Ill. 1978).

114. *See Dow Chem. Co. v. Exxon Corp.*, 139 F.3d 1470, 1472, 1477 (Fed. Cir. 1998), *discussed in In re Ciprofloxacin Hydrochloride Antitrust Litig.*, 363 F. Supp. 2d 514, 544 (E.D.N.Y. 2005) (“Dow alleged that Exxon had threatened to sue actual and prospective Dow customers for patent infringement, even though Exxon allegedly had no good-faith belief that Dow infringed the patent when Exxon made the threats and had allegedly obtained the patent by inequitable conduct.”).

115. *See Cygnus Therapeutics Sys. v. ALZA Corp.*, 92 F.3d 1153, 1157–58 (Fed. Cir. 1996); *Sticker Indus. Supply Corp. v. Blaw-Knox Co.*, 367 F.2d 744, 747 (7th Cir. 1966); Borkin, *supra* note 100, at 641 (“Contributory infringement is a potent discouragement to buyers, . . . and can serve as an effective side-attack to cut off the economic support of a small producer.”).

116. *See, e.g., Bourns, Inc. v. Raychem Corp.*, 331 F.3d 704, 714 (9th Cir. 2003) (Pregerson, J., concurring in part and dissenting in part) (“Finally, Raychem informed its customers that Bourns’ potential PPTC products would be in violation of its patents.”); *Baxa Corp. v. McGaw, Inc.*, 996 F. Supp. 1044, 1047 (D. Colo. 1998) (stipulating as fact that in the case at bar, one letter from the patent-holder’s attorney was sufficient to cause the customer to dissolve a business deal with competitor).

ment, or even a direct threat of litigation, is required to create anticompetitive effects.

Customer fears of infringement litigation can impose a powerful chill on new entry into the market. While a new competitor may risk an infringement suit because it is the only way to enter that market, its customers can always take the low-risk route of buying products from the patentee or its licensees. If a firm's customers are scared away because of fear of infringement suits for buying from the patentee's competitors, then that firm cannot make sales and will likely not survive in the market. If the patent that deters customers from purchasing from a competitor is invalid, then the patent-holder is gaining market share through improper exclusionary conduct. At a minimum, the specter of possible litigation will increase the cost of market entry, as the new competitor must negotiate with its own customers, quell their fears, and perhaps even agree to indemnify them.¹¹⁷

Even if the potential upstart concludes that the dominant firm's patent is invalid, it may have difficulty getting the financing necessary to enter the market when its product clearly infringes an existing—albeit invalid—patent. Venture capitalists do not eagerly embrace business models based on a product that infringes the patent of a dominant player when assertions of invalidity cannot be tested before entering the market.¹¹⁸ Litigation costs and unnecessary licensing fees could prove prohibitive for a start-up and could make it much more difficult to raise the necessary funds, as venture capitalists see increasing costs and decreasing potential market share.¹¹⁹ As a result, the “threat of being sued for infringement by an incumbent—even on a meritless claim—may ‘scare . . . away’ venture capital financing.”¹²⁰ If a new firm is unable to obtain necessary financ-

117. See, e.g., *Arrowhead Indus. Water, Inc. v. Ecolochem, Inc.*, 846 F.2d 731, 733 (Fed. Cir. 1988); *Am. Needle & Novelty Co. v. Schuessler Knitting Mills, Inc.*, 379 F.2d 376, 378 (7th Cir. 1967); *BMC Res., Inc. v. Paymentech, L.P.*, No. 3-03-CV-1927-M, 2004 WL 981079, at *1–2 (N.D. Tex. May 5, 2004).

118. See *Handgards, Inc. v. Ethicon, Inc.*, 601 F.2d 986, 995 n.15 (9th Cir. 1979) (“Mr. Campbell, a past employee of [a venture capital lender], also testified that his company would not become involved in underwriting the sale of Handgards's stock, because of the pendency of the infringement suit.”).

119. Cf. *id.* at 991 (noting the alleged infringer's argument that it “found itself unable to obtain outside financing necessary for it to remain competitive in the industry” following the initiation of patent litigation).

120. FTC INNOVATION REPORT, *supra* note 7, ch. 2, at 8 (quoting *Competition and Intellectual Property Law and Policy in the Knowledge-Based Econ-*

ing, then it could be excluded from the market entirely. If the threat of litigation increases the cost of capital, the incumbent will be a less efficient competitor. Either way, the holder of the invalid patent profits by deterring market entry.

5. Reduction of Consumer Welfare and Innovation

By deterring market entry and allowing the patent-holder to behave like a monopolist (in those situations where the patent confers market power), invalid patents can result in supra-competitive pricing, reduced quantity, and the attendant dead-weight loss. Society may be willing to accept these consequences when a patent is valid; but if the patent is invalid, these high costs are imposed on society without any counter-vailing benefits.¹²¹ When the patentee knows its patent is invalid and yet is able to act like a monopolist, the patentee inflicts antitrust injury on consumers.¹²²

In addition to the usual harms associated with monopoly pricing, deterring competitors through the maintenance of invalid patents can distort product improvements. Because “improvements on the patent cannot be practiced without the permission of the patentee,”¹²³ competitors fearful of infringement litigation may decline to invest in research and development (R&D) in areas tainted by invalid (but unexposed) patents.¹²⁴ At the FTC hearings, panelists suggested that “improperly awarded patents may distort firms’ research choices and influence them to shun whole areas of R&D activity.”¹²⁵ This reac-

omy: *FTC/DOJ Hearings* (2002) (statement of Harvard Business School Professor Joshua Lerner)).

121. See *Precision Instrument Mfg. Co. v. Auto Maint. Mach. Co.*, 324 U.S. 806, 816 (1945) (“A patent by its very nature is affected with a public interest. . . . [It] is an exception to the general rule against monopolies and to the right to access to a free and open market. The far-reaching social and economic consequences of a patent, therefore, give the public a paramount interest in seeing that patent monopolies spring from backgrounds free from fraud or other inequitable conduct and that such monopolies are kept within their legitimate scope.”).

122. Ayres & Klemperer, *supra* note 61, at 1019 (arguing that enforcement of invalid patents distorts competitive pricing).

123. Dreyfuss, *supra* note 15, at 735.

124. See Mark A. Lemley, *Property, Intellectual Property, and Free Riding*, 83 TEX. L. REV. 1031, 1060 (2005).

125. FTC INNOVATION REPORT, *supra* note 7, ch. 5, at 2. Particularly in biotechnology markets, firms may “avoid infringing questionable patents and therefore will refrain from entering or continuing with a particular field of research that such patents appear to cover. Such effects deter market entry and follow-on innovation by competitors and increase the potential for the holder of

tion harms consumers by stifling technological advancement. While it is possible that some competitors may design around the patent, in at least some instances competitors may be deterred by these additional entry costs.¹²⁶ Moreover, consumers will have to pay these additional research costs, which firms would not have had to incur if they did not have to design around the invalid patent.

6. Willful Ignorance of Invalid Patents?

There are some arguments for the proposition that invalid patents do not distort market entry. One possibility is that a firm that is considering whether to enter a new market may make a conscious decision not to do a patent search. The mere ownership of a patent can only deter entry if the new competitor actually knows the patent exists (independent of whether it suspects the patent is invalid). Some evidence suggests that some new entrants do not actually search the PTO's patent database to determine whether they might be infringing an existing patent.¹²⁷ Some scholars argue that, at least in some cases, firms do not search for patents because if the firm were aware of a patent and proceeded anyway, any infringement would be considered willful, and the company would be liable for treble damages.¹²⁸ Companies determined to enter a market may thus decide against investigating the presence of patents.

While this scholarship no doubt accurately describes the behavior of some firms, many new entrants go to great pains to insure that their products and processes are not, in fact, infringing an issued patent. Thus, while many companies do not search for patents, many others do, and they may be deterred

a questionable patent to suppress competition." *Id.* Executive Summary, at 5–6, *see also id.* ch. 3, at 54 ("Questionable patents may have a disproportionately adverse impact on entry by small firms and individuals who lack the resources to challenge such patents. As one software programmer commented, 'the ease with which the US Patent Office has been granting patents in the last few years has already dampened my plans to write software as a primary business.'" (citation omitted)).

126. *See supra* notes 92–96 and accompanying text.

127. *See* Mark A. Lemley & Ragesh K. Tangri, *Ending Patent Law's Willfulness Game*, 18 BERKELEY TECH. L.J. 1085, 1100–01 (2003) ("[I]n-house patent counsel and many outside lawyers regularly advise their clients not to read patents if there is any way to avoid it.").

128. *See* Timothy R. Holbrook, *Possession in Patent Law*, 59 SMU L. REV. 123, 142–43 (2006); Lemley & Tangri, *supra* note 127, at 1089.

from entry by an existing, but invalid, patent.¹²⁹ Furthermore, many patentees—including some that hold invalid patents—advertise the existence of their patents. Finally, if willful ignorance describes most firms' behavior, then even valid patents would not deter market entry. After all, if a firm pursues the willful ignorance strategy, then the firm will be ignorant of all patents, whether valid or not. But there is much evidence to indicate that the presence of valid patents does, in fact, deter firms from entering markets when they fear an infringement lawsuit.¹³⁰ In sum, instances of willful ignorance do not negate the fact that there may be instances when the presence of invalid patents nevertheless deters market entry.¹³¹

B. INVALID PATENTS CAN DETER MARKET ENTRY REGARDLESS OF WHETHER OTHER FIRMS KNOW OR SUSPECT INVALIDITY.

It might seem that an invalid patent would not deter competitors who suspect or strongly believe that the patent is invalid. But invalid patents can distort competition regardless of the state of competitors' knowledge. This Subsection argues that a monopolist's mere maintenance of an invalid patent could deter competition in three scenarios: (1) where a potential competitor has no basis for thinking the patent is invalid; (2) where a potential competitor strongly believes that the patent is invalid and has some basis for its belief; and (3) where a potential competitor suspects the patent is invalid, but has insufficient proof to establish invalidity. In all of these situations, the mere ownership of an invalid patent could be exclusionary.

1. No Basis for Thinking a Patent is Invalid

The belief that a patent is valid deters entry by competitors.¹³² If patents deter market entry generally, then invalid patents will deter market entry just as effectively as valid patents when the invalidity is unknown. A rational competitor will

129. To the extent that a potential competitor does not know about a monopolist's patent, the causation requirement will prevent that competitor from bringing a cause of action for the patentee's refusal to disavow an invalid patent. See *infra* Part IV.A.3 (discussing causation).

130. See Nard, *supra* note 94, at 759.

131. When the invalid patent does deter entry, resulting in monopoly power for the patentee, then Section Two of the Sherman Act is implicated. 15 U.S.C. § 2 (2000). Of course, if the new entrant does in fact enter the market, then it has no Section Two claim based on the maintenance of an invalid patent.

132. See Nard, *supra* note 94, at 759.

not enter a market protected by patents when entry necessarily entails infringement of those patents and the competitor perceives the patents to be valid.¹³³

In many instances, a potential competitor may have no reason to know that a patent is invalid even if the patent-holder knows with certainty that its patent is invalid. An issued patent may turn out to be invalid for a variety of reasons, but many of the bases for invalidation are difficult for outside competitors to evaluate. This section will discuss three scenarios in which a patentee could likely know its patent is invalid while its competitors would not: the on-sale bar, the public-use bar, and the public knowledge bar.

First, a patentee may know its patent is invalid while its competitors do not because the patent is invalid under the on-sale bar. Section 102(b) of the Patent Act provides that a patent should not issue if anyone sold or offered to sell the patented invention in the United States more than one year before the patent application's filing date.¹³⁴ A single offer to sell triggers the on-sale bar.¹³⁵ In most cases, potential competitors would have no way of knowing whether the patentee concealed an offer for sale more than a year before the critical date.¹³⁶ This is not public information that is collected in any meaningful way or stored in any central location. Ordinarily, only the patentee could know with any certainty.¹³⁷

133. See *id.* (noting "the patentee's ability to send a clearly defined message of deterrence to competitors").

134. 35 U.S.C. § 102(b) (2000).

135. A.B. Chance Co. v. RTE Corp., 854 F.2d 1307, 1311 (Fed. Cir. 1988); see also *In re Terazosin Hydrochloride Antitrust Litig.*, 352 F. Supp. 2d 1279, 1304 (S.D. Fla. 2005) ("The 'on-sale bar' does not require sustained commercial activity, advertising, or displays. On the contrary, a single sale or even a single offer to sell is sufficient to trigger the statutory bar." (citing *In re Caveney*, 761 F.2d 671, 676 (Fed. Cir. 1985))). The offer need not be accepted to implicate the on-sale bar. See *Scaltech, Inc. v. Retec/Tetra, LLC*, 269 F.3d 1321, 1328 (Fed. Cir. 2001); Timothy R. Holbrook, *Liability for the "Threat of a Sale": Assessing Patent Infringement for Offering to Sell an Invention and Implications for the On-Sale Patentability Bar and Other Forms of Infringement*, 43 SANTA CLARA L. REV. 751, 771-73 (2003) (discussing standards for the on-sale bar).

136. See Timothy R. Holbrook, *The More Things Change, The More They Stay the Same: Implications of Pfaff v. Wells Electronics, Inc. and the Quest for Predictability in the On-Sale Bar*, 15 BERKELEY TECH. L.J. 933, 965 (2000) ("[A]n offer need not be generally publicly available.").

137. Even the offeree may not know the patent is invalid given that most offerees would not follow the patent application process more than a year after a turned-down offer. And the potential competitor might not have any reason to know of the offeree's existence.

Second, Section 102(b) also precludes the issuance of a patent if anyone has made public use of the invention more than one year before the patent application was filed.¹³⁸ Because the use must be “public,” it would seem that competitors could easily discover whether this bar makes a patent invalid. However, the concept of public use for patent purposes is quite expansive; even relatively clandestine uses can trigger Section 102(b). The Federal Circuit has held that “an inventor’s own prior commercial use, albeit kept secret, may constitute a public use or sale under § 102(b), barring him from obtaining a patent.”¹³⁹ Even when the inventor takes explicit action to keep the patent secret, if it used the claimed invention for commercial advantage more than one year before filing for a patent, the public use bar precludes a patent from issuing. Should the PTO nevertheless issue the patent unaware of the secret conduct, that patent is rightly considered invalid.¹⁴⁰ Despite a patent’s invalidity under these applications of the public use bar, a potential competitor deterred from entering the market for fear of infringing the patent would have no basis for knowing of the patent’s invalidity. In short, the public use bar to patentability could render a patent invalid in a manner that would keep potential competitors unaware of the patent’s invalidity.

Third, a patentee may know about some bases for invalidity when its competitors do not, even though neither has special access to the necessary information; one example is prior knowledge or use. Under Section 102(a), a patent should not issue if the described “invention was known to or used by others in this country before the date of the patentee’s invention.”¹⁴¹ The sources of patent-precluding public knowledge include “[e]very book, journal article, leaflet, and student thesis pub-

138. 35 U.S.C. § 102(b) (2000).

139. *Woodland Trust v. Flowertree Nursery, Inc.*, 148 F.3d 1368, 1370 (Fed. Cir. 1998) (citing *Egbert v. Lippman*, 104 U.S. 333, 336 (1881), for the proposition that an “inventor’s unobservable prior use was a ‘public use’”).

140. See *New Railhead Mfg., LLC v. Vermeer Mfg. Co.*, 298 F.3d 1290, 1297 (Fed. Cir. 2002) (“The statutory phrase ‘public use’ does not necessarily mean open and visible in the ordinary sense; it includes any use of the claimed invention by a person other than the inventor who is under no limitation, restriction, or obligation of secrecy to the inventor.”); *TP Labs., Inc. v. Prof’l Positioners, Inc.*, 724 F.2d 965 (Fed. Cir. 1984) (“Nor, it must be added, is all secret use *ipso facto* not ‘public use’ within the meaning of the statute, if the inventor is making commercial use of the invention under circumstances which preserve its secrecy.”); 1 IRVING KAYTON, PATENT PRACTICE § 4.41 (6th ed. 1995).

141. *Woodland Trust*, 148 F.3d at 1370.

lished anywhere in the world in any language.”¹⁴² It can be exceedingly difficult for either a patent applicant or its competitors to uncover relevant prior art, especially when it is buried in arcane or hard-to-find texts. However, when the patentee has been in the business longer—with a larger workforce of researchers—the patentee is more likely than a would-be competitor to know of the patent-invalidating public knowledge or use. Such informational asymmetry can profoundly impact competition.

In sum, all three of the above scenarios show that relevant prior art can be relatively inaccessible to potential competitors even if the patentee is aware of it, and in some cases, the patentee will be uniquely positioned to know about prior art. If the evidence of a patent’s invalidity is solely within the control of the patentee, and if would-be entrants do not suspect the monopolist’s patent to be invalid, then the monopolist may hold onto its market power through deception, rather than through efficiency, superior product, or ingenuity of product or process.

2. Strong Belief That a Patent is Invalid

Even when a potential entrant believes with reasonable certainty that the dominant firm’s relevant patent is invalid, that patent could still potentially deter the would-be competitor from entering the market. Judge Posner has argued that if a potential competitor believes that the monopolist’s patent is invalid, then the new entrant can simply enter the market.¹⁴³ The monopolist will respond in one of two ways: do nothing or enforce its patent. If the monopolist does nothing, then the new entrant can compete.¹⁴⁴ If the monopolist enforces the patent—either by threatening litigation or by actually filing suit—then the new competitor can counterclaim under Section Two of the Sherman Act using either a *Walker Process* or *Handgards* claim, depending on the reasons for the patent’s invalidity.¹⁴⁵ Under the first scenario, if the monopolist initially does nothing the competitor will endure the constant (albeit unexpressed) threat of litigation, which can dissuade both customers and

142. Thomas, *supra* note 7, at 313.

143. Brunswick Corp. v. Riegel Textile Corp., 752 F.2d 261, 265 (7th Cir. 1984) (“[A] patent known to the trade to be invalid will not discourage competitors from making the patented product or using the patented process.”).

144. *Id.*

145. *Id.*

venture capitalists from fully engaging with the new entrant.¹⁴⁶ Under the second scenario, the company risks losing the litigation and going bankrupt, even if the patent is in fact invalid. Even if the would-be competitor successfully defends against the infringement suit, the anticipated litigation costs can be so high as to deter market entry.¹⁴⁷

A competitor who strongly believes that the dominant firm's patent is invalid may still be reluctant to enter the market because of the difficulty of prevailing in court. Patent law includes several legal presumptions that make it hard for the infringement defendant to prove patent invalidity as a defense. Courts treat patents issued by the PTO as "presumptively valid."¹⁴⁸ This presumption of validity applies even to evidence, such as prior art, that the PTO was never aware of and never considered.¹⁴⁹ The presumption means that persons challenging the validity of a patent must prove their arguments by clear and convincing evidence, rather than a mere preponderance.¹⁵⁰ This evidentiary standard "may work to undermine the role contemplated by the patent system for court challenges to weed out faulty patents."¹⁵¹

Furthermore, federal courts have increased the challenger's burden of proving the invalidity of an issued patent by rejecting arguments of prior use based on testimonial evidence if the testimony is not also corroborated by documentary proof

146. See *supra* notes 68–72 and accompanying text.

147. See *supra* notes 59–79 and accompanying text.

148. *Abbott Labs. v. Geneva Pharms., Inc.*, 182 F.3d 1315, 1318 (Fed. Cir. 1999) (citing 35 U.S.C. § 282 (1994)).

149. *Kahn v. Gen. Motors Corp.*, 135 F.3d 1472, 1480 (Fed. Cir. 1998) ("The presentation of evidence that was not before the examiner does not change the presumption of validity.").

150. See *Al-Site Corp. v. VSI Int'l, Inc.*, 174 F.3d 1308, 1323 (Fed. Cir. 1999); *Laitram Mach., Inc. v. Carnitech A/S*, 884 F. Supp. 1074, 1084 (E.D. La. 1995).

Thus, an infringement defendant relying upon the public use doctrine has a burden of proving such use with clear and convincing evidence. See *Allied Colloids, Inc. v. Am. Cyanamid Co.*, 64 F.3d 1570, 1574 (Fed. Cir. 1995). Similarly, any prior sale that would invalidate the patent under the on-sale bar must be proved by clear and convincing evidence. *Baxa Corp. v. McGaw, Inc.*, 996 F.Supp. 1044, 1053 (D. Colo. 1997) (citing *Baker Oil Tools, Inc. v. Geo Vann, Inc.*, 828 F.2d 1558, 1563 (Fed. Cir. 1987)).

151. FTC INNOVATION REPORT, *supra* note 7, ch. 5, at 27 (noting concerns of District Judge Ellis); see also *id.* Executive Summary, at 8 (questioning the clear and convincing evidence standard as applied to the patent validity issue).

or the testimony of an additional witness.¹⁵² No matter how credible an individual witness, the Federal Circuit has held that uncorroborated testimonial “evidence is insufficient as a matter of law to establish invalidity of the patent. This is not a judgment that [the witness’s] testimony is incredible, but simply that such testimony alone cannot surmount the hurdle that the clear and convincing evidence standard imposes in proving patent invalidity.”¹⁵³ This leads to the anomalous situation where some “permissible sources of prior art, such as sales offers or knowledge, need not have been formally documented at all,”¹⁵⁴ while the party challenging the patent’s validity nevertheless needs documentation if another informed witness is not available to testify. These evidentiary burdens can be too great for a competitor to overcome, and it may decline to enter the market even when it believes the patent in question is, in fact, invalid.

In addition to the evidentiary hurdles, any competitor considering infringement en route to market entry would be aware that the litigation costs of any subsequent infringement suit could be astronomical. Patent litigation costs measure in the billions,¹⁵⁵ the average cost per suit in the millions.¹⁵⁶ In fields such as biotechnology, the anticipated litigation costs can exceed the expected revenue of market participation.¹⁵⁷ Given the costs of patent litigation, even if a firm is convinced that its rival’s patent is invalid, the firm may conclude that it is more beneficial to license the patent than to challenge its validity.¹⁵⁸

Uncertainty increases the deterrent effect of invalid patents. While the result of any litigation is uncertain, it is par-

152. See *Finnigan Corp. v. U.S. Int’l Trade Comm’n*, 180 F.3d 1354, 1369–70 (Fed. Cir. 1999).

153. *Id.* at 1370 (citing *Mahurkar v. C.R. Bard, Inc.*, 79 F.3d 1572, 1577 (Fed. Cir. 1996)).

154. Thomas, *supra* note 7, at 313.

155. See Josh Lerner, *Patenting in the Shadow of Competitors*, 38 J.L. & ECON. 463, 470 (1995) (“[T]he patent litigation within USPTO and the federal courts begun in 1991 will lead to total legal expenditures (in 1991 dollars) of about \$1 billion, a substantial amount relative to the \$3.7 billion spent by U.S. firms on basic research in 1991.”); Ayres & Klemperer, *supra* note 61, at 1014 (“In the real world, infringement litigation carries with it significant costs.”).

156. AIPLA ECONOMIC SURVEY, *supra* note 75, at 22. A patentee’s efforts at concealing an invalid patent can increase litigation costs even further.

157. FTC INNOVATION REPORT, *supra* note 7, ch. 3, at 22.

158. See *Painton & Co. v. Bourns, Inc.*, 442 F.2d 216, 225 (2d Cir. 1971); Borkin, *supra* note 100, at 641 (“[W]ith respect to competition, the fact of litigation may in itself be decisive, regardless of any outcome in court.”).

ticularly so in patent infringement suits because courts routinely make mistakes in patent litigation.¹⁵⁹ Federal judges themselves sometimes admit that in patent litigation “it is well-known that courts are far from error-free.”¹⁶⁰

The only thing more fear-inspiring to the infringement defendant than a bench trial is a jury trial. Juries are significantly more likely to rule for a plaintiff-patentee than are judges.¹⁶¹ Patent juries favor patentees and are more likely to find that a patent is both valid and infringed. In her comprehensive empirical study of all patent cases that went to trial during the seventeen-year period of 1983–99, Professor Kimberly Moore found that juries were “significantly pro-patentee in suits for infringement,” with patentees winning sixty-eight percent of the time.¹⁶² Jury consultants that study juror perceptions have concluded that juries believe that “patents are almost impossible to get, . . . they last forever, . . . they can’t be invalidated,” that “patent applications are thoroughly reviewed by the Patent Office, and [that] patent applicants don’t lie.”¹⁶³ In addition, juries defer to the perceived expertise of the PTO, which issued the patent as valid.¹⁶⁴ Any jury errors are unlikely to be corrected on appeal. Professor Moore explains that

the standard of review the court employs when reviewing jury verdicts on factual questions, substantial evidence, is highly deferential. . . . [A]nd more importantly, the black box nature of jury verdicts makes them virtually unreviewable. Without any insight into the de-

159. See Kimberly A. Moore, *Are District Court Judges Equipped to Resolve Patent Cases?*, 15 HARV. J.L. & TECH. 1, 2 (2001) (finding that district court judges improperly construe patent claim language in one-third of cases appealed to the Federal Circuit).

160. *In re Ciprofloxacin Hydrochloride Antitrust Litig.*, 363 F. Supp. 2d 514, 540 (E.D.N.Y. 2005).

161. See Kimberly A. Moore, *Judges, Juries, and Patent Cases—An Empirical Peek Inside the Black Box*, 99 MICH. L. REV. 365, 386 (2000) (“When the jury is the adjudicator, the patent holder prevails in 63% of all claims and 68% of all suits. When the judge is the adjudicator, the patent holder succeeds in 49% of all claims and 51% of all suits.”).

162. *Id.* at 213 (noting that the patentee won thirty-eight percent of the cases when defending against a declaratory judgment action).

163. Nicholas M. Cannella & Timothy J. Kelly, *Jury Trials and Mock Jury Trials*, in PRACTICING LAW INST., PATENT LITIGATION 1993, at 731, 741–42 (PLI Patents, Copyrights, Trademarks, and Literary Property, Handbook Series No. G-375, 1993).

164. See ETHAN HOROWITZ & LESTER HOROWITZ, PATENT LITIGATION: PROCEDURE & TACTICS § 2.02[6] (1971).

cision-making process, the court is unable to assess the accuracy of the decision or its analysis.¹⁶⁵

As a result, “the Federal Circuit has limited ability to identify and correct jury inadequacies.”¹⁶⁶ Despite these problems, the alleged infringer cannot easily escape a pro-patentee jury, since the plaintiff suing for damages has a constitutional right to a jury trial.¹⁶⁷

All of this bodes ill for the patent infringement defendant. Professor Moore’s empirical findings “suggest that the patent holder has an edge on almost every issue in front of any adjudicator.”¹⁶⁸ This advantage must affect the mindset of potential market entrants, and the perceptions of would-be competitors are key. If potential entrants believe that juries will be biased against them, they are less likely to infringe by entering the market. At a minimum, this perception injects a large measure of uncertainty into patent litigation. Unfortunately, courts have talked about this uncertainty as a reason to protect the patentee.¹⁶⁹ But this uncertainty also deters new entrants even when a patent is invalid.

Given the risk of judicial error and staggering damages imposed against infringers, basic cost-benefit analysis may dictate against entering a market covered by an invalid patent, even if the competitor thinks it is more likely than not that it will win the litigation. For a new firm without high cash reserves and whose main product has just been challenged in court, inviting or defending against patent infringement litigation is a bet-the-company business strategy. If a federal court were to conclude incorrectly that an invalid patent is valid, then the new company would be driven into bankruptcy. If the likely costs (i.e., the probability of losing the infringement suit multiplied by the damages from losing, plus litigation costs) are greater than the expected profits from selling potentially in-

165. Kimberly A. Moore, *Juries, Patent Cases and a Lack of Transparency*, 39 HOUS. L. REV. 779, 790–91 (2002).

166. Moore, *supra* note 161, at 401.

167. See *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 377 (1996); *In re Tech. Licensing Corp.*, 423 F.3d 1286, 1291 (Fed. Cir. 2005) (*per curiam*) (holding that the patentee suing only for injunctive relief does not have a constitutional right to trial by jury).

168. Moore, *supra* note 161, at 391.

169. See, e.g., *In re Ciprofloxacin Hydrochloride Antitrust Litig.*, 363 F. Supp. 2d 514, 525 (E.D.N.Y. 2005) (“[T]he asymmetries of risk inherent in Hatch-Waxman patent litigation and the high profits at stake could induce even a confident patentee to pay a substantial sum in settlement.”).

fringing products, then the rational firm will not compete even though the product is not protected by a valid patent. In other words, the stakes are high and many rational firms avoid such high-stakes gambits.

In conclusion, the cost of the infringement suit could deter a potential competitor from entering the market (in a way that infringes the invalid patent) even if the competitor believes that it would ultimately prevail in the litigation.¹⁷⁰ It is simply too risky to produce the potentially infringing product and invite a lawsuit. Courts reach the wrong results in patent cases too often. As a result, the cost of the litigation and the risk of losing combine to make non-entry the rational business decision.

3. Mere Suspicion of Patent Invalidity

For the same reasons that a firm that is confident that a monopolist's patent is invalid might not enter the market, a firm merely suspicious of patent invalidity could be deterred as well. Being dubious of a dominant firm's patent, would-be competitors might approach the monopolist and express their suspicions. But this action triggers no duty upon the patent-holder to admit the invalidity of a patent that the patentee knows to be invalid, or to investigate the rumor. Neither patent law nor antitrust law aids the suspicious competitor. Patent law imposes no relevant continuing duties on patentees, and merely being told by one's competitors that one's patents are invalid does not rise to the level of knowledge that is necessary to trigger *Walker Process* liability.¹⁷¹ Furthermore, high costs may deter competitors from performing their own investigations.¹⁷²

170. The decision to enter the market will be a function of the expected rewards of market entry. If the expected rewards of competing exceed the expected costs of losing an infringement suit (times the probability of being sued and losing), then a rational firm may enter despite the suspect patent. However, if the profits from entry are small relative to the litigation risks, entry will be deterred.

171. See *Argus Chem. Corp. v. Fibre Glass-Evercoat Co.*, 812 F.2d 1381, 1386 (Fed. Cir. 1987) ("The allegation by an accused infringer that the patent is invalid—an assertion frequently made by those charged with infringement—cannot be turned into evidence that the patentee knew the patent was invalid when it instituted an infringement suit.").

172. Even if a potential competitor hears that a monopolist's patent is potentially invalid, it may cost a significant amount of money to determine whether one's suspicions are accurate. The investigation process may be streamlined and become more centralized as patent bounty hunters hone their craft. For example, some entrepreneurs have created operations where a pat-

Even with investigation, it may be too hard for suspicious competitors to detect fraud on their own. The *Walker Process* case itself provides an excellent example. Walker Process had heard a rumor that the patent of its competitor FMC was invalid because FMC had made public use of the patent more than a year before filing its patent application.¹⁷³ Walker Process approached FMC and asked it to investigate the rumor.¹⁷⁴ FMC simply refused, correctly noting that it had no such duty.¹⁷⁵ After FMC filed a patent infringement suit, it still refused to provide the dates of its first testing and shipment of the patented product.¹⁷⁶ FMC was eventually forced to produce its internal documents,¹⁷⁷ which showed clearly that FMC had shipped and installed the product more than a year before filing its patent application.¹⁷⁸ But not until FMC's suit had been under way for almost two years—and long after the patent had expired—did Walker Process obtain definitive proof that FMC had sold its product before the critical date.¹⁷⁹

The strategy of rolling the dice, entering the market, and hoping that one's suspicions are true (and will be borne out by documentary evidence) involves too much risk for many firms. A potential entrant's exposure is particularly great given that any infringement could be considered willful because the entrant did, in fact, know about the patent. If the finder of fact

ent challenger can pay a fee and post a reward on a website to whoever submits the necessary documentation to have the patent declared invalid. Long, *supra* note 19, at 670–71. While this perhaps represents an important advancement in societal efforts to discover invalid patents, it is still inefficient to have competitors—whether directly or through surrogates—research patent validity when the patentee knows the patent is invalid.

173. Petition for Writ of Certiorari at 4, *Walker Process Equip., Inc. v. Food Mach. & Chem. Corp.*, 382 U.S. 172 (1965) (No. 602), *reprinted in* ANTITRUST BRIEFS & ORAL ARGUMENTS, *supra* note 25, at 593.

174. *Id.*

175. *Id.*

176. Petition for Writ of Certiorari at 4–5, *supra* note 173, *reprinted in* ANTITRUST BRIEFS & ORAL ARGUMENTS, *supra* note 25, at 593–94.

177. But for the infringement litigation, the patent-holder would not have to produce the incriminating documents. It is exceedingly difficult to determine the patent-holder's own prior sale or use, especially if that patent-holder refuses to answer a potential competitor's questions. *See supra* notes 134–42 and accompanying text.

178. Petition for Writ of Certiorari, *supra* note 173, at 5, *reprinted in* ANTITRUST BRIEFS & ORAL ARGUMENTS, *supra* note 25, at 594.

179. Transcript of Oral Argument, *supra* note 84, at 3, *reprinted in* ANTITRUST BRIEFS & ORAL ARGUMENTS, *supra* note 25, at 745 (statement of Charles J. Merriam on behalf of petitioner).

concludes the infringement is willful, the defendant could be liable for treble damages. Unfortunately, patent juries are seemingly eager to declare infringement “willful.”¹⁸⁰ Of course, if the new competitor loses the infringement suit and is denied a license, not only will it suffer potentially crippling damages, it will be less likely to recover its start-up costs because it cannot sell its product and earn any profit.¹⁸¹ The fear of being in this predicament could deter market entry even if the competitor suspects the patent that controls the market is invalid.

4. Summary

Thus, no matter the competitor’s state of knowledge, an invalid patent can successfully deter or prevent market entry. No matter how confident a new competitor is that a monopolist’s patent is invalid, the competitor’s potential customers and venture capitalists are unlikely to join forces with the market entrant until the patent at issue is either invalidated or has expired. Risk-averse firms in the field may even avoid entire areas of research. In short, the market-blocking, cost-raising effects of invalid patents exist regardless of a new competitor’s beliefs about the patent’s validity. This can make both fraud upon the Patent Office and the knowing maintenance of an invalid patent a cost-effective method of monopolization.

III. CURRENT LEGAL REGIMES CANNOT ADEQUATELY CLEAR THE MARKET OF INVALID PATENTS.

Although most observers would agree that legal rules should discourage fraudulent conduct before the Patent Office, our current system does not adequately deter such fraud. Given the potential anticompetitive effects of mere maintenance of an invalid patent and the minimal sanctions against patentees, committing fraud against the PTO can represent a rational business strategy. Legal rules must make the costs of fraud before the PTO outweigh the benefits. This section argues that neither patent law nor antitrust law, as currently interpreted, render patent fraud not cost-beneficial for the mischievous patentee in search of monopoly power. Thus, it may sometimes be rational for a firm to commit fraud against the PTO.

180. Moore, *supra* note 161, at 393 (“Juries find willfulness in almost three of four cases (71%) and judges only find it half the time (53%), suggesting that juries are more easily convinced of an infringer’s thieving intent.”).

181. See Dreyfuss, *supra* note 15, at 755.

A. PATENT LAW DOES NOT SUFFICIENTLY DETER FRAUD AND MAINTENANCE OF INVALID PATENTS.

The patent system relies primarily on the defense of patent invalidity (as well as inequitable conduct and non-infringement) to protect competitors from being excluded from the market by fear of infringement litigation. But an invalidity defense requires competitors to infringe and risk liability. There are several other ways to challenge the validity of a patent. First, an interested third party can request a reexamination. Second, a competitor can attempt to get a declaratory judgment invalidating an issued patent. Third, there can be a public use hearing. This section discusses these mechanisms as well as the possibility of post-grant opposition proceedings.¹⁸²

1. Reexaminations

The patent system's primary mechanism for vetting improperly issued patents is the reexamination process.¹⁸³ The reexamination of an issued patent can result in the issuance of a certificate confirming the original patent claims, amending some or all of the claims, or canceling any claim determined to be unpatentable.¹⁸⁴ The reexamination process exists "to increase the reliability of patents thought to be of doubtful validity"¹⁸⁵ and to "provide a useful and necessary alternative for challengers and for patent owners to test the validity of United States patents in an efficient and relatively inexpensive man-

182. Additionally, interference hearings can result in invalidation of one or both patents involved in an interference proceeding, and patent law provides a process for correcting inventorship. Neither of these is a particularly effective avenue for competitors to challenge patents in order to open up markets for free competition. While the interference proceeding can result in patent invalidation, it requires the challenger to have a patent himself (or to be applying for one). See 35 U.S.C. § 135(a) (2000) (allowing the PTO Director to declare an interference "[w]henver an application is made for a patent which . . . would interfere with any pending application, or with any unexpired patent"). The process cannot be used by the competitor seeking market entry who has no patent or patent application.

183. 35 U.S.C. §§ 311–18 (2000).

184. *Id.* at § 316; Thomas, *supra* note 7, at 326–27.

185. *In re Freeman*, 30 F.3d 1459, 1468 (Fed. Cir. 1994); see also ROBERT L. HARMON, PATENTS AND THE FEDERAL CIRCUIT 1064 (7th ed. 2005) ("The innate function of the reexamination process is to increase the reliability of the PTO's action in issuing a patent by reexamination of patents thought 'doubtful.'").

ner.”¹⁸⁶ The reexamination procedure was intended to “restor[e] confidence in the validity of patents issued by the PTO.”¹⁸⁷ It has failed.

There are now two types of reexamination. Until recently, reexamination had only been an *ex parte* proceeding where parties other than the patent-holder could trigger, but not participate in, the proceeding. This system was not particularly attractive because the person challenging the already issued patent had no real voice in the proceedings and no right to appeal any adverse decision.¹⁸⁸ Empirically, such reexaminations rarely resulted in patent cancellations.¹⁸⁹ Indeed, the process may have the opposite effect, as “the confirmation of a patent in reexamination is accorded a great deal of respect by courts, and hence a reexamination can bolster the ‘strength’ of a patent.”¹⁹⁰ While this method of reexamination still exists, it is rarely used by third parties wishing to challenge a patent’s validity.¹⁹¹

As a result of the deficiencies in the traditional reexamination process, Congress made reexamination broader by creating a second type of reexamination: *inter partes* reexamination.¹⁹² Under this new mechanism, the challenger can submit arguments to the PTO in response to filings by the patent owner and can appeal a decision to uphold the patent’s validity.¹⁹³

186. HOUSE COMM. ON THE JUDICIARY, AMENDING THE PATENT AND TRADE-MARK LAWS, H.R. REP. NO. 96-1307, pt. 1, at 4 (1980), *reprinted in* 1980 U.S.C.C.A.N. 6460, 6463; *see also* Thomas, *supra* note 7, at 327 (“Congress intended reexamination to serve as an inexpensive alternative to judicial determinations of patent validity. The fees associated with reexamination are modest compared to patent litigation, which often runs into the millions of dollars. Reexamination also allows further access to Patent Office technical expertise when additional prior art is discovered after issuance.”).

187. *Patlex Corp. v. Mossinghoff*, 758 F.2d 594, 601 (Fed. Cir. 1985), *aff’d in part and rev’d in part on reh’g*, 771 F.2d 480, 488 (Fed. Cir. 1985).

188. *See* FTC INNOVATION REPORT, *supra* note 7, ch. 1, at 27; Thomas, *supra* note 7, at 331.

189. Janis, *supra* note 97, at 47 n.202.

190. MERGES & DUFFY, *supra* note 51, at 1210–11.

191. Thomas, *supra* note 7, at 329–30. It is also possible for the Commissioner of the PTO to request a reexamination. *See* Terri Suzette Hughes, *Patent Reexamination and the PTO: Compton’s Patent Invalidated at the Commissioner’s Request*, 14 J. MARSHALL J. COMPUTER & INFO. L. 379, 381 (1996). This is rare. *Id.* at 399. The patentee can also ask for a reissue but this is not a way to get rid of invalid patents.

192. 35 U.S.C. § 311 (2000).

193. 35 U.S.C. §§ 311–318 (2000); *see* FTC INNOVATION REPORT, *supra* note 7, ch. 5, at 16 (“Prior to enactment of a statutory amendment in November 2002, requesters could not appeal adverse decisions to the federal courts.”); Thomas, *supra* note 7, at 326.

However, the party requesting reexamination cannot request discovery, conduct cross-examination, or present oral arguments.¹⁹⁴

Additionally, challengers are estopped from raising in any subsequent litigation those issues that they raised or could have raised in the reexamination.¹⁹⁵ This creates a disincentive to use *inter partes* reexamination.¹⁹⁶ This effect is unappealing to potential challengers, particularly given the lack of discovery and complete participation in the reexamination proceeding. Thus, the recently expanded mechanism is unlikely to prove effective.¹⁹⁷ Indeed, Professor Thomas has condemned the reexamination process “as one of the greatest failures of the modern patent system.”¹⁹⁸

2. Declaratory Judgment Actions

In addition to adjudication within the PTO, competitors can seek a declaratory judgment in federal court that another firm’s patent is invalid. In theory, the declaratory judgment route means that competitors can challenge the validity of a suspect patent before it is actually enforced. The *Walker Process* Court seemed to think that declaratory judgment actions would solve the problem of invalid patents diminishing compe-

194. FTC INNOVATION REPORT, *supra* note 7, ch. 5, at 16.

195. 35 U.S.C. § 315(c) (2000).

196. See Mark D. Janis, *Inter Partes Patent Reexamination*, 10 FORDHAM INTELL. PROP. MEDIA & ENT. L.J. 481, 493 (2000) (“[Congress] has exacted a very high price for participation in an *inter partes* reexamination.”).

197. See FTC INNOVATION REPORT, *supra* note 7, ch. 3, at 22 (“The panelists unanimously considered the reexamination procedures as they existed at the time of the hearing inadequate for a third party to challenge the validity of another party’s patent.”); Janis, *supra* note 97, at 74 (“As crucial as these changes may be to creating an administrative review system that provides a litigation alternative, liberalizing third-party participation will accomplish little unless accompanied by more fundamental reforms. Unfortunately, the third-party participation provisions are embedded in a second-generation reexamination scheme that was designed primarily to cure governmental defects, and only secondarily to provide a litigation alternative.”); Lemley, *supra* note 5, at 1500 n.17 (“[V]irtually no one is expected to use this system because doing so precludes you from challenging the validity of a patent in later litigation.”); Thomas, *supra* note 7, at 3330 (“The newly minted *inter partes* reexamination may prove even less popular, with commentators predicting that industry will make scant use of these proceedings.”).

By the time of the FTC hearings, third parties had employed the process only four times. FTC INNOVATION REPORT, *supra* note 7, ch. 1, at 27.

198. Thomas, *supra* note 7, at 329.

tition.¹⁹⁹

But the reality of declaratory judgment actions in this area has not lived up to the promise. First, it is exceedingly difficult for a competitor who is suspicious, or even certain, of a patent's invalidity to secure standing to pursue a declaratory judgment action against a patent-holder. In order to obtain standing, the declaratory judgment plaintiff must show

- (1) an explicit threat or other action by the patentee which creates a reasonable apprehension on the part of the declaratory judgment plaintiff that it will face an infringement suit, and (2) present activity by the declaratory judgment plaintiff which could constitute infringement, or concrete steps taken by the declaratory judgment plaintiff with the intent to conduct such activity.²⁰⁰

With respect to the first element, if there is not an explicit threat of suit, courts will consider the totality of the circumstances to determine whether a reasonable apprehension exists.²⁰¹

Unfortunately, courts have made it exceedingly difficult for threatened competitors seeking declaratory judgments to demonstrate this reasonable apprehension. This burden is perhaps most important in the area of licensing negotiations. While it is not surprising that a patentee's request for licensing negotiations does not create a reasonable apprehension of a lawsuit,²⁰²

199. *Walker Process Equip., Inc. v. Food Mach. & Chem. Corp.*, 382 U.S. 172, 176 (1965) ("In fact, one need not await the filing of a threatened suit by the patentee; the validity of the patent may be tested under the Declaratory Judgment Act.").

200. *Teva Pharms. USA, Inc. v. Pfizer, Inc.*, 395 F.3d 1324, 1330 (Fed. Cir. 2005); *In re Ciprofloxacin Hydrochloride Antitrust Litig.*, 363 F. Supp. 2d 514, 541 (E.D.N.Y. 2005).

This test represents a more stringent one than that which prevailed before the creation of the Federal Circuit. Professor Lisa Dolak has examined how, "[w]ithout explanation, the court replaced the 'express charge of infringement' prong of its familiar two-prong reasonable apprehension test with a requirement of '*an explicit threat . . . which creates a reasonable apprehension on the part of the declaratory judgment plaintiff that it will face an infringement suit.*'" Lisa A. Dolak, *Declaratory Judgment Jurisdiction in Patent Cases: Restoring the Balance Between the Patentee and the Accused Infringer*, 38 B.C. L. REV. 903, 929 (1997) (citing *Shell Oil Co. v. Amoco Corp.*, 970 F.2d 885, 888 (Fed. Cir. 1992)) (quoting *BP Chems. Ltd. v. Union Carbide Corp.*, 4 F.3d 975, 978 (Fed. Cir. 1993) (emphasis added)).

201. *Arrowhead Indus. Water, Inc. v. Ecolochem, Inc.*, 846 F.2d 731, 736 (Fed. Cir. 1988); *Plumtree Software, Inc. v. Datamize, LLC*, No. C-04-2777 VRW, 2005 WL 2206495, at *5 (N.D. Cal. Sept. 12, 2005) (quoting *Vanguard Research, Inc. v. PEAT, Inc.*, 304 F.3d 1249, 1254 (Fed. Cir. 2002)).

202. *Ryobi Am. Corp. v. Peters*, 815 F. Supp. 172, 174 (D.S.C. 1993); *InfoSys, Inc. v. Billingnetwork.com, Inc.*, No. 03 C 3047, 2003 WL 22012687, at *6

the Federal Circuit has held that a patent-holder does not create a reasonable apprehension of litigation when, during a licensing negotiation, it responds affirmatively to the question, "Will you enforce your patent?"²⁰³ The court reasoned that an affirmative answer to such a question from an alleged infringer is "merely 'jawboning'" and is "reflexive and obligatory."²⁰⁴ As a result, courts have essentially created a safe harbor by holding that "[t]hreats of litigation within the context of license negotiations . . . do not create a reasonable apprehension."²⁰⁵ The patentee's strategy is clear: offer a license and threaten away. Patentees can make threats without triggering declaratory judgment actions by including in their cease and desist letters to competitors an offer to license or to talk further.²⁰⁶ It is as if a mugger's demand of "your money or your life" is not a threat, but a mere invitation to negotiate.

In theory, the competitor threatened by a license-offering patent-holder could bring suit once the negotiations have broken down to the point where "further discussion would have been 'fruitless.'"²⁰⁷ But courts have denied the alleged infringer standing to pursue a declaratory judgment if the infringer was the party that terminated the licensing negotiations.²⁰⁸ Courts utterly fail to recognize that this rule allows the holder of an invalid patent to start negotiations, to assert patent validity while threatening infringement litigation, and to prevent the alleged infringer from having standing to pursue declaratory relief. The negotiations delay entry while simultaneously preventing the cleansing litigation.

As with specific threats of litigation made within licensing negotiations, broad public proclamations by a patentee "that it

(N.D. Ill. Aug. 27, 2003) ("[I]t is black letter law that merely offering a license does not create a reasonable apprehension." (citing *Phillips Plastics Corp. v. Kato Hatsujou Kabushiki Kaisha*, 57 F.3d 1051, 1053 (Fed. Cir. 1995))).

203. *Shell Oil Co. v. Amoco Corp.*, 970 F.2d 885, 889 (Fed. Cir. 1992).

204. *Id.* Of course, some felons may feel that it is also reflexive and obligatory to lie to federal investigators asking about a crime the felon committed. But this lie would constitute an additional crime, not an excuse. Answers to questions have legal consequences. They should in the patent context, as well.

205. *InfoSys*, 2003 WL 22012687, at *6.

206. See *Dataline, Inc. v. MCI WorldCom Network Servs.*, No. 00 CIV. 1578 (LAP), 2001 WL 102336, at *4 (S.D.N.Y. Feb. 6, 2001); *Studio Due, S.r.L. v. Vari-Lite, Inc.*, No. 99 CIV. 11683 (BSJ), 2000 WL 977703, at *3 (S.D.N.Y. July 14, 2000).

207. *BMC Res., Inc. v. Paymentech, L.P.*, No. 3-03-CV-1927-M, 2004 WL 981079, at *4 (N.D. Tex. May 5, 2004).

208. *Id.* at *4-5.

will enforce its patent rights in the courts” do not confer declaratory judgment standing, even when followed by direct statements to an alleged infringer that it will be “necessary” and “required” for the new entrant to license the particular patent if it wishes to stay in the market legally.²⁰⁹ Alleged infringers cannot get declaratory judgment standing against a patentee who has sued others for infringement while making public statements “that the company would not tolerate any infringement of its patent rights and would take legal action against any unauthorized use.”²¹⁰ Along the same lines, courts also seem to discount prior litigation by the patentee against alleged infringers.²¹¹ For example, suing the plaintiff’s distributors in another jurisdiction does not create a reasonable apprehension of suit in the United States.²¹² Thus, the holder of an invalid patent can directly accuse a rival of patent infringement but make the threat of litigation to the public generally and thereby still prevent a declaratory judgment suit.²¹³

In one of the easier ways to deny competitors’ standing to challenge patent validity, patentees can escape declaratory judgment actions by threatening suits through intermediaries, such as licensees. Courts have denied standing when the threat is made by a corporate affiliate of the patentee,²¹⁴ or a non-exclusive licensee,²¹⁵ instead of the patentee itself. In *Publications International, Ltd. v. Futech Educational Products, Inc.*, although the patentee’s Area Manager for Southeast Asia explicitly threatened an infringement suit if the new firm entered the market, the court held the threat insufficient because the manager was not an officer of the defendant and was not “qualified to render legal opinions regarding infringement.”²¹⁶ However, the manager was not rendering a legal opinion; in-

209. *Gamesa Eolica, S.A. v. Gen. Elec. Co.*, 71 U.S.P.Q.2d 1379, 1381 (W.D. Wis. 2004).

210. *Citizen Elecs. Co. v. GMBH*, 377 F. Supp. 2d 149, 154 (D.D.C. 2005).

211. *See Royal Pet Inc. v. Edwards*, Civ. No. 05-825 (DWF/SRN), 2005 WL 2290826, at *4 (D. Minn. Sept. 20, 2005).

212. *Studex Corp. v. Blomdahl Med. Innovation AB*, 355 F. Supp. 2d 3, 8–9 (D.D.C. 2004).

213. *See Citizen*, 377 F. Supp. 2d at 154.

214. *Northlake Mktg. & Supply, Inc. v. Glaverbel, S.A.*, 861 F. Supp. 653, 659 (N.D. Ill. 1994).

215. *See West Interactive Corp. v. First Data Res.*, 972 F.2d 1295, 1298 (Fed. Cir. 1992). In his dissent, Judge Lourie condemned the majority opinion as “simply permit[ting] a patentee to play games with the courts.” *Id.* at 1299 (Lourie, J., dissenting).

216. No. 97 C 0236, 1997 WL 627641, at *4 (N.D. Ill. Oct. 1, 1997).

stead, he was announcing the patentee's intent and, thereby, creating a reasonable apprehension that the competitor would be sued. Others courts, too, have suggested that the fact that the alleged threat letter is not written by an attorney—but instead by the firm's Patent Manager—counsels against a finding of reasonable apprehension.²¹⁷ Such holdings give patent-holders a relatively easy way to threaten litigation and use their invalid patents to deter entry by competitors without creating standing for a declaratory judgment action.

The case of *Century Industries, Inc. v. Wenger Corp.*²¹⁸ offers a clear example (albeit in a claim of noninfringement, rather than invalidity) of how aggressively a patentee can assert patent rights in an attempt to deter a competitor's market entry without creating a reasonable apprehension of suit that would entitle the competitor to declaratory resolution of the patent dispute. In *Century Industries*, the defendant-patentee sent a letter to the new competitor stating that the plaintiff's product "falls within the scope" of the defendant's about-to-be-reissued patent and that the defendant "will fully enforce its patent rights under the reissued patent."²¹⁹ At a trade show, the defendant's delegation informed the plaintiff that the patentee "had the money budgeted to pursue a legal resolution" of the patent dispute.²²⁰ The plaintiff spent November making its case for noninfringement to the patentee, to no avail.²²¹ The plaintiff then filed a declaratory judgment action less than two months later, asking the court to declare that its product did not infringe the defendant's patent.²²² The court denied standing because the parties were "still engaged in discussions aimed at resolving the potential dispute," the members of the defendant's delegation did not have authority to speak for the defendant, and the plaintiff had waited too long after the trade show threat, such that any reasonable apprehension had passed.²²³ The court failed to appreciate how a reasonable competitor would read the evidence. Whether the trade delegation

217. See *Dataline, Inc. v. MCI WorldCom Network Servs.*, No. 00 CIV. 1578 (LAP), 2001 WL 102336, at *4 (S.D.N.Y. Feb. 6, 2001).

218. 851 F. Supp. 1260 (S.D. Ind. 1994).

219. *Id.* at 1261–62.

220. *Id.* at 1262.

221. *Id.*

222. *Id.*

223. *Id.* at 1264–65; see also *infra* notes 227–31 and accompanying text (discussing timing issues of declaratory judgment actions).

had the legal authority to bind the defendant is completely irrelevant; the delegation exposed the defendant's activities in preparation for filing infringement litigation. If the statements "you're infringing," "we'll enforce our patent," and "we've budgeted the money for the lawsuit" do not create a reasonable apprehension of litigation, what does?

A patentee can engage in a range of other machinations to thwart declaratory judgment standing. For example, some case law suggests that if the patentee assigns its patent to someone else during litigation, the patent's validity can evade scrutiny.²²⁴ Alternatively, the patentee can threaten its competitors' customers instead of the competitors directly. Litigation threats to a new entrant's customers may not qualify as creating a reasonable apprehension of suit, as courts have dismissed such evidence as mere hearsay.²²⁵ Courts taking this approach ignore the fact that the threat of an infringement suit is not being offered to prove that a lawsuit is forthcoming, but rather to show the effect of such threats on an entrant's belief as to the likelihood of being sued.²²⁶

A threatened competitor faces particular difficulty in mastering the timing requirements that courts impose on declaratory judgment plaintiffs. On the one hand, judges have suggested that potential infringers must wait and give patentees an opportunity to sue.²²⁷ On the other hand, courts have chastised declaratory judgment plaintiffs for "inexplicably waiting to file suit for over six months after the last event that could reasonably have caused an apprehension of suit."²²⁸ Even waiting a mere two months after a qualifying threat is made can strip a threatened competitor of standing to pursue a declaratory judgment.²²⁹ The absence of an infringement suit between the threat and the filing of the declaratory judgment action can be dispositive. In one case, the defendant sent threatening letters accusing the new competitor of infringing, offering a roy-

224. See *Figi Graphics, Inc. v. Estate of Edwards*, 44 U.S.P.Q.2d 1364, 1368 (D. Kan. 1997).

225. See *West Interactive Corp. v. First Data Res.*, 972 F.2d 1295, 1300 (Fed. Cir. 1992) (Lourie, J., dissenting).

226. See *id.*

227. See *Kustom Signals, Inc. v. Applied Concepts, Inc.*, 41 U.S.P.Q.2d 1048, 1053 (D. Kan. 1996) (rejecting standing, in part, because the competitor brought suit the day the patent was issued).

228. *Citizen Elecs. Co. v. GMBH*, 377 F. Supp. 2d 149, 156 (D.D.C. 2005).

229. *Century Indus., Inc. v. Wenger Corp.*, 851 F. Supp. 1260, 1265 (S.D. Ind. 1994).

alty-based license and stating that if the competitor did not accede quickly then the “favorable licensing terms . . . [would] no longer be available.”²³⁰ The court found no reasonable apprehension of suit because “[d]espite the arguably threatening tone of these letters, [the defendant] did nothing”²³¹ The court seems to suggest that there was no declaratory judgment standing because the patentee did not actually sue. But that misses the whole point of the Declaratory Judgment Act: a threatened party does not have to wait to be sued. In sum, there is a window of reasonable apprehension such that new competitors can be denied standing if they wait too long or if they do not wait long enough, but courts have not defined the window with any precision.

Finally, in those cases where the competitor can satisfy the technical requirements for standing to bring a declaratory judgment action, judges still have the discretion to deny standing, and they often exercise that discretion against competitors.²³² In short, judges give insufficient consideration to the competitors deterred from market entry by a dominant firm’s maintenance of a potentially invalid patent which it refuses to disavow.

Even if the new competitor could establish standing, a collective action problem might lead it to conclude that it is not in its best interests to pursue a declaratory judgment against the patent-holder. Collective action problems can occur when the members of a group would all be better off if they pursued a common course of action. If it is not cost-beneficial for an individual to act alone because the costs of action exceed her individual benefit—even though the overall social benefits exceed the overall social costs—then she takes no action despite the net social benefit.

Declaratory judgment suits to invalidate suspect patents can present collective action problems. Competitors would all be better off if the invalid patent of a monopolist were invalidated. However, any new entrant who pursues a declaratory judgment action would bear the significant costs of bringing the lawsuit.²³³ This plaintiff alone bears these costs, but if it pre-

230. *Citizen*, 377 F. Supp. 2d at 154.

231. *Id.*

232. *EMC Corp. v. Norand Corp.*, 89 F.3d 807, 813–15 (Fed. Cir. 1996); Dolak, *supra* note 200, at 913.

233. *See Heerema Marine Contractors v. Sante Fe Int’l Corp.*, 582 F. Supp. 445, 449 (C.D. Cal. 1984) (“Although the availability of declaratory relief in

vails, then the benefits would be diffused throughout the marketplace. If one potential competitor sues to invalidate a patent and wins, then every other potential competitor can enter the market and the original plaintiff cannot recoup its litigation costs through exploiting the invention claimed in the invalidated patent.²³⁴ Thus, while challenging a suspect patent may be cost-beneficial for potential competitors as a group, it may not be cost-beneficial for any challenger acting on its own.

Collective action problems are susceptible to solution when one member of the affected community has more at stake than the others. However, the holder of an invalid patent can prevent this solution. If one company appears more likely to challenge the patent, the monopolist may buy off that firm with a settlement or royalty-free cross-licensing deal. Professor Thomas has persuasively explained that where a potential competitor has evidence of prior art that would invalidate a patent,

the competitor can privately disclose the prior art reference to the patentee. So long as sufficient supracompetitive profits exist to go around, the patentee ordinarily possesses incentives to suppress the prior art by means of a favorable license. Both parties may then extract information rents from the consuming public by maintaining artificially high prices due to an invalid patent.²³⁵

That new firm alone can enter the market, charge a supracompetitive price, and save the litigation costs. The monopolist also saves litigation costs and, more importantly, eliminates the risk (and perhaps certainty) that its patent will be invalidated. While the monopolist will have to share some of its monopoly profits with the new licensee, that is a better result than having the patent exposed as invalid, because it can still maintain the patent as a head on the pike that may scare other firms away from the market. Additionally, if the terms of the license

patent actions . . . often enables a potential infringer to avoid economically wasteful activity, this remedy does not allow him to avoid all potentially wasteful activity.”).

In addition to filing fees and traditional litigation costs, attorneys' fees would be an enormous out-of-pocket expense. Attorneys may not be willing to take a declaratory judgment case on contingency because there are no meaningful damages from which to take a percentage.

234. See FTC INNOVATION REPORT, *supra* note 7, ch. 5, at 20 (“Because the costs of a challenge are borne by the challenger, but the benefits of invalidation spill over to other potential licensees and to consumers, the private incentives to launch a challenge are less than would be warranted by the social return.”); Joseph Scott Miller, *Building a Better Bounty: Litigation-Stage Rewards for Defeating Patents*, 19 BERKELEY TECH. L.J. 667, 668 (2004).

235. Thomas, *supra* note 7, at 335.

are not publicized, the fact that the earlier firm acquired a license to the patent might provide a patina of legitimacy to the patent.

Independent of the collective action problem, competitors may face great costs in initiating a declaratory judgment action. Litigation costs pose a barrier to entry. The fact that the end result of litigation may be the invalidation of the patent ignores the huge transactions costs and delay, which themselves constitute barriers to entry. Indeed, even if the new entrant foresees a positive litigation result, the transactions costs and the delay alone may convince the firm that the game is not worth the candle.

3. Public Use Proceedings

In theory, interested third parties can prevent the issuance of invalid patents by participating in public use proceedings. The public use proceeding allows members of the public to submit evidence to the PTO in order to show the public use or sale of a claimed invention more than a year before the application was filed.²³⁶ Public use proceedings are largely ineffective, however, because the PTO does not publish pending patent applications until eighteen months after those applications are filed—giving the public little time to research and report any previous public use or sale of the claimed invention.²³⁷ As Professor Janis notes, “public use proceedings can only be initiated in those rare instances in which the applicant divulges information about a pending application. Thus, public use proceedings have been exceedingly rare and could not conceivably function as a systemic curative mechanism.”²³⁸ While there is little downside to allowing public use proceedings for those instances when a competitor or other interested party has relevant evidence to present and knows of the pending application in order to present the evidence in a timely manner, this mechanism cannot effectively screen out the bulk of invalid patents.

236. See 37 C.F.R. § 1.292 (2006); Russell E. Levine et al., *Ex Parte Patent Practice and the Rights of Third Parties*, 45 AM. U. L. REV. 1987, 2006–07 (1996).

237. 35 U.S.C. § 122(b) (2000). *But see* Thomas, *supra* note 7, at 330–31 (arguing that competitors may still intuit the contents of domestic patent applications by examining foreign applications).

238. Janis, *supra* note 97, at 16.

4. Opposition Proceedings

Some commentators have advocated the creation of post-grant opposition proceedings, modeled on those conducted by the European Patent Office.²³⁹ Opposition proceedings would provide a mechanism for competitors to challenge a suspect patent. This would represent a significant improvement over the current system of reexamination. But post-grant opposition proceedings would not compensate excluded competitors for the injuries caused by the knowing maintenance of an invalid patent; they only seek to prevent future harm. Because there are no damages available, if opposition proceedings were the sole mechanism for invalidating bad patents, they would not provide sufficient incentive for monopolists with invalid patents to disclaim their patent rights *before* that invalidity is discovered by others. Another problem with opposition proceedings is that they are generally structured as one-shot opportunities. If competitors discover prior art or other reasons to question patent validity after termination of the opposition proceedings, they are left with litigation as the only means to invalidate the patent.²⁴⁰ For all of these reasons, post-grant opposition proceedings ultimately would not provide sufficient deterrence against patent fraud.

5. Summary

In sum, patent law does not currently provide a cost-effective way to challenge invalid patents and to deter a monopolist's knowing maintenance of an invalid patent as a barrier to entry. Several mechanisms within the patent system fail to achieve their goal of effectively weeding out invalid patents. Patent law, therefore, does not deter patent fraud and the maintenance of invalid patents because the potential benefits are high and the potential costs are relatively low. The benefits include potential monopoly profits for the life of the patent; in

239. *See id.* at 99–107; Merges, *supra* note 10, at 589; Thomas, *supra* note 7, at 307. Opposition proceedings also were proposed in the Patent Reform Act of 2005. H.R. 2795, 109th Cong. §§ 321–340 (2005).

240. If the proceedings were structured so that another opportunity for challenge was provided for newly discovered prior art, as proposed in the Patent Reform Act of 2005, this could solve the problem. *See* H.R. 2795, § 321(a)(1)–(2) (requiring that “for *each* opposition request submitted . . . the Director *shall* determine . . . [if] a substantial question of patentability exists” and if so “the Director *shall* commence an opposition proceeding” (emphasis added)).

contrast, the costs include the patent acquisition fees and the penalties if caught, discounted by the probability of getting caught. Deterrence is a function of detection and punishment, yet the risk of detection is low because invalidity is hard to detect²⁴¹ and evidentiary standards significantly favor the patent-holder.²⁴² The collective action dynamics exacerbate the difficulty of exposing invalid patents. As a result, patent law ultimately fails to deter fraud against the PTO and the maintenance of invalid patents to secure market power.

B. ANTITRUST LAW DOES NOT SUFFICIENTLY DETER FRAUD AGAINST THE PTO AND THE MAINTENANCE OF INVALID PATENTS.

Antitrust law is also not up to the task of deterring and punishing fraud against the Patent Office. In theory, “a *Walker Process* claim is designed to prohibit a dominant party from willfully and fraudulently monopolizing a market by deterring another company’s attempt to enter that market.”²⁴³ But antitrust law does not adequately deter the commission of fraud against the PTO. The same difficulties that weaken patent law’s ability to weed out invalid patents plague antitrust law because courts use the standard for declaratory judgment standing, described above, to determine whether the patentee has engaged in “enforcement” sufficient to establish a *Walker Process* claim.²⁴⁴ The Federal Circuit recently held that “as a matter of Federal Circuit antitrust law, the standards . . . for determining jurisdiction in a Declaratory Judgment Action of patent invalidity also define the minimum level of ‘enforcement’ necessary to expose the patentee to a *Walker Process* claim for attempted monopolization.”²⁴⁵ Courts treat the failure to satisfy the declaratory judgment standard as dispositive of the enforcement requirement in *Walker Process* cases.²⁴⁶

The enforcement requirement makes maintenance of an invalid patent cost-beneficial. Under the current legal regime,

241. See *supra* notes 173–79 and accompanying text.

242. See *supra* notes 15–20 and accompanying text.

243. *Bourns, Inc. v. Raychem Corp.*, 331 F.3d 704, 713 (9th Cir. 2003) (Pregerson, J., concurring in part and dissenting in part).

244. See *Northlake Mktg. & Supply, Inc. v. Glaverbel, S.A.*, 861 F. Supp. 653, 660 (N.D. Ill. 1994).

245. *Unitherm Food Sys., Inc. v. Swift-Eckrich, Inc.*, 375 F.3d 1341, 1358 (Fed. Cir. 2004), *rev’d on other grounds*, 126 S. Ct. 980 (2006).

246. See, e.g., *K-Lath, Inc. v. Davis Wire Corp.*, 15 F. Supp. 2d 952, 964 (C.D. Cal. 1998).

the holder of an invalid patent can secure monopoly rents for years without ever worrying about antitrust liability. If knowingly maintaining an invalid patent cannot itself give rise to legal liability, then it is perfectly rational for a monopolist to sit tight—neither initiating infringement litigation nor informing the market of the patent's invalidity. Once a patentee learns that its patent is invalid, it costs little, if anything, to remain silent.²⁴⁷ As a result, maintaining an invalid patent can provide a relatively cost-effective mechanism to deter others from entering one's market. If a potential competitor sees that a monopolist has a patent and the new entrant has no basis for thinking that the patent is invalid, that patent alone will keep the new entrant from entering the market.²⁴⁸ Even if the rival suspects or strongly believes the patent to be invalid, it may rationally decide to decline to compete if it cannot do so without infringing.²⁴⁹ The current antitrust rule creates an incentive for firms to acquire and maintain invalid patents and then to bide their time, since the mere presence of the patent should be enough to deter many potential competitors.

The enforcement requirement creates an effective safe harbor for firms that commit fraud against the PTO: So long as you do not threaten to sue anyone, you cannot be held liable under antitrust laws. There is not a sufficient reason to avoid committing fraud on the PTO. The mere possession of the patent can sufficiently suppress effective competition in the markets (a benefit to the patentee) and does not create the risk of monetary penalties (thus, imposing no costs on the patentee). But if the mere possession of an invalid patent is enough to maintain monopoly power, then antitrust law should address that possession even in the absence of any active enforcement efforts.

IV. PROVING ANTITRUST LIABILITY BASED ON MAINTENANCE OF INVALID PATENTS

Neither antitrust nor patent law should operate in a manner that makes fraud on the PTO cost-beneficial. Both bodies of law should facilitate the elimination of competition-reducing invalid patents from the marketplace. Section Two of the Sherman Act offers two causes of action that should constrain a monopolist's acquisition and knowing possession of an invalid

247. The only obvious cost is the payment of maintenance fees.

248. See *supra* notes 132–42 and accompanying text.

249. See *supra* notes 143–70 and accompanying text.

patent: monopolization and attempted monopolization.²⁵⁰ This section proposes an expansion of the *Walker Process* doctrine by eliminating the enforcement requirement, suggests what the elements of the antitrust cause of action should be, and explains why such an expansion of antitrust jurisprudence is warranted.

A. MAINTENANCE OF AN INVALID PATENT AS ILLEGAL MONOPOLIZATION

In *United States v. Grinnell Corp.*, the Supreme Court established a two-pronged test for illegal monopolization.²⁵¹ The plaintiff must show “(1) the [defendant’s] possession of monopoly power in the relevant market and (2) the willful acquisition or maintenance of that power as distinguished from growth or development as a consequence of a superior product, business acumen, or historic accident.”²⁵² Additionally, a private plaintiff must show that it suffered causal antitrust injury.²⁵³ This section argues that a monopolist’s knowing possession of an invalid patent can satisfy these elements.

1. Monopoly Power in a Relevant Market

As with any monopolization claim, a plaintiff must first define the relevant product and geographic markets and then prove that the defendant possesses monopoly power in this properly defined market.²⁵⁴ The mere possession of a patent, valid or invalid, does not necessarily confer any market power, let alone monopoly power, on the patent-holder.²⁵⁵ If the invalid patent confers no monopoly power on the patentee, then Section Two takes no issue with how the patentee acquired the patent or what it does with it.²⁵⁶ However, if the patent-holder possesses monopoly power, then Section Two is implicated.²⁵⁷

250. 15 U.S.C. § 2 (2006).

251. 384 U.S. 563, 570–71 (1966).

252. *Id.*

253. See *infra* notes 295–307 and accompanying text.

254. See *infra* notes 295–307 and accompanying text.

255. See *Merges, supra* note 10, at 603 (“[M]ost [patented] technologies will not be economically viable or commercially successful . . .”).

256. Section Two also condemns conspiracies to monopolize, but relatively little Section Two case law addresses the cause of action; nor will this Article.

257. 15 U.S.C. § 2 (2006).

2. Monopoly Conduct: Knowingly Maintaining an Invalid Patent

The possession of monopoly power does not itself pose problems for a patent-holder. Not all monopolies are illegal; it is not unlawful for a firm to possess a monopoly that has been thrust upon it.²⁵⁸ However, as the Court noted in the second element of the *Grinnell* test, a monopolist who acquires or maintains its market power through anticompetitive or exclusionary conduct violates the antitrust laws.²⁵⁹ A practice is exclusionary if it “tends to impair the opportunities of rivals, [based on something other than] competition on the merits.”²⁶⁰

A monopolist’s knowing maintenance of invalid patents impairs rivals’ opportunities to compete on the merits by imposing unnecessary barriers to entry in a number of related ways.²⁶¹ First, maintaining an invalid patent is direct exclusionary conduct because the purpose of patents is to exclude rivals from markets. Invalid patents can exclude competitors just as effectively as valid patents. When the invalid patent—and the attendant fear of infringement litigation—succeeds in deterring entry, the monopolist has erected an effective (and illegal) barrier to entry. A monopolist’s creation of barriers to entry, absent legitimate business justification, is anticompetitive conduct.²⁶²

Second, a monopolist’s knowing maintenance of an invalid patent raises costs for those rivals who seek to enter the market despite the presence of a powerful patent. Raising rivals’ costs can constitute exclusionary conduct sufficient to satisfy the second prong of *Grinnell*.²⁶³ When a monopolist possesses a

258. See *United States v. Aluminum Co. of Am.*, 148 F.2d 416, 431 (2d Cir. 1945) (dealing with an incidental monopoly regarding aluminum).

259. *United States v. Grinnell*, 384 U.S. 563, 570–71 (1966).

260. *Aspen Skiing Co. v. Aspen Highlands Skiing Corp.*, 472 U.S. 585, 605 n.32 (1985) (quoting 3 PHILLIP AREEDA & DONALD TURNER, *ANTITRUST LAW* 78 (1978)).

261. This section discusses invalidity at the patent level, but in reality it is the individual claims within a patent that may be invalid. A patent can have some valid claims and some invalid claims. For the purposes of this Article, I am referring to situations where a monopolist knows that one or more of its claims is invalid and that it is the invalid claim(s) that deter competitors from entering the market.

262. See, e.g., *United States v. Dentsply Int’l, Inc.*, 399 F.3d 181, 191–92 (3d Cir. 2005).

263. See Thomas G. Krattenmaker and Steven Salop, *Anticompetitive Exclusion: Raising Rivals’ Costs to Achieve Power Over Price*, 96 *YALE L.J.* 209, 230–49 (1986).

patent that it knows to be invalid, the entry costs of competitors increase in many ways. The monopolist has increased search and investigation costs of those competitors who take the route of trying to invalidate the suspect patent. The most frequent mechanism to invalidate a bad patent is the presentation of prior art or a barring event.²⁶⁴ But this usually requires the would-be competitor to research and find the prior art that invalidates a patent.²⁶⁵ If the patent-holder-monopolist already knew about this prior art and withheld it, the competitor's search represents a waste of societal resources—assuming that the competitor can even find the invalidating prior art. As for those competitors that attempt to enter the market without infringing the patent, the monopolist has increased the research and development costs that they must incur to invent around the invalid patent.²⁶⁶ If the monopolist had a duty to disavow the patent that it knows to be invalid, then the new entrant could save all of these the costs.

Many potential strategies that a monopolist might use to raise rivals' costs are discounted by commentators as impractical because, in order to implement the strategy, the monopolist would incur costs greater than or equal to the expenses that the target competitor faces.²⁶⁷ Maintaining an invalid patent as a strategy to raise rivals' costs does not suffer this disadvantage. Rather, it allows the monopolist to impose significant costs on any would-be entrant without the monopolist itself actually incurring any serious costs beyond relatively small maintenance fees.²⁶⁸ While maintaining an invalid patent is cheap, the costs incurred by competitors are, in contrast, relatively high.

Finally, it bears stating the obvious: maintaining monopoly power through the knowing possession of invalid patents is not competition on the merits. Knowingly holding on to invalid patents cannot be characterized as "growth or development as a consequence of a superior product, business acumen, or historic

264. See Allison & Lemley, *supra* note 3, at 207–08.

265. See *supra* notes 87–91 and accompanying text.

266. See *supra* notes 92–96 and accompanying text.

267. Chicago School theorists often discount exclusionary conduct because it can cost the monopolist as much as, if not more than, the targeted firm. See, e.g., ROBERT BORK, *THE ANTITRUST PARADOX: A POLICY AT WAR WITH ITSELF* 149–52 (2d ed. 1993).

268. Maintenance fees are negligible compared to the potential monopoly profits than can be earned by deterring legitimate entry. See *supra* notes 243–49 and accompanying text.

accident.”²⁶⁹ The monopolist in this scenario has the ability to exclude competition for reasons completely unrelated to efficiency. There is no legitimate reason for misrepresenting the validity of an invalid patent. The possession of an invalid patent constitutes illegal exclusionary conduct.²⁷⁰

An antitrust plaintiff can establish the second element of the *Grinnell* test either by explaining why the defendant’s challenged conduct is exclusionary or by employing a multi-prong test for specific conduct that courts have held can satisfy *Grinnell*’s second element. Taking this second approach, a monopolization claim based specifically on a monopolist’s knowing maintenance of an invalid patent should require the plaintiff to prove a number of individual elements in order to establish that the defendant has indeed engaged in monopoly conduct.

a. Patent Invalidity

First, the antitrust plaintiff must prove that the monopolist’s patent is, in fact, invalid. *Walker Process* requires this already.²⁷¹ So, proof of this element can be established using the current legal test, which starts with a presumption of patent validity and requires that the challenger prove invalidity by clear and convincing evidence.²⁷²

b. Intent: The Monopolist Knew Its Patent Was Invalid.

Section Two monopolization does not impose a traditional intent requirement. The confusing role of intent in antitrust jurisprudence stems in large part from Judge Learned Hand’s statement in *Alcoa* that “no monopolist monopolizes unconscious of what he is doing.”²⁷³ But Section Two also is not a

269. *United States v. Grinnell Corp.*, 384 U.S. 563, 570–71 (1966).

270. *See Stearns Airport Equip. Co. v. FMC Corp.*, 170 F.3d 518, 522 (5th Cir. 1999) (“[I]f the conduct has no rational business purpose other than its adverse effects on competitors, an inference that it is exclusionary is supported.”).

271. *See Walker Process Equip., Inc. v. Food Mach. & Chem. Corp.*, 382 U.S. 172, 177 (1965) (finding that the requirements of a monopolization cause of action can be met if the patentee obtained a patent by fraud on the PTO or “maintains and enforces the patent with knowledge of the patent’s infirmity”).

272. *See Baxa Corp. v. McGaw, Inc.*, 996 F. Supp. 1044, 1054 (D. Colo. 1998) (citing *Hewlett-Packard Co. v. Bausch & Lomb Inc.*, 909 F.2d 1464, 1467 (Fed. Cir. 1990)), *aff’d sub nom. Baxa Corp. v. Excelsior Med. Corp.*, 185 F.3d 883 (Fed. Cir. 1999).

273. *United States v. Aluminum Co. of Am.*, 148 F.2d 416, 432 (2d Cir. 1945).

strict liability offense. Mere possession of monopoly power is not a violation; only willful acquisition or maintenance of monopoly power through anticompetitive conduct violates Section Two.²⁷⁴ The *Grinnell* Court's use of the word "willful" suggests some level of intent. The proposed requirement that the patent-holder know that its patent is invalid satisfies the need for establishing intent as a prerequisite for Section Two liability.

To protect patentees against inappropriate liability, courts require the plaintiff to prove that the monopolist knew that its patent was invalid. The patentee can know its patent is invalid either before or after it issues. If the patentee committed fraud against the PTO, there is no problem with determining that the firm "knows" that its patent is invalid. In evaluating *Walker Process* and *Handgards* claims, courts must already determine whether a patentee knew of a patent's invalidity.²⁷⁵ As the government noted in its amicus brief in support of the petitioner in *Walker Process*, "[t]he fact that an applicant has deliberately misled a governmental office into granting an undeserved patent under color of which others may be excluded from the market is conclusive evidence of an intention to achieve unlawful monopoly power."²⁷⁶ Food Machinery Company (FMC) swore in its oath to the PTO that it knew of no public use occurring more than one year before it filed its application, but FMC had itself used its invention before the critical date.²⁷⁷ Thus, there was no

274. See *Grinnell*, 384 U.S. at 570–71 (noting that Section 2 of the Sherman Act requires "the willful acquisition or maintenance of [monopoly] power" (emphasis added)).

275. *Argus Chem. Corp. v. Fibre Glass-Evercoat Co.*, 812 F.2d 1381, 1386 (Fed. Cir. 1987) ("The *Handgards* decisions explicitly state that to prevail in an antitrust claim based upon enforcement of an invalid or unenforceable patent, the litigant must establish that the patentee acted in bad faith in enforcing the patent because he knew that the patent was invalid."); *Baxa*, 996 F. Supp. at 1049 ("To prevail, however, an antitrust plaintiff 'must establish that the patentee acted in bad faith in enforcing the patent because he knew that the patent was invalid.'" (quoting *Argus*, 812 F.3d at 1386)).

276. Brief for the United States as Amicus Curiae, *supra* note 83, at 14, reprinted in ANTITRUST BRIEFS & ORAL ARGUMENTS, *supra* note 25, at 738; Transcript of Oral Argument at 12, *Walker Process*, 382 U.S. 172 (No. 13), reprinted in ANTITRUST BRIEFS & ORAL ARGUMENTS, *supra* note 25, at 754 (oral argument of Daniel M. Friedman, on behalf of the United States as amicus curiae, stating "[w]e think the essential element of this case is the knowing aspect of it, because [FMC] intentionally obtained this power by knowingly misrepresenting the facts to the Patent Office.").

277. CHISUM, *supra* note 14, § 19.03[1][f], at 19-158; see also *Walker Process*, 382 U.S. at 177 ("Walker's counterclaim alleged that Food Machinery obtained the patent by knowingly and willfully misrepresenting facts to the Patent Office." (emphasis added)).

doubt about FMC's knowledge of invalidity. When a patent application includes deceptive affidavits, it is not difficult to divine the patentee's state of knowledge.²⁷⁸

Alternatively, the patentee can learn of the invalidity after the patent issues (or after it acquires the patent from another firm). Because the standard proposed here is actual knowledge of patent invalidity, the test is straightforward to apply and it is already performed in *Handgards*-type cases. In *Handgards* itself, the patentee knew its patent was invalid, as the jury found in response to special interrogatories.²⁷⁹

It does not matter why one's patent is invalid, whether because of fraud committed by the current patent-holder or because it discovers the patent invalidity after it acquires the patent (either from the PTO or the previous owner of the patent). If a patentee knows that its patent is invalid and yet it holds it out to the world as a valid patent, it has distorted the marketplace in an anticompetitive manner. Potential competitors are not deterred because the patent-holder is more efficient or has a legal right to exclude competitors; rather, they are deciding not to compete because the patent-holder is lying to them, claiming it has a right that it knows it does not have. This is not competition on the merits. A monopolist who maintains its

278. See, e.g., *Paragon Podiatry Lab., Inc. v. KLM Labs., Inc.* 984 F.2d 1182, 1191 (Fed. Cir. 1993) (finding that the submission of deceptive affidavits to the PTO strongly supports an inference of an intent to deceive the PTO); *Herman v. William Brooks Shoe Co.*, 39 U.S.P.Q.2d 1773, 1777 (S.D.N.Y. 1996) ("The Federal Circuit has held that [a deceptive affidavit creates] . . . an inference of intent, justifying grant of summary judgment, . . . based on 'the affirmative acts of submitting [the affidavits], their misleading character, and the inability of the examiner to investigate the facts.'" (quoting *Paragon Podiatry*, 984 F.2d at 1191)), *rev'd*, 111 F.3d 142 (Fed. Cir. 1997) (finding summary judgment improper because a genuine issue of material fact still remained, even though submission of a false affidavit is per se material); see also *F.B. Leopold Co. v. Roberts Filter Mfg. Co.*, 37 U.S.P.Q.2d 1375, 1381-82 (W.D. Pa. 1995) (finding that the applicant's "intent is clearly demonstrated . . . [by] his conscious effort to conceal [a patent-disqualifying transaction] from his newly hired attorney" and by firing his "patent attorney of 10 years . . . after receiving an unfavorable patentability opinion"), *aff'd*, 119 F.3d 15 (Fed. Cir. 1997).

279. *Handgards, Inc. v. Ethicon, Inc.*, 601 F.2d 986, 991 (9th Cir. 1979); see also *Argus Chem. Corp. v. Fibre Glass-Evercoat Co.*, 812 F.2d 1381, 1386 (Fed. Cir. 1987) ("Noting that [in *Handgards*] the defendant presented evidence that the patentee 'actually knew' that the patent was invalid 'on one or more of three separate grounds,' the court concluded that substantial evidence supported a jury finding that the patentee 'prosecuted its patent suit in bad faith.'" (quoting *Handgards*, 743 F.2d at 1288)).

dominant position by knowingly possessing an invalid patent is engaging in quintessential exclusionary conduct.

An intent requirement is particularly important for the antitrust cause of action proposed here. Antitrust law should not punish the negligence or inadvertent maintenance of a patent that turns out to be invalid.²⁸⁰ Of course, the same anticompetitive effects can come from an invalid patent whether or not the patentee knows of the patent's invalidity. This would be an argument for treating the holding of an invalid patent as the basis for antitrust liability regardless of whether the patentee knew or had reason to know that its patent was, in fact, invalid. But absent a knowledge requirement, there is a serious risk of courts imposing treble damages on patent-holders for good-faith maintenance of patents that are ultimately held invalid. A good faith belief of a patent's validity should protect the patentee from liability for antitrust violations, even if that patent is later proven to be invalid.²⁸¹

Even with this knowledge requirement, there is a risk that a competitor could call the monopolist's attention to vague references to potential prior art and then assert that the monopolist "knew" its patent was invalid. Thus, there is the potential for costly harassment if patentees felt obligated to chase down all such rumors lest they violate the antitrust laws. This Article does not propose the creation of an independent duty to investigate mere accusations or suspicions of patent invalidity.²⁸² The standard for intent proposed here is not that the monopolist should have known; it is actual knowledge. Vague insinuations of invalidity do not create actual knowledge. A standard is needed that prevents abusive tactics when a competitor "informs" the patentee that its patent is invalid.

While line-drawing is difficult in the abstract, one possible standard would be that any such notice must be sufficient to survive a motion for summary judgment. A defendant monopolist would be found to possess actual knowledge of a patent's invalidity if that defendant monopolist were (1) specifically in-

280. For example, while patent invalidity is a common defense asserted in patent infringement suits, the success of the defense should not automatically create antitrust liability (even if the patent-holder was a monopolist).

281. See *Walker Process*, 382 U.S. at 177 ("By the same token, Food Machinery's good faith would furnish a complete defense. This includes an honest mistake as to the effect of prior installation upon patentability—so-called 'technical fraud.'").

282. Such a duty could provide a marginal disincentive to legitimate patenting activity, a result this proposal seeks strenuously to avoid.

formed of the basis of a patent's invalidity and (2) provided with all the evidence necessary to support such a basis of invalidity. However, if the proffered prior art merely created a reasonable argument of invalidity, then actual knowledge would not be established.

The intent requirement provides a balance between the competing goals of exposing invalid patents and preserving sufficient incentives to innovate. Antitrust law could eliminate more competition-reducing invalid patents if it punished any monopolist who maintained market power through an invalid patent, regardless of the monopolist's awareness of invalidity. While this would lead to the exposure of more invalid patents (and eliminate the necessity of determining the defendant's state of knowledge), such an approach would impose too great a burden on the patent system. If patent-holders had to worry that any subsequent finding of invalidity of their most valuable patents could also give rise to liability for treble damages, they would have a disincentive to engage in patentable activity.

So long as the patentee either does not know its patent is invalid or has a good faith belief that its patent is valid, then the patentee does not have the requisite level of intent.²⁸³ Antitrust liability would not attach under the cause of action proposed here.

c. Duty to Disavow Invalid Patents

This Article argues in favor of creating a duty for monopolists to disavow patents that they know to be invalid and that are used to maintain their monopoly power. To win any claim based on this duty, an antitrust plaintiff would have to show that the monopolist failed to disavow the patent's validity. Conversely, if a monopolist could show that it dedicated its patent to the public domain—or otherwise disavowed an intent to enforce its patent in a way that legally absolved potential infringers of liability—within a set time period (say, six months) of discovering that its patent was invalid, this showing should constitute a defense to antitrust liability based on the invalid patent. This creates an incentive for firms to take appropriate action when they learn that a particular patent in their portfolio is invalid.

283. See CHISUM, *supra* note 14, § 19.03[4], at 19-262 (“A good faith mistake does not constitute fraud or inequitable conduct.”).

Patent law provides that a patentee (or patent applicant) can disclaim its patent or dedicate it to the public domain.²⁸⁴ Firms need not say why they are dedicating their patent to the public domain. No doubt, public relations departments will spin any dedication as a magnanimous act by a corporation trying to serve the common good, even at the expense of profits. Linux and other players in the open source movement have made selfless business decisions less suspicious.

To satisfy the duty to disavow an invalid patent, the monopolist's act must meet two criteria. First, any statement of intent not to enforce a patent must be legally binding. If it were not legally binding, then potential competitors could still be deterred from entering the market by a rational fear of being sued for infringement. Second, any statement of intent not to enforce should be irrevocable. Once a patent is in the public domain, it remains there permanently, whether the patent arrives in the public domain through expiration of the patent or by dedication of the patentee. If a decision not to enforce one's patent were subject to revocation, the patentee could announce such a decision and then wait to see whether the patented technology was widely adopted. If so, after creation of path dependence it would be more—and perhaps prohibitively—costly for consumers to shift to another standard. The patentee could exact monopoly profits for the life of the patent or until another dominant standard, not covered by the patent, emerged.

The PTO should maintain an accurate, up-to-date list of dedicated or invalidated patents.²⁸⁵ Firms should be able to determine whether a patent has entered the public domain with the same ease as determining whether a patent has been issued governing a particular invention or process. A monopolist's decision to add its patent to the list would deprive the patent owner of the ability to sue for infringement. Patents on the list would be strictly unenforceable and would be treated like an expired patent. If a firm with monopoly power, maintaining that power through a patent that it knows to be invalid, does not surrender its invalid patent, then these facts could suffice to establish that the firm failed its duty to disavow.

Some may argue that a duty to disavow invalid patents is too burdensome. But the duty exists only if the patent-holder

284. See 35 U.S.C. § 253 (2000).

285. The patents listed in the current PTO database should contain an annotation that informs researchers whether a patent has been judicially invalidated, or disavowed or otherwise abandoned by the patent-holder.

knows that its patent is, in fact, invalid. Negligently holding an invalid patent in one's patent portfolio, oblivious to its invalidity, should not violate antitrust laws. Furthermore, the duty only applies to monopolists.²⁸⁶ The duty to disclose an invalid patent is substantially less intrusive than the other duties that antitrust law imposes on monopolists, such as sharing essential facilities and continuing certain business arrangements.²⁸⁷ This duty requires no meaningful expenditures or the continuation of unwanted business relationships. It is not an ongoing duty; once the monopolist disavows its patent, the duty is done.

The duty is reasonable because patentees already have a duty of candor to disclose material information during the patent application process. Patent applicants have a duty to report all material facts to the PTO,²⁸⁸ and, in some instances, current law already punishes a patent-holder for failing to disclose that it has a patent or has applied for one. For example, in the context of proceedings to adopt industry standards, some courts require the patent-holder to inform its standard-setting board co-members that it possesses, or has applied for, a patent that would be infringed by a proposed industry standard.²⁸⁹ In addition, the proposed duty is not without existing analogies elsewhere; the law already allows the suppression of accurate information to serve as the basis for legal liability in many other contexts. For instance, suppressing information can constitute securities fraud, and tort law punishes drug companies that suppress negative information about their products. Thus, it is not revolutionary to hold patent-holders accountable for suppressing the known truth about their patent's invalidity.

The reasonableness of a duty to disavow invalid patents can also be seen by considering the duty, in other contexts, to

286. The duty might also apply to those firms with a dangerous probability of monopolizing a relevant market and with a specific intent to monopolize that market, in the case of attempted monopolization claims.

287. See *Aspen Skiing Co. v. Aspen Highlands Skiing Corp.*, 472 U.S. 585, 585–86, 611 (1985).

288. *Precision Instrument Mfg. Co. v. Auto. Maint. Mach. Co.*, 324 U.S. 806, 818 (1945) (“Those who have applications pending with the Patent Office or who are parties to Patent Office proceedings have an uncompromising duty to report to it all facts concerning possible fraud or inequitableness underlying the applications in issue.”).

289. James C. De Vellis, *Patenting Industry Standards: Balancing the Rights of Patent Holders with the Need for Industry-Wide Standards*, 31 *AIPLA Q.J.* 301, 332–33 (2003) (quoting *Stambler v. Diebold*, 11 U.S.P.Q.2d (BNA) 1709, 1714 (E.D.N.Y. 1988)) (citing *Wang Labs., Inc. v. Mitsubishi Elecs. Am., Inc.*, 30 U.S.P.Q.2d (BNA) 1241, 1250 (C.D. Cal. 1993)).

return government property. The government grant of a patent confers a property right upon the patentee. A firm that knowingly possesses a property right to which it is not entitled has an obligation to return it. The government has a long-standing right to recover funds that have been erroneously granted to a private party.²⁹⁰ In particular, the government can recover tax refunds that are erroneously given to a taxpayer.²⁹¹ Courts should treat intellectual property no differently. Indeed, a stronger argument can be made with respect to intellectual property since, unlike an unearned tax refund, ownership of intellectual property rights gives the holder rights against third parties. When the government gives a taxpayer too large a tax refund, third parties remain largely unaffected.²⁹² But if the government grants an unearned patent right to a firm, then potential competitors may be deterred from entry, and consumers may pay a higher price for products. In sum, whether the patentee has committed fraud or not, the patent-holder who knowingly maintains an invalid patent is retaining property rights that the government has erroneously granted and that the patentee has no right to keep—let alone deploy against third parties.

Of course, the monopolist must be afforded some opportunity to consider its position and to disavow its patent. A defined grace period should be established. The grace period must be

290. *United States v. Wurts*, 303 U.S. 414, 415 (1938) (“The Government by appropriate action can recover funds which its agents have wrongfully, erroneously, or illegally paid. ‘No statute is necessary to authorize the United States to sue in such a case. The right to sue is independent of statute.’” (quoting *United States v. Bank of the Metropolis*, 40 U.S. 377, 401 (1841))).

291. 26 U.S.C. § 6532(b) (2000) (“Recovery [by the United States] of an erroneous refund by suit under section 7405 shall be allowed only if such suit is begun within 2 years after the making of such refund, except that such suit may be brought at any time within 5 years from the making of the refund if it appears that any part of the refund was induced by fraud or misrepresentation of a material fact.”). *See, e.g.*, *Mildred Cotler Trust v. United States*, 2 F. Supp. 2d 264, 273 (E.D.N.Y. 1998), *rev’d on other grounds*, 184 F.3d 168 (2d. Cir. 1999).

Indeed, the government can recover interest on the refund that it mistakenly awarded even when the taxpayer has done nothing wrong and has notified the IRS about the erroneous refund. *See, e.g.*, *Brookhurst, Inc. v. United States*, 931 F.2d 554, 557–58 (9th Cir. 1991). In some instances, the federal government can recover fines, as well as treble damages, when an individual conceals its obligation to transmit money or property to the government. *See, e.g.*, 31 U.S.C. § 3729(a)(7) (2000); *United States v. Pemco Aeroplex, Inc.*, 195 F.3d 1234, 1236 (11th Cir. 1999).

292. There may be a slight drain on government coffers that has a minimal, indirect effect on many people.

long enough to allow the patentee to make an informed decision but not so long as to allow the monopolist to profit unreasonably from extending the delay in market entry by competitors. Anywhere in the range of three to six months would be a reasonable amount of time. Not all monopolists that knowingly possess invalid patents should receive the benefit of a grace period, though. If the patentee-monopolist actually commits fraud against the PTO in obtaining its patent, then it has violated Section Two as soon as it either achieves monopoly power or has a dangerous probability of doing so. However, if the monopolist only discovers that its patent is invalid after the patent has been issued, it should be entitled to a grace period.

d. Affirmative Defense: Legitimate Business Justification

Courts generally allow Section Two defendants to argue that their exclusionary conduct is supported by a legitimate business justification. The defendant bears the initial burden of showing that its challenged conduct was intended to further a legitimate business justification.²⁹³ If it can establish such a justification, the plaintiff must show that the justification is pretextual or that the goal could be achieved through less restrictive means.²⁹⁴ This defense is unlikely to be an issue in this new cause of action: there is simply no legitimate justification for knowingly maintaining an invalid patent.

3. Causal Antitrust Injury

Finally, a private antitrust plaintiff must prove causal antitrust injury in order to recover damages. This requires two related showings by the plaintiff: first, that it suffered an antitrust injury, and second, that the defendant's conduct caused that injury. "Antitrust injury" refers to injuries of the type that antitrust law was designed to prevent, such as the exclusion of efficient competitors or an increase in price to consumers. A monopolist's maintenance of an invalid patent can create antitrust injury. Perhaps the injury is most clear when a monopolist—who knows its patent is invalid—convinces rivals to take out licenses. The licensees suffer antitrust injury which can be measured by the unnecessary royalty payments. Competition

293. *United States v. Microsoft Corp.*, 253 F.3d 34, 59 (D.C. Cir. 2001).

294. *In re Visa Check/Mastermoney Antitrust Litig.*, 192 F.R.D. 68, 81 (E.D.N.Y. 2000) (quoting *Clorox Co. v. Sterline Wintrop, Inc.*, 117 F.3d 50, 56 (2d. Cir. 1997)), *aff'd*, 280 F.3d 124 (2d Cir. 2001).

also is reduced when an invalid patent causes would-be competitors to decline to enter the market. A firm deterred from entering a market because of an invalid patent has suffered antitrust injury: its reduced potential profits are the result of diminished competition, not sales lost to a more efficient competitor.²⁹⁵ Consumers, too, suffer antitrust injury in such a situation, as they do whenever a monopolist acquires or maintains its monopoly through anticompetitive conduct.²⁹⁶

In order to establish causation, an antitrust plaintiff may not simply show that a monopolist knowingly possessed an invalid patent. A private plaintiff pursuing a Section Two cause of action also must prove that the defendant's antitrust violation *caused* its harm; namely, that the presence of the invalid patent²⁹⁷ caused the plaintiff either to exit the market or to decline entry into a market that it was otherwise ready, willing, and able to enter within a reasonable time.²⁹⁸ Thus, the plaintiff competitor claiming that it has suffered antitrust injury because of the defendant monopolist's knowing maintenance of an invalid patent must prove three separate components in order to establish the causal antitrust injury element: (1) it desired to enter the relevant market, (2) it had the ability to enter the market, and (3) the defendant's invalid patent was a but-for cause in the decision not to enter the market.²⁹⁹ If the antitrust

295. See *Brunswick Corp. v. Pueblo Bowl-O-Mat, Inc.*, 429 U.S. 477, 482 (1977).

296. FTC INNOVATION REPORT, *supra* note 7, ch. 3, at 40–41 (“According to Professor Shapiro, the higher royalty paid by companies subject to a hold-up strategy may result in higher prices to consumers, inefficiently low use of the affected products, and deadweight loss.”).

I am not here advocating for granting consumers standing to assert *Walker Process* claims, something that they currently cannot do. *In re Ciprofloxacin Hydrochloride Antitrust Litig.*, 363 F. Supp. 2d 514, 542 (E.D.N.Y. 2005). That is a topic for another day.

297. Of course, the plaintiff does not have to establish that *it* knew the patent to be invalid. Even if a plaintiff firm suspected or knew the patent to be invalid but feared an infringement suit and thus declined market entry, that should be sufficient. The critical issue is the *defendant's* awareness of the patent's invalidity, not the plaintiff's.

298. *Andrx Pharms., Inc. v. Biovail Corp. Int'l*, 256 F.3d 799, 806 (D.C. Cir. 2001) (citing *Indium Corp. of Am. v. Semi-Alloys, Inc.*, 781 F.2d 879, 882 (Fed.Cir.1985)).

299. This is similar to the second prong of the test for declaratory judgment standing to challenge patent validity, which requires that the plaintiff “must have actually produced or prepared to produce an allegedly infringing product.” *Spectronics Corp. v. H.B. Fuller Co.*, 940 F.2d 631, 634 (Fed. Cir. 1991), *abrogated on other grounds by Cardinal Chem. Co. v. Morton Int'l*, 508 U.S. 83 (1993).

plaintiff entered the market after a meaningful delay despite the suspect patent, or limited its sales—either geographically or in volume—out of fear of drawing a patent infringement suit, it has similarly suffered antitrust injury, and the same causation test applies.

Desire to Enter the Relevant Market: A plaintiff cannot show that it suffered antitrust injury from the defendant's conduct unless it can establish that it was planning to enter the relevant market.³⁰⁰ Courts should be leery of firms bringing frivolous claims whenever a monopolist's patent is found to be invalid. While the need to prove that the monopolist knew its patent was invalid provides one meaningful filter against false positives, courts can also screen out suspect suits brought by professional plaintiffs by requiring meaningful evidence that the plaintiff was, in fact, planning to enter the market while the monopolist possessed the patent. The strongest evidence of a desire to enter the market would be contemporaneous correspondence, e-mails, memoranda, and reports that document the firm's decision to enter the relevant market. Although clearly relevant and perhaps sufficient in some cases, testimony from the plaintiff's executives and employees would be less persuasive. Defendants could challenge the veracity of such proclamations since firms could easily assert a prior interest in entering a monopolized market. In any case, even if the plaintiff's testimony is self-serving, such testimony only demonstrates desire. The plaintiff must also establish the second component of causation: that it had a reasonable probability of actual market entry.

Ability to Enter the Relevant Market: In addition to showing a desire to enter the monopolized market, an antitrust plaintiff must prove that it had realistic prospects of entering the market in a reasonable time.³⁰¹ If the plaintiff had previously been in the market and was forced out due to the defendant's threats, the ability to compete is easily inferred.³⁰² Anti-

300. *Bourns, Inc. v. Raychem Corp.*, 331 F.3d 704, 714 (9th Cir. 2003) (Pregerson, J., concurring in part and dissenting in part) ("Thus, 'our circuit, along with most circuits, has held that a potential competitor has standing if he can show a genuine intent to enter the market and a preparedness to do so.'" (quoting *Bubar v. Ampco Foods, Inc.*, 752 F.2d 445, 450 (9th Cir. 1985))).

301. What constitutes a reasonable time will be a function of the characteristics of the particular market.

302. In declaratory judgment cases, courts have held that the "plaintiff must be engaged in an actual making, selling, or using activity subject to an infringement charge or must have made meaningful preparation for such ac-

trust courts have noted that when plaintiffs claim “that the defendant unlawfully prevented the plaintiff from engaging in a business, particularized allegations of preparedness are essential.”³⁰³ Courts consider the following to represent indicia of preparedness: “adequate background and experience in the new field, sufficient financial capability to enter it, and the taking of actual and substantial affirmative steps toward entry, ‘such as the consummation of relevant contracts and procurement of necessary facilities and equipment.’”³⁰⁴ Also important are market studies commissioned by the plaintiff when it was considering market entry. Such reports often itemize the costs and benefits of market entry, and list the barriers to entry and the firm’s ability to overcome these barriers in light of its assets. When available, market analyses can help the fact-finder evaluate whether the plaintiff bore a reasonable chance of successfully entering the relevant market given the plaintiff’s assets—both those assets held and those reasonably capable of acquisition.

In addition to any contemporaneous records evaluating the prospects for successful market entry, both sides may introduce relevant expert testimony. Of course, there can never be certainty about whether a particular competitor would have succeeded. However, this uncertainty can be attributed to the defendant’s anticompetitive conduct—assuming that the plaintiff can establish causation, discussed below. By analogy, successful plaintiffs enjoy some latitude in estimating antitrust damages when precise calculations are not available because the defendant’s antitrust violation prevented the plaintiff from making sales.³⁰⁵ Here, too, the defendant should not gain a litigation advantage by excluding competitors in a manner that requires courts to speculate about whether the plaintiff would have succeeded; the defendant’s actions have made speculation a necessity. If all of the other elements of the cause of action are established, courts should be reluctant to impose too high a

tivity.” *Arrowhead Indus. Water, Inc. v. Ecolchem, Inc.*, 846 F.2d 731, 736 (Fed. Cir. 1988). If the plaintiff is actually making and selling its product at full capacity, then it would be difficult to show any antitrust injury; so, “meaningful preparation” is the important language.

303. *Indium Corp. of Am. v. Semi-Alloys, Inc.*, 591 F. Supp. 608, 613 (N.D.N.Y. 1984).

304. *Andrx Pharms., Inc. v. Biovail Corp. Int’l*, 256 F.3d 799, 806–07 (D.C. Cir. 2001) (quoting *Hecht v. Pro-Football, Inc.*, 570 F.2d 982, 994 (D.C. Cir. 1977)).

305. See *Bigelow v. RKO Radio Pictures, Inc.*, 327 U.S. 251, 264–65 (1946).

burden on plaintiffs seeking to establish that they would have been viable competitors if the defendant's patent had not deterred their market entry. This leads to the final component required to prove the causal antitrust injury element.

The Defendant's Invalid Patent Caused the Decision Not to Enter the Market: After proving the desire and ability to enter the relevant market, the plaintiff must establish that the reason it declined market entry was fear of infringing the defendant's patent. As with testimony regarding the desire to enter a market, the plaintiff's decision-makers' testimony that the firm declined market entry because of the defendant's invalid patent is important, but potentially suspect. However, such testimony can be corroborated by contemporaneous records documenting the plaintiff's awareness of the defendant's patent and the plaintiff's decision-making process.³⁰⁶ There may be multiple reasons why a competitor did not enter a market, but when a monopolist knowingly uses an invalid patent to maintain its market power, the causation requirement should not be applied so strictly as to deny an antitrust remedy to competitors who were deterred from entering the market at least in part because of the presence of that invalid patent. If courts apply too stringent a causation requirement in such cases, they could essentially immunize monopoly-enhancing conduct that has no socially redeeming value.

The causation issues will be more nuanced when the monopolist possesses a patent portfolio. In some situations, a single patent may suffice to monopolize a relevant market. While this happens more often in the pharmaceutical industry, it can happen in other industries as well. But, in many cases, patents are part of a larger portfolio, and one invalid patent in a large portfolio should not necessarily trigger antitrust liability. The issue is whether the invalid patent is critical to maintaining the dominant firm's monopoly power. In other words, would the competitor have entered the market if the monopolist had only its portfolio of valid patents without the invalid patent as well? Patent law makes a distinction between essential patents and

306. To be most persuasive, such documents should probably indicate that the firm did not wish to risk an infringement suit and that the firm's decision-makers did not believe that the firm could efficiently enter the market without infringing the patent.

non-essential patents.³⁰⁷ If the invalid patent is non-essential, then it should not serve as the basis for antitrust liability. However, if the monopolist holds an essential patent that it knows to be invalid, then it is potentially liable if the plaintiff can prove the remaining elements under Section Two.

B. ATTEMPTED MONOPOLIZATION

In addition to violating the Sherman Act's prohibition against actual monopolization, the knowing maintenance of an invalid patent could constitute illegal attempted monopolization. The Supreme Court has held that "to demonstrate attempted monopolization a plaintiff must prove (1) that the defendant has engaged in predatory or anticompetitive conduct with (2) a specific intent to monopolize and (3) a dangerous probability of achieving monopoly power."³⁰⁸ The first element of the *Spectrum Sports* test is the same as the second element of the *Grinnell* test; thus, the above analysis of intent and the duty to disavow applies here as well. However, there are two major differences between the *Grinnell* and *Spectrum Sports* tests.³⁰⁹ First, while the third element of the *Spectrum Sports* attempted monopolization test requires the same process of defining the relevant market as the first element of the *Grinnell* test, it can be satisfied with a lower market share.³¹⁰ Second, the attempted monopolization test requires a greater level of intent than that required by a monopolization claim.³¹¹ The attempted monopolization plaintiff must show that the defendant knew its patent was invalid while holding it out to the world as

307. See, e.g., *U.S. Philips Corp. v. Int'l Trade Comm'n*, 424 F.3d 1179, 1194 (Fed. Cir. 2005) (noting that "non-essential" patents constitute separate products from "essential" patents in a packaging licensing agreement).

308. *Spectrum Sports, Inc. v. McQuillan*, 506 U.S. 447, 456 (1993) (citing 3 PHILLIP AREEDA & DONALD F. TURNER, *ANTITRUST LAW*, ¶ 820, at 312 (1978)).

309. See *supra* notes 284–92 and accompanying text.

310. See *Multiflex v. Samuel Moore & Co.*, 709 F.2d 980, 990 (5th Cir. 1983) ("Attempted monopolization under Section 2 is usually defined as an unsuccessful attempt to achieve monopolization."), *abrogated on other grounds* by *Deauville Corp. v. Federated Dep't Stores, Inc.*, 756 F.2d 1183 (5th Cir. 1985).

311. *Argus Chem. Corp. v. Fibre Glass-Evercoat Co.*, 812 F.2d 1381, 1385 (Fed. Cir. 1987) ("Indeed, in *American Hoist & Derrick*, this court, apparently applying Ninth Circuit law, stated that in a *Walker Process* claim of attempting to monopolize 'a specific intent, greater than an intent evidenced by gross negligence or recklessness, is an indispensable element.'" (quoting *Am. Hoist & Derrick Co. v. Sowa & Sons, Inc.*, 725 F.2d 1350, 1368 (Fed. Cir. 1984))).

valid, and that the defendant had a specific intent to monopolize a relevant market.³¹²

Thus, even if the patent-holder does not yet possess full monopoly power, so long as its market share is sufficiently high to represent a dangerous probability of monopolization, maintenance of invalid patent may form the basis of Section Two attempted monopolization liability.

C. ANTITRUST LAW CAN SOLVE THE PROBLEMS CREATED BY INVALID PATENTS BETTER THAN THE PATENT SYSTEM.

Ultimately, the antitrust law regime provides a better mechanism for deterring and punishing the maintenance of invalid patents that injure competition. Invalid patents unnecessarily and inefficiently deter competitors from entering the market. In its amicus brief in support of the petitioner in *Walker Process*, the government took note of “the public policy favoring the elimination of fraudulently obtained patents, which otherwise would clog our system of free competition.”³¹³ The goal of remedying an injury to competition is the province of antitrust jurisprudence.³¹⁴

The need for an antitrust solution can be seen on several levels. First, an expanded antitrust cause of action would properly incentivize excluded competitors to sue to invalidate bad patents. In particular, collective action problems of firms waiting for their rivals to take legal action against a suspect patent would be avoided. As discussed above, collective action problems may dissuade firms from challenging suspect patents because the individual benefits of victory do not outweigh the costs of the challenge.³¹⁵ Antitrust solves the collective action problem by giving sufficient incentives to strike invalid patents. Besides being able to practice the invention of the stricken pat-

312. See *Darda Inc. USA v. Majorette Toys (U.S.) Inc.*, 627 F. Supp. 1121, 1140–41 (S.D. Fla. 1986), *rev'd in part on other grounds*, 824 F.2d 976 (Fed. Cir. 1987) (“Antitrust liability based on alleged fraudulent patent procurement requires a specific intent to monopolize. An intent evidenced by gross negligence or even recklessness is insufficient to establish antitrust liability, which must be proven by clear and convincing evidence.”).

313. Brief for the United States as Amicus Curiae, *supra* note 83, at 6, *reprinted in* ANTITRUST BRIEFS & ORAL ARGUMENTS, *supra* note 25, at 730.

314. See *Mercoid Corp. v. Minneapolis-Honeywell Regulator Co.*, 320 U.S. 680, 684 (1944) (“The legality of any attempt to bring unpatented goods within the protection of the patent is measured by the anti-trust laws not by the patent law.”).

315. See *supra* notes 233–35 and accompanying text.

ent, the victorious plaintiff would be entitled to treble damages, likely exceeding the costs of challenging an invalid patent. Thus, antitrust solves the collective action problem, which is itself a barrier to entry.

While there are other means of overcoming the collective action problem,³¹⁶ antitrust provides the most effective solution. For example, Professor Thomas proposes a bounty system.³¹⁷ While I am generally supportive of bounties,³¹⁸ using antitrust liability instead of patent bounties provides some comparative advantages. There is no need to eliminate all invalid patents because many do not “have commercial value, and the effort required to scrutinize those that do not would be wasteful.”³¹⁹ Professor Thomas acknowledges that “a generous bounty could promote overinvestment in prior art research.”³²⁰ But independent of the amount of the bounty, a bounty system that encourages researching the prior art relevant to worthless patents would almost certainly produce waste by encouraging investment in invalidating patents that have no distorting effect on the economy. The primary advantage of Section Two liability over a patent bounty is the focused attention on those invalid patents that are actually causing harm, or are most likely to cause harm. It tethers damages to the amount of harm caused. This means that social resources are more likely to be focused in a more cost-effective manner. Furthermore, in contrast to patent bounties, an antitrust claim would compensate those directly injured by the invalid patent. Patent remedies do not provide compensation for the injury inflicted against competition.

Second, an antitrust remedy would better deter future patent fraud. Deterrence requires meaningful punishment of the bad act. The patent system does not adequately deter fraud

316. The FTC has suggested that it recognizes the collective action problem and may help try to overcome it by becoming involved in challenges to questionable patents. See FTC INNOVATION REPORT, *supra* note 7, ch. 6, at 22.

317. Thomas, *supra* note 7, at 305, 342–43.

318. See Christopher R. Leslie, *Trust, Distrust, and Antitrust*, 82 TEX. L. REV. 515, 655 (2004).

319. Dreyfuss, *supra* note 15, at 755; Lemley, *supra* note 5, at 1497 (“[T]he overwhelming majority of patents are never litigated or even licensed. . . . [Therefore,] it is much cheaper for society to make detailed validity determinations in those few cases than to invest additional resources examining patents that will never be heard from again.”); cf. Miller, *supra* note 234, at 675 (“Industry actors have not been sufficiently animated into challenging patents that should be brought down.”).

320. Thomas, *supra* note 7, at 345.

against the PTO in large part because the punishment is insufficient. The punishment is generally loss of the patent, which, in the invalid patent context, frequently acts as no deterrent at all. If the only punishment for bank robbing were to have to give the money back when caught, bank robbing would be highly rational—and popular. While attorney sanctions may effectively prevent lawyer participation in fraud upon the PTO, such sanctions do nothing to deter patent applicants from concealing disqualifying information from their patent counsel. Antitrust imposes a more meaningful punishment on the firm. With its treble damages remedy, antitrust law can help deter fraud and thus simultaneously achieve important goals with both the patent and antitrust regimes.

Third, by solving the collective action problem and avoiding the standing hurdles in declaratory judgment actions, an antitrust action results in earlier invalidation of the patent and quicker restoration of the competitive market. The legal system should encourage expedient invalidation of bad patents.³²¹ Early invalidation saves resources because competitors do not have to invest in researching or inventing around a bad patent. Knowing that they could more easily challenge suspect patents, competitors would be more likely to consider entering markets that would otherwise remain foreclosed. Eliminating the enforcement requirement will lead to the invalidation of bad patents sooner because the patentee would no longer control the initiation of litigation. Under the current system, the holder of an invalid patent can forestall both antitrust and declaratory judgment lawsuits by declining to affirmatively enforce the patent. Although the mere presence of the patent in the marketplace could deter entry, no excluded competitor would have standing to sue. Creating an antitrust cause of action based on a monopolist's knowing possession of an invalid patent would solve this problem.

Finally, antitrust law allows the fashioning of appropriate individual remedies. The anticompetitive effects of the invalid patent may even continue for some time after the (invalid) pat-

321. See Dreyfuss, *supra* note 15, at 702 (“The public interest favors early challenge of patents so that the discoveries are available sooner for use free of tribute to their inventors.”); see also Nard, *supra* note 94, at 762 (“In short, patent owners, their competitors, and the public are being ill-served by not having resolution of proprietary and competitive certainty until so late in the ‘sterile enterprise of litigation.’” (quoting *Litton Sys., Inc. v. Honeywell, Inc.*, 87 F.3d 1559, 1580 (Fed. Cir. 1996) (Bryson, J., concurring))).

ent has expired.³²² But a patent declaratory judgment action merely invalidates the patent; it does not affirmatively level the playing field moving forward, which can be particularly important in markets with high customer loyalty or network effects.³²³ By contrast, antitrust law can fix the problem through injunctive relief designed to restore competition. For example, an antitrust remedy can allow customers locked into long-term contracts the opportunity to exit those contracts in favor of dealing with another competitor. Alternatively, if there are significant switching costs, antitrust courts can find a way to make the liable monopolist pay those costs.

While it would be possible to change the patent system to better deal with invalid patents—for example, by increasing resources at the PTO or relaxing the standard for declaratory judgment actions—expanded antitrust liability addresses the problem of invalid patents better than exclusive reliance on the patent system. More time on the front-end of the patent process, for example, is unlikely to uncover situations in which a patent applicant lies about the absence of patent-disqualifying bars, such as early offers to sell. Making standing for declaratory judgments of invalidity easier to obtain does not solve the collective action problem. Highlighting the downsides of other approaches does not mean that such proposals should not be attempted or that my proposal will completely solve the problem of invalid patents. It will not. No single approach could eliminate invalid patents from the U.S. marketplace. My proposal is no exception; it will not eliminate all invalid patents, and I do not claim that it will. But my proposal should lead to greater exposure and punishment of some competition-distorting invalid patents (those of the most concern) and provide greater deterrence against future fraud on the PTO. Also, my proposal could easily be pursued in conjunction with other suggestions for better vetting patent applications and eliminating invalid patents, such as an expansion of opposition hearings.³²⁴

322. Brief of Petitioner, *supra* note 25, at 8, *reprinted in* ANTITRUST BRIEFS & ORAL ARGUMENTS, *supra* note 25, at 666 (“The monopoly effect continued even after expiration of the patent because it deprived Walker of acquiring, during the term of the fraudulent monopoly, the experience which purchasers in this field require of their equipment suppliers.”).

323. *See supra* notes 199–206 and accompanying text.

324. *See supra* notes 236–42 and accompanying text (discussing the shortcomings of public use and opposition proceedings).

Monopolists do not currently have sufficient incentives to disavow patents that they know to be invalid. Given the potential market-distorting effects of some invalid patents, the law should create such incentives. Using antitrust law as the mechanism to do so will both create a meaningful incentive (given the trebling of damages) and also focus attention on those invalid patents that actually result in competitive harm. Judicial and social resources would not be spent culling patents that may be invalid but inflict no harm. Permitting antitrust liability for monopolists who acquire or maintain their monopoly power by holding invalid patents would simultaneously serve the goals of both antitrust law and patent law.

V. ARGUMENTS AGAINST ANTITRUST LIABILITY FOR A MONOPOLIST'S MAINTENANCE OF INVALID PATENTS

There are several possible arguments against recognizing an antitrust cause of action based on a monopolist's possession of an invalid patent that excludes competitors. First, the letter of an expanded rule could be too broad and condemn conduct that it should not. Second, new laws create the risk of false positives and may unintentionally condemn beneficial conduct. As a result, expanded liability can deter useful conduct. Third, an expanded *Walker Process* claim could encourage nuisance suits. This Section addresses each of these concerns in turn.

A. TOO BROAD A CAUSE OF ACTION

There is much debate and consternation about antitrust law encroaching on intellectual property law. Supporters of strong patent rights seem to bemoan any efforts to impose antitrust liability on patent-holders. The common refrain is that the risk of antitrust liability will deter innovation by making the acquisition of patents less attractive. In the conflict between antitrust law and intellectual property, advocates of strong patent rights contend that antitrust law should give way, lest society lose the advantages achieved by the U.S. patent system.

While some commentators argue that antitrust law should avoid interfering with patent rights, the condemned conduct here—knowing possession of invalid patents—is clearly reprehensible. The only acts that a duty to disavow will deter are fraud upon the PTO and the knowing maintenance of invalid patents by monopolists. These are hardly the types of conduct that we should worry about chilling. Where is the slippery

slope, the risk of overdeterrence? Finish this sentence: If monopolists cannot commit fraud on the PTO, then Then what? What is the great calamity that will befall America's system of investment in research and development if people cannot lie to the Patent Office or otherwise maintain patents that they know are invalid?³²⁵

Expanding antitrust liability creates little risk of chilling beneficial conduct. The only conduct that will be deterred is patentees committing fraud on the PTO or knowingly holding on to an invalid patent and representing it to the world as a valid patent. Innocent holders of invalid patents would not be punished because the antitrust plaintiff would be required to prove not merely that the monopoly-maintaining patent was invalid, but that the monopolist *knew* that it was invalid. There is no compelling argument for allowing a monopolist to use an invalid patent as an entry barrier when the monopolist knows that its patent is invalid. Expanded *Walker Process* liability will not discourage firms from acquiring legitimate patents. While it may deter them from obtaining or maintaining invalid patents, that deterrence is an unmitigated benefit. In short, eliminating the enforcement requirement in *Walker Process* claims would not interfere with legitimate patent rights.

Another potential criticism of eliminating the enforcement requirement is that it is tantamount to removing the monopoly conduct element altogether from a Section Two claim, essentially converting monopolization into an inchoate violation. In those cases in which the patentee has perpetrated fraud against the PTO, the commission of fraud is clearly conduct. But in no case would antitrust law punish the monopolist's mere thought or intent; it should punish the knowing possession of an invalid patent. Possession of an object—whether it is

325. Some may opt out of the patent system and resort to trade secret protection. See Katherine J. Strandburg, *What Does the Public Get? Experimental Use and the Patent Bargain*, 2004 WIS. L. REV. 81, 105–18 (2004). But if a patent should not issue, this is precisely the course of action that should happen.

The larger concern may be that a firm considering whether to patent its invention—and believing its invention to be patentable—may worry that it will later discover the patent is invalid and it will be left without any intellectual property protection, either patent or trade secret. Risk averse companies may opt for trade secret protection instead of applying for a patent, thereby preventing public disclosure of the invention. But all firms must currently worry that their patents may be invalidated after issuance. This is part of the current calculus. When firms knowingly receive patents that should not have issued, they should not be able to profit from the exclusionary effects of such invalid patents.

intellectual property, like a patent, or physical property, like drugs or counterfeit goods—is conduct.³²⁶ More importantly, antitrust law already provides a relatively low threshold for the type of conduct sufficient to satisfy *Grinnell's* second prong, especially in the refusal-to-deal context.³²⁷ The refusal of a monopolist to disavow a patent that it knows to be invalid is as much conduct as a monopolist's refusal to share access to an essential facility. What matters is the anticompetitive effect of the monopolist's conduct, not the amount of energy exerted.

Finally, eliminating the enforcement requirement does not undermine patent policy. As the Supreme Court recognized in *Walker Process*, a rule “that private suits may be instituted under § 4 of the Clayton Act to recover damages for Sherman Act monopolization knowingly practiced under the guise of a patent procured by deliberate fraud, cannot well be thought to impinge upon the policy of the patent laws to encourage inventions and their disclosure.”³²⁸ By providing a meaningful penalty for maintaining invalid patents, expanded antitrust liability could deter fraud against the PTO and make the patent system more efficient.

B. RISK OF FALSE POSITIVES

Courts and commentators are generally reluctant to expand Section Two liability out of fear of deterring pro-competitive conduct. No efficiency arguments could possibly justify the knowing maintenance of invalid patents, especially when a dominant firm is using those patents to secure its monopoly power. Nevertheless, there is a risk that the expansion of antitrust law could have negative effects on the patent system.³²⁹

326. See *United States v. Serna*, 309 F.3d 859, 864 (5th Cir. 2002) (finding that possession of a sawed-off shotgun constitutes conduct under the Sentencing Guidelines); *United States v. Hensel*, 699 F.2d 18, 35 (1st Cir. 1983) (describing possession of preparation lists, clean-up lists, and payroll lists relating to a drug deal as conduct under the Federal Rules of Evidence).

327. See *Aspen Skiing Co. v. Aspen Highlands Skiing Corp.*, 472 U.S. 585, 600–05 (1985); *Lorain Journal Co. v. United States*, 342 U.S. 143, 154–55 (1951).

328. *Walker Process Equip., Inc. v. Food Mach. & Chem. Corp.*, 382 U.S. 172, 179–80 (1965) (Harlan, J., concurring).

329. FTC INNOVATION REPORT, *supra* note 7, ch. 1, at 13 (“Patents thus present an additional concern to antitrust enforcers: mistaken antitrust enforcement may undermine the incentives the patent system creates.”).

While false positives are possible, antitrust law is equipped to handle them. First, false positives could result if a patentee is found liable for violating Section Two when the fact-finder incorrectly concludes that the monopolist's patent is invalid. This result seems unlikely given the difficulty of proving that a patent is invalid.³³⁰ There is no evidence of this type of false positive occurring in current challenges to patent validity.

Second, a false positive would result if the fact-finder correctly concludes a monopolist's patent is invalid but incorrectly concludes that the monopolist knew of the patent's invalidity. This precise possibility currently exists for *Walker Process* claims, which require the plaintiff to establish a monopolist's knowledge of patent invalidity.³³¹ Yet there is no evidence that juries mistakenly find such knowledge when none in fact exists.³³²

Third, a fact-finder may correctly conclude that a defendant knowingly maintained an invalid patent, but may incorrectly conclude that the defendant had monopoly power. This mistake is possible in all Section Two litigation. District courts and appellate courts have repeatedly shown themselves more than willing to reject jury verdicts for antitrust plaintiffs on this score. Also, while an incorrect finding of monopoly power would be a false positive, false positives are generally condemned because beneficial conduct is deterred.³³³ What efficient conduct is improperly condemned or deterred here? Any firm's knowing possession of an invalid patent is hardly to be encouraged. Furthermore, the defendant has complete control over this form of false positive: it may disavow patents known to be invalid, thereby avoiding false positives. The fact that non-monopolists, too, might have an incentive to disavow their invalid patents is not necessarily a bad outcome.

330. See *supra* notes 5–20 and accompanying text (noting the difficulty of proving patents invalid).

331. *Walker Process*, 382 U.S. at 177 (noting that a plaintiff's proof of knowing misrepresentation would be sufficient to strip antitrust protection, while a defendant's good faith would serve as a complete defense to such an action).

332. While there is much criticism of antitrust law examining intent because there is a risk that juries will punish mere anticompetitive desires, that is not the type of intent discussed here. We are not examining the monopolist's motives, but its knowledge. This element provides additional protection for patentees.

333. For example, a false positive in a predatory pricing setting could discourage efficient firms from charging lower legal prices. *Matsushita Elec. Indus. Co. v. Zenith Radio Corp.*, 475 U.S. 574, 594 (1986).

In sum, while each of these versions of a false positive is possible, antitrust law is equipped to screen them out. Every element—monopoly power, patent invalidity, intent, and causation—acts as a filter against false positives, since a plaintiff's failure to prove any of those elements dooms its claim.

The risks of false positives can be reduced further through heightened pleading requirements. For example, courts could require the antitrust plaintiff to plead with particularity why the patent is invalid in order to survive a motion to dismiss or for summary judgment. An antitrust plaintiff should be required to cite with specificity the actual prior art or direct evidence of a first sale invalidation that allegedly renders the defendant's patent invalid.

Finally, a focus on the risk of false positives should not blind us to the risks and costs of false negatives. Yet there is a serious risk of false negatives, of monopolists excluding competitors through the possession of invalid patents. Many patents are, in fact, invalid.³³⁴ At this point we cannot know the full scope of the problem or how many invalid patents will be exposed through expanded antitrust liability. The current legal rules help conceal the number of invalid patents because excluded competitors face a high bar in establishing standing to challenge suspect patents. Sly monopolists may hold onto their patents without actively enforcing them, benefiting from the exclusionary effects of the patent system without exposing themselves either to declaratory judgment actions or to antitrust lawsuits. These are false negatives. The social costs of such false negatives include decreased production, higher prices, deadweight loss, and reduced innovation. The law should be as concerned with these false negatives as it is with false positives.

C. NUISANCE SUITS

Recognizing any new cause of action creates a risk of nuisance suits. Some may argue that unscrupulous lawyers will file antitrust suits as a matter of course upon learning of invalidated patents.³³⁵ The fear is not unfounded. History teaches

334. See *supra* notes 3–4 and accompanying text (noting the relatively high incidence of patent invalidity).

335. See FTC INNOVATION REPORT, *supra* note 7, ch. 5, at 22 (“The record reveals substantial concerns that post-grant review proceedings could become very time consuming and might be used as vehicles for harassing patentees.”).

It could also be argued that without the enforcement requirement, merely

that some plaintiffs' counsel seek out areas of the law in which to bring a high volume of arguably meritless lawsuits, usually with the sole intent of coercing quick settlements—in other words, pestering defendants until paid to go away. Before Congress enacted the Private Securities Litigation Reform Act (PSLRA),³³⁶ class action attorneys routinely filed securities fraud suits of dubious merit. There was a perception that whenever a company's stock value declined, unethical lawyers would automatically file securities fraud suits. Some might worry that a similar phenomenon could play out in antitrust litigation, where the invalidation of a patent would automatically invite a Section Two lawsuit.

There is reason to believe that the abuses witnessed in pre-PSLRA securities fraud litigation would not visit themselves upon a new antitrust cause of action based on knowing maintenance of an invalid patent. The securities fraud suits were class actions, in which counsel used repeat players as the class representatives. However, *Walker Process* litigation does not lend itself to class action litigation because consumers generally do not have standing to sue. The pool of potential plaintiffs—excluded competitors in a particular market—is sufficiently small that it would generally not satisfy the numerosity requirement for federal class action litigation.³³⁷ Attorneys would have to represent actual companies that can plead and prove that they were ready, willing, and able to enter the market but declined to do so because of the defendant's patent.

The same elements that protect against false positives should screen out frivolous suits.³³⁸ The plaintiff must prove the relevant product market and relevant geographic market, and must convince the judge that the defendant possessed monopoly power in that properly defined market, that the defendant secured monopoly through the exclusionary effects of a

acquiring a patent could draw a nuisance antitrust suit. However, people could bring frivolous suits falsely asserting enforcement now, just as they may falsely assert that the patentee has monopoly power and its patent is invalid. Eliminating the enforcement requirement does not change the frivolity of the suit.

336. Pub. L. No. 104-67, 109 Stat. 737 (codified in scattered sections of 15 U.S.C.).

337. See FED. R. CIV. P. 23(a) (requiring a class to be “so numerous that joinder of all members would be impracticable”).

338. See *supra* notes 328–33 and accompanying text (describing the screening effect of the requirement that a Section Two plaintiff prove monopoly power, patent invalidity, intent, and causation).

patent it knew to be invalid, and that the plaintiff was ready, willing, and able to proceed to enter the market but was deterred by the presence of the defendant's patent (which later turned out to be invalid). District court judges can operate as gate keepers at summary judgment. Especially following *Matsushita*,³³⁹ district court judges are more inclined to grant summary judgment to defendants in antitrust cases.

While concerns that a rival might bring antitrust litigation to harass a dominant firm are rational, it is important to remember that competitors can bring nuisance suits now, under either antitrust or patent law. The same risk exists whenever a patentee attempts to enforce its patent. Just as declaratory judgment actions and antitrust suits are currently routinely dismissed at a relatively early stage of proceedings, so could any nuisance suit brought under an expanded *Walker Process* doctrine. If competitors abuse this new cause of action, judges should be willing to impose Rule 11 sanctions against any competitor who brings a frivolous suit. The fear of nuisance suits alone should not prevent the creation of a legal remedy against those who abuse the patent system in order to secure illegal monopolies. The answer is to punish nuisance suits, not to protect illegal monopolies.

Furthermore, courts can screen out frivolous suits through heightened pleading requirements. To the extent that *Walker Process* claims began as a species of fraud claims—based on fraudulent procurement of a patent—it is not unreasonable to apply the requirement of Rule 9(b) of the Federal Rules of Civil Procedure that fraud must be pled with specificity.³⁴⁰ Although knowingly maintaining an invalid patent is not technically a form of fraud subject to Rule 9(b)'s heightened pleading requirement, a move in this direction would represent a minor change.³⁴¹

339. *Matsushita Elec. Indus. Co. v. Zenith Radio Corp.*, 475 U.S. 574, 585–87 (1986) (increasing the evidentiary burden on antitrust plaintiffs to survive summary judgment).

340. FED. R. CIV. P. 9(b) (“In all averments of fraud or mistake, the circumstances constituting fraud or mistake shall be stated with particularity.”).

341. Charges of inequitable conduct—essentially fraud on the PTO—already require heightened pleading. See *Simpson v. Stand 21 S.A.*, 32 U.S.P.Q.2d 1848, 1850 (S.D. Ind. 1994) (“Under Rule 9(b), the defendants must specifically plead the time, place, and content of any alleged misrepresentations the plaintiffs made to the PTO, and the requisite intent.”); *Chiron Corp. v. Abbott Labs.*, 156 F.R.D. 219, 221 (N.D. Cal. 1994) (“[P]ublic policy

Fear of private plaintiffs run amok might lead us to consider whether reliance on federal antitrust authorities is the appropriate way to attack invalid patents. If the enforcement requirement of *Walker Process* were eliminated, then lawyers at the Federal Trade Commission and the Department of Justice Antitrust Division would be able to bring antitrust claims against monopolists who maintained their monopoly power through mere possession of invalid patents. By way of remedy, a successful government plaintiff could request damages based on the monopoly profits earned by the defendant—either complete disgorgement, twice the gain, or treble damages—and could suggest appropriate injunctive relief. These remedies could disgorge ill-gotten gains, provide a meaningful deterrent, and help restore a competitive market. Government-sponsored litigation would be good, but so long as private lawsuits were available, it would not solve the problem of potential nuisance suits. Unfortunately, government enforcement alone would probably not be a sufficient deterrent, since federal antitrust authorities have finite resources and bring only a fraction of antitrust suits, especially under Section Two of the Sherman Act.³⁴² Antitrust law does not put exclusive reliance on government actors—save for criminal prosecutions—because government alone cannot discover, litigate, and remedy all antitrust violations. The rational approach is to undertake an antitrust experiment. The courts or Congress should recognize a private antitrust cause of action for a monopolist's knowing maintenance of an invalid patent. If the cause of action leads to abuse in the hands of private plaintiffs, then leaving the task solely to government enforcers would be appropriate.

Finally, the fear of lawsuits is not a sufficient reason to deny an antitrust remedy. Responding to this same argument in *Walker Process*, the Supreme Court opined: "Nor can the interest in protecting patentees from 'innumerable vexatious suits' be used to frustrate the assertion of rights conferred by the antitrust laws. It must be remembered that we deal only with a special class of patents, i.e., those procured by inten-

considerations dictate that the affirmative defense of inequitable conduct be subject to Rule 9(b).").

342. Although the government brings relatively little Section Two litigation, this is one area of illegal monopolization with which even those who disfavor antitrust prosecutions generally should have no serious trouble. There is no efficiency argument to support monopolization through the maintenance of invalid patents.

tional fraud.”³⁴³ The Court’s analysis applies equally when one considers the anticompetitive effects of unenforced patents that the monopolist knows to be invalid.

CONCLUSION

Patents are by their nature exclusionary. Patent rights are quintessential barriers to entry. Particularly strong patents can effectively block all entry into a particular market. Even if a patent does not block market entry completely, it can force competitors to invent around the patent in an effort to create a noninfringing competing product. This also represents a barrier to entry, as the process of inventing around requires an investment of time and money, and may not result in an equally desirable product. These social costs are tolerable when the patent represents a meaningful advancement of the state of the art. But when the patent is invalid, yet still has anticompetitive effects, the law should provide a remedy for excluded competitors.

Currently, neither patent law nor antitrust law is up to the task of deterring and punishing monopolists who maintain their market power through the possession of invalid patents. Courts have imposed an enforcement requirement on antitrust plaintiffs based on the assumption that invalid patents injure competition only when the holder affirmatively enforces the invalid patent against infringers through threats or litigation. Unfortunately, maintaining an invalid patent is currently a cost-effective way for a monopolist to exclude competitors even without threats or litigation. The patentee can charge a monopoly price without risking antitrust liability: there is little likelihood of exposure because litigation is perhaps the best way to expose invalid patents and, under the current legal rules, patentees can prevent litigation by not actively enforcing their patents. Eliminating the enforcement requirement for *Walker Process* claims would create necessary incentives for monopolists to disavow those of their patents which they know to be invalid. This approach could eliminate the competition-distorting effects that flow from monopolists’ mere possession of invalid patents.

343. *Walker Process Equip., Inc. v. Food Mach. & Chem. Corp.*, 382 U.S. 172, 176 (1965) (quoting *Mowry v. Whitney*, 81 U.S. 434, 441 (1871)).