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Rethinking Standing in Patent Challenges

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ABSTRACT

Patents have become a serious business risk. They issue from the Patent and Trademark Office in record-breaking quantity and are aggressively enforced by patent trolls. But many patents are likely to be invalid; and even those which are valid are likely to be narrower than their owners claim. Firms investing in innovation would find it desirable to clear their respective fields of invalid or overbroad patents prior to making their investments, and there is great social value in reducing the number of such patents. But the path to determining the validity or scope of issued patents runs through the courts, and in recent years the Federal Circuit has developed special standing rules for patent challengers that allow access to the courts only when it appears that an infringement suit is temporally or legally proximate. In this Article, I criticize this "proximity" criterion on conceptual, doctrinal, and normative grounds and provide a comprehensive account of standing to challenge the scope and validity of patents. Conceptually, I argue that because patents are a form of regulation, their effects sweep more broadly than the Federal Circuit currently appreciates. When the risk of infringement liability deters business and investment activities, the affected parties can bring a "quiet title" action to obtain certainty about the validity or scope of adverse patents. I then argue as a doctrinal matter that there is no reason to treat patent challenges differently from other cases. Applying traditional principles of constitutional and prudential standing broadens the range of potential plaintiffs. Finally, I justify this result on normative grounds because the Federal Circuit's restrictive approach creates a misalignment between those who have incentives to challenge patents and those who have access to the courts. Allowing challenges by a broader range of plaintiffs will result in more socially valuable validity litigation.

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INTRODUCTION

Patents have become a serious business risk. They are produced in greater quantities than ever before.[1] A whole industry based upon threats of patent enforcement—the infamous patent trolls—has sprung up, leading to a surge in intellectual property litigation.[2] And a judgment of infringement can have devastating effects for a business, subjecting it to crippling damages and an injunction against continuing any infringing operations.[3] A great many of the patents that are issued and litigated are invalid; and even more are of uncertain

1 In fiscal year 2013, the United States Patent & Trademark Office ("PTO") issued over 265,000 utility patents. *See* U.S. PATENT & TRADEMARK OFFICE, PERFORMANCE AND ACCOUNTABILITY REPORT: FISCAL YEAR 2013, at 192 tbl.6. Even just ten years ago, in 2003, the PTO issued just over 171,000. *See id.*

2 The literature on patent trolls is large and growing. For an overview, see Colleen V. Chien, *From Arms Race to Marketplace: The Complex Patent Ecosystem and Its Implications for the Patent System*, 62 HASTINGS L.J. 297 (2010); Mark A. Lemley & A. Douglas Melamed, *Missing the Forest for the Trolls*, 113 COLUM. L. REV. 2117 (2013); Michael Risch, *Patent Troll Myths*, 42 SETON HALL L. REV. 457 (2012).

3 *See* 35 U.S.C. § 284 (2012) (authorizing up to treble damages in certain cases of patent infringement); *id.* § 283 (authorizing injunctive relief for patent infringement).

scope, particularly in the software industry. But it is very difficult to predict the validity or scope of an issued patent prior to litigation.[4] So what is a business facing this risk to do in planning its activities? Innovation, after all, takes time and money; investments in innovation often must be made well before new products or processes actually see the light of day. An innovative company often may face an impossible choice. It must either make fixed investments despite the risk that those investments can be held up later through patent litigation, or it must steer clear of any possibly infringing activity no matter how weak an adverse patent claim may be.

If this hypothetical business were a real estate developer uncertain about whether it was authorized to build on a parcel of land, there would be an obvious third choice: it could resolve the uncertainty through a quiet title action.[5] But in recent years the Federal Circuit has developed a set of standing rules that prevents most developers of intellectual property, rather than real property, from bringing such an action. Instead of making the familiar inquiry into standing—whether a plaintiff has been injured in fact, by the defendant, in a manner redressable by a favorable judicial ruling[6]—the Federal Circuit inquires into the temporal and legal proximity of an infringement suit.[7] A plaintiff can "quiet title" as to the validity or scope of a patent only if she is likely to be sued for infringement—that is, if she has come close to infringing and the defendant has signaled a willingness to assert the patent.

This Article critiques these standing rules on conceptual, doctrinal, and normative grounds. It argues that the Federal Circuit has misconceived the injury that arises from even the mere existence of a patent, has crafted patent-specific standing rules that are more restrictive than those called for under the Supreme Court's broader standing precedents, and has created a misalignment between those who have the incentive to challenge patents and those who have standing to do so. The result is fewer and lower quality challenges[8] than may be optimal.

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4 Issued patents enjoy a presumption of validity, but courts retain authority finally to adjudicate that issue. *See id.* § 282(a) ("A patent shall be presumed valid."); Microsoft Corp. v. i4i Ltd. P'Ship, 131 S. Ct. 2238, 2242 (2011) (requiring proof of invalidity by clear and convincing evidence).

5 *See, e.g.*, 28 U.S.C. § 2409a (2012).

6 *See, e.g.*, Lujan v. Defenders of Wildlife, 504 U.S. 555, 560 (1992).

7 *See infra* Part I.

8 I use the term "patent challenges" throughout this Article to refer to both declaratory judgment suits and administrative proceedings, and to refer to both invalidity and noninfringe-

Standing to sue has not until recently been a significant issue in patent litigation. In the typical case, a patent holder files suit against an accused infringer. The infringement defendant, in turn, can assert as a defense that the patent is invalid and can seek, by way of counterclaim, a declaratory judgment voiding the patent.[9] In this posture, there is no question that the infringement defendant has standing to challenge the validity of the patent that is being asserted against her. Her counterclaim is part and parcel of the same "[c]ase[ ]" or "[c]ontrovers[y]" that arose when she was sued for infringement.[10]

As patents and patent litigation have proliferated, however, proactive actions seeking to invalidate or narrow patents have become more common. Indeed, Congress acknowledged the importance of more and better mechanisms for weeding out invalid intellectual property when it enacted new patent review procedures as part of the America Invents Act ("AIA").[11] Challenges to a patent's scope or validity may take two forms, but both require access to the courts. The first is a declaratory judgment action filed in the district court. Although in the past these actions were usually brought only by licensees or infringement defendants seeking a favorable forum, groups such as the ACLU, the Public Patent Foundation, and the Electronic Frontier Foundation are adopting a public interest model of patent litigation reminiscent of that found in civil rights or environmental law.[12] The most prominent example of this litigation model is the challenge to the validity of breast cancer gene patents in *Ass'n for Molecular Pathology v. Myriad Genetics, Inc.*[13]

The second type of validity challenge is an appeal from administrative post-grant review proceedings. Through the new AIA procedures, any "person who is not the owner of a patent" may file a petition with the U.S. Patent & Trademark Office ("PTO") "to cancel

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ment grounds. For the most part, the standing concerns are the same as between challenges to a patent's validity and to its scope. *See infra* Part III.C.

9 *See* 35 U.S.C. § 282(b)(2)–(3) (2012). A judicial finding that a patent is invalid has preclusive effect in subsequent litigation. *See* Blonder-Tongue Labs., Inc. v. Univ. of Ill. Found., 402 U.S. 313, 333–34 (1971).

10 *See* U.S. CONST. art. III, § 2.

11 *See* Leahy-Smith America Invents Act, Pub. L. No. 112-29, § 6, 125 Stat. 284, 299–313 (2011) (codified as amended in scattered sections of 35 U.S.C.); Joe Matal, *A Guide to the Legislative History of the America Invents Act: Part II of II*, 21 FED. CIR. B.J. 539, 600–05 (2012) (collecting legislative history of post-grant review provisions).

12 *See* Megan M. La Belle, *Patent Law as Public Law*, 20 GEO. MASON L. REV. 41, 41–45 (2012) (analogizing such actions to the public law litigation model described in Abram Chayes, *The Role of the Judge in Public Law Litigation*, 89 HARV. L. REV. 1281 (1976)).

13 Ass'n for Molecular Pathology v. Myriad Genetics, Inc., 133 S. Ct. 2107 (2013).

as unpatentable [one] or more claims of a patent."[14] But those agency proceedings are not final. Any party, including the challenger, may appeal the agency's determination in federal court.[15] And the Federal Circuit recently concluded that its standing rules apply both to declaratory judgments and to agency appeals.[16]

As judicial and administrative validity challenges become important mechanisms to weed out invalid intellectual property and to check the behavior of patent trolls, standing is being litigated with increasing frequency.[17] Indeed, aspects of intellectual property standing appeared on the Supreme Court's docket twice in the 2012 Term—in *Myriad*, the gene patents case, and in *Already, LLC v. Nike Inc.*,[18] a trademark case. Neither case definitively resolved the issue.[19] Standing questions therefore continue to vex courts and litigants in patent challenges.

This Article offers the first comprehensive treatment of standing to challenge the validity or scope of patents. It makes three contributions. First, I develop a conceptual account of the injury that may arise from the existence of intellectual property.[20] Intellectual property rights are rights *in rem*. They purport to exclude the world from the subject matter they cover. As such, they regulate the primary be-

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14 35 U.S.C. §§ 311(a)–(b), 321(a)–(b) (2012).

15 *See id.* §§ 319, 329.

16 *See* Consumer Watchdog v. Wis. Alumni Research Found., 753 F.3d 1258, 1261–62 (Fed. Cir. 2014) (requiring underlying injury in fact separate and distinct from loss before the agency for standing), *cert. denied*, 2015 WL 731871 (U.S. Feb. 23, 2015).

17 In 2012 and 2013, the Federal Circuit issued eight decisions on declaratory judgment jurisdiction in patent cases. *See* Cisco Sys., Inc. v. Alta. Telecomms. Research Ctr., 538 F. App'x 894 (Fed. Cir. 2013); Organic Seed Growers & Trade Ass'n v. Monsanto Co., 718 F.3d 1350 (Fed. Cir. 2013); Arkema Inc. v. Honeywell Int'l, Inc., 706 F.3d 1351 (Fed. Cir. 2013); Fox Grp., Inc. v. Cree, Inc., 700 F.3d 1300 (Fed. Cir. 2012); Matthews Int'l Corp. v. Biosafe Eng'g, LLC, 695 F.3d 1322 (Fed. Cir. 2012); Dey Pharma, LP v. Sunovion Pharm. Inc., 677 F.3d 1158 (Fed. Cir. 2012); 3M Co. v. Avery Dennison Corp., 673 F.3d 1372 (Fed. Cir. 2012); Streck, Inc. v. Research & Diagnostic Sys., Inc., 665 F.3d 1269 (Fed. Cir. 2012).

18 Already, LLC v. Nike, Inc., 133 S. Ct. 721 (2013).

19 In *Already*, the Court considered an issue common to patent and trademark litigation: whether a covenant not to sue for past or present infringing activity mooted a declaratory judgment action when the plaintiff alleged a continued risk of future injury. *See id.* at 725. The Court, however, construed the relevant covenant to include future activity, avoiding the question whether a risk of infringement liability was sufficient for standing. *See id.* at 728–29. Although the standing issue was contested in *Myriad*, the Court affirmed the Federal Circuit's finding that at least one plaintiff had standing in a brief footnote with little reasoning. *See* Ass'n for Molecular Pathology v. Myriad Genetics, Inc., 133 S. Ct. 2107, 2115 n.3 (2013).

20 *See infra* Part II. Megan La Belle analogizes patent litigation to traditional public law litigation. *See* La Belle, *supra* note 12. Although La Belle argues for expanded standing on that ground, *see id.* at 92–93, she does not engage the question how intellectual property results in Article III injury.

havior of those in the relevant field. When patents are of uncertain validity or scope, their mere presence creates risk and uncertainty that deters productive investments. This risk itself is an injury. It prevents people from engaging in conduct that, if the intellectual property were invalid, they otherwise would be entitled to undertake.

Second, I situate the problem of intellectual property standing within the broader doctrinal context of the Supreme Court's constitutional and prudential standing jurisprudence.[21] I argue that there is nothing about intellectual property that justifies the development of special rules that depart from the Supreme Court's general principles. The Court recognizes in a variety of contexts that the risk or uncertainty of regulation can give rise to standing so long as a judicial determination reduces or eliminates the risk or uncertainty. Patent challenges fit easily into these precedents and their underlying normative commitments. Patent challenges also are justified on well-established prudential grounds.

Finally, I make the normative argument not only that broader standing will produce more validity challenges, but also that a return to classic standing principles will remedy a misalignment between those who can bring intellectual property validity challenges and those who have the incentive to do so.[22] Direct competitors, the preferred plaintiffs under current rules, often have an individual incentive to expend time and money on validity litigation that does not align with that of other competitors or society as a whole. They bring fewer validity challenges on narrower grounds than might other plaintiffs such as indirect or potential competitors. Allowing challenges from both

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21 *See infra* Part III. Several scholars have suggested fixes to the discretionary factors applied in declaratory judgment cases. *See* Lorelei Ritchie de Larena, *Re-evaluating Declaratory Judgment Jurisdiction in Intellectual Property Disputes*, 83 IND. L.J. 957, 987–89 (2008); Lisa A. Dolak, *Power or Prudence: Toward a Better Standard for Evaluating Patent Litigants' Access to the Declaratory Judgment Remedy*, 41 U.S.F. L. REV. 407, 432–34 (2007). To my knowledge, this Article is the first to address the constitutional and prudential status of patent challenges, and the first to do so across the full range of procedural postures.

22 *See infra* Part IV. Others have articulated a variety of reasons why expanded standing might be good policy, but have not expressly linked standing to the incentive to bring validity challenges. *See* La Belle, *supra* note 12, at 92–93 (arguing for rules that encourage challenges based on public policy concerns); Nicholas D. Walrath, Note, *Expanding Standing in Patent Declaratory Judgment Actions to Better Air Public Policy Considerations*, 88 N.Y.U. L. REV. 476, 480–81 (2013) (same); *see also* Chester S. Chuang, *Unjust Patents & Bargaining Breakdown: When Is Declaratory Relief Needed?*, 64 S.M.U. L. REV. 895, 897–98 (2011) (arguing that declaratory relief should be more readily available for vague patent claims); Kali N. Murray, *Rules for Radicals: A Politics of Patent Law*, 14 J. INTELL. PROP. L. 63, 77–81 (2006) (arguing for broad standing to allow multiple stakeholders to shape patent policy).

actual and potential competitors to proceed in court would therefore enhance the social value of patent litigation.

I. THE FEDERAL CIRCUIT'S "PROXIMITY" STANDARD

Most of the law concerning the justiciability of patent challenges has been developed in the context of declaratory judgment actions. The Declaratory Judgment Act provides that "[i]n a case of actual controversy within its jurisdiction . . . any court of the United States . . . may declare the rights and other legal relations of any interested party seeking such declaration."[23] The Supreme Court has long held that the "case of actual controversy" language in the statute incorporates Article III's strictures on federal jurisdiction.[24] So actions brought under the Declaratory Judgment Act are subject to the same justiciability analysis as any other actions.[25] They still must satisfy the requirements of standing, mootness, and ripeness.

One of the original uses of the Declaratory Judgment Act was to seek a declaration that intellectual property was invalid.[26] That particular use remains common. Prior to 2007, the Federal Circuit articulated and consistently applied a two-part test for determining whether a court had jurisdiction to hear a claim under the Declaratory Judgment Act that a patent was invalid.[27] For jurisdiction to be proper, the court required "both (1) an explicit threat or other action by the patentee, which creates a reasonable apprehension on the part of the declaratory plaintiff that it will face an infringement suit, and (2) present activity which could constitute infringement or concrete steps taken with the intent to conduct such activity."[28] The court was rarely clear about the rationale for this test. Its reasoning seemed to be simply that an "actual controversy" under the Declaratory Judgment Act was necessary for the exercise of Article III jurisdiction, and the two-part

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23 28 U.S.C. § 2201(a) (2012).

24 *See, e.g.*, Aetna Life Ins. Co. v. Haworth, 300 U.S. 227, 239–40 (1937).

25 *See* Franchise Tax Bd. v. Constr. Laborers Vacation Trust for S. Cal., 463 U.S. 1, 17 (1983) ("[T]he Declaratory Judgment Act was intended to affect only the remedies available in a federal district court, not the court's jurisdiction . . . .").

26 *See* EDWIN BORCHARD, DECLARATORY JUDGMENTS 803–04 (2d ed. 1941).

27 *See, e.g.*, Microchip Tech. Inc. v. Chamberlain Grp., Inc., 441 F.3d 936, 942 (Fed. Cir. 2006); MedImmune, Inc. v. Genentech, Inc., 427 F.3d 958, 964 (Fed. Cir. 2005), *rev'd*, 549 U.S. 118 (2007); Teva Pharm. USA, Inc. v. Pfizer, Inc., 395 F.3d 1324, 1332 (Fed. Cir. 2005); Gen-Probe Inc. v. Vysis, Inc., 359 F.3d 1376, 1380 (Fed. Cir. 2004); Super Sack Mfg. Corp. v. Chase Packaging Corp., 57 F.3d 1054, 1058 (Fed. Cir. 1995); BP Chems. Ltd. v. Union Carbide Corp., 4 F.3d 975, 978 (Fed. Cir. 1993); Arrowhead Indus. Water, Inc. v. Ecolochem, Inc., 846 F.2d 731, 736 (Fed. Cir. 1988).

28 *BP Chems.*, 4 F.3d at 978.

test could be used to determine whether such an "actual controversy" existed.[29] The court explained that there was no controversy unless the defendant expressed an "intent to enforce its patent" and the plaintiff had "a true interest to be protected by the declaratory judgment."[30] In the court's view, it seems, there was only an "actual controversy" when there was "an underlying legal cause of action that the declaratory defendant could have brought or threatened to bring, if not for the fact that the declaratory plaintiff ha[d] preempted it."[31] Only, therefore, when a declaratory plaintiff *could have been* the defendant in an infringement suit was she allowed first to file a declaratory judgment action.

The Federal Circuit viewed its test as a constitutional requirement for jurisdiction.[32] It therefore applied that test across a wide range of fact patterns and procedural postures. The most straightforward were instances where the declaratory judgment was sought as a counterclaim in an infringement suit. In that circumstance, the "reasonable apprehension" of suit had already matured into an actual suit, and so the test was satisfied.[33] But the court also held that even after a suit was filed, the patent holder could unilaterally divest the court of jurisdiction over a declaratory judgment counterclaim by moving to dismiss the original infringement action and making a covenant not to sue again over the defendant's then-existing products or conduct.[34] The court held that licensees were never in reasonable apprehension of suit so long as they continued to make royalty payments and did not breach their licenses; the license agreement "obliterate[s] any rea-

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29 *See, e.g.*, *Teva Pharm.*, 395 F.3d at 1331–32 ("The [Declaratory Judgment] Act, which parallels Article III of the Constitution, requires an actual controversy between the parties before a federal court may exercise jurisdiction . . . . This court has developed a two-part inquiry to determine whether there is an actual controversy in a suit requesting a declaration of patent non-infringement or invalidity.") (internal quotation marks and citations omitted); *Gen-Probe*, 359 F.3d at 1379–80; *Arrowhead*, 846 F.2d at 735–36.

30 *Arrowhead*, 846 F.2d at 736.

31 *Microchip Tech.*, 441 F.3d at 943.

32 *See, e.g.*, *MedImmune*, 427 F.3d at 964–65; *Teva Pharm.*, 395 F.3d at 1335; Dolak, *supra* note 21, at 423–24.

33 *See Arrowhead*, 846 F.2d at 736 ("If defendant has expressly charged a current activity of the plaintiff as an infringement, there is clearly an actual controversy, certainty has rendered apprehension irrelevant, and one need say no more.").

34 *See* Super Sack Mfg. Corp. v. Chase Packaging Corp., 57 F.3d 1054, 1058 (Fed. Cir. 1995). Indeed, prior to the Supreme Court's decision in *Cardinal Chemical Co. v. Morton International, Inc.*, 508 U.S. 83 (1993), the Federal Circuit consistently held that affirmance of a judgment of noninfringement justified vacating a declaratory judgment of invalidity because "the finding of noninfrginement has entirely resolved the controversy between the litigants by resolving the initial complaint brought by the patentee." *Id.* at 91–92. The Supreme Court rejected this practice and its rationale. *See infra* notes 37–45 and accompanying text.

sonable apprehension" that the licensee will be sued for infringement.[35] As to parties without a preexisting relationship, the court developed a fact-specific jurisprudence about what constitutes sufficient threats of litigation to place a declaratory judgment plaintiff in "reasonable apprehension of suit."[36]

The Supreme Court rejected the "reasonable apprehension of suit" test in *MedImmune, Inc. v. Genentech, Inc.*[37] In that case, the plaintiff MedImmune was a licensee of the defendant Genentech.[38] When a dispute over whether a patent was covered by the license arose, MedImmune continued to pay the demanded royalties—it was unwilling to risk the possibility of treble damages and an injunction against selling a product that accounted for more than 80 percent of its revenue in an infringement action[39]—but also brought a declaratory judgment to invalidate Genentech's patent.[40] The Federal Circuit held that the courts lacked jurisdiction over the action because, so long as MedImmune paid royalties under the license, MedImmune had no reasonable apprehension of suit.[41] The Supreme Court reversed. The Court acknowledged that MedImmune's "own acts . . . eliminate the imminent threat of harm" because "[a]s long as . . . payments are made, there is no risk that [Genentech] will seek to enjoin [MedImmune's] sales."[42] But the Court expressly rejected the "reasonable apprehension of suit" test.[43] Instead, the Court reiterated that "the question in each case is whether the facts alleged, under all the circumstances, show that there is a substantial controversy, between parties having adverse legal interests, of sufficient immediacy and reality to warrant the issuance of a declaratory judgment."[44] Because MedImmune sought a declaration of actively contested rights, its own reluctance to expose itself to liability was no barrier to bringing a declaratory judgment action. As the Court wrote: "The rule that a plaintiff must destroy a large building, bet the farm, or (as here) risk treble damages and the loss of 80 percent of its business before seeking a

35 Gen-Probe Inc. v. Vysis, Inc., 359 F.3d 1376, 1381 (Fed. Cir. 2004).

36 *See, e.g.*, BP Chems. Ltd. v. Union Carbide Corp., 4 F.3d 975, 978–80 (Fed. Cir. 1993).

37 MedImmune, Inc. v. Genentech, Inc., 549 U.S. 118 (2007).

38 *See id.* at 121.

39 *Id.* at 122.

40 *Id.*

41 *See id.*

42 *Id.* at 128.

43 *See id.* at 132 n.11.

44 *Id.* at 127 (internal quotation marks omitted).

declaration of its actively contested legal rights finds no support in Article III."[45]

In the years since the *MedImmune* decision, the Federal Circuit has not been consistent either in its articulation of the legal standards for justiciability in patent validity actions or in its application of those standards across different factual circumstances. But a pattern has emerged in which, once again, the likelihood of standing depends upon how close the parties are to engaging in infringement litigation.

One strand of the caselaw has adopted a weaker version of the pre-*MedImmune* two-part test. In *SanDisk Corp. v. STMicroelectronics, Inc.*,[46] the first patent standing case the Federal Circuit decided after *MedImmune*, the court acknowledged that "[t]he Supreme Court's opinion in *MedImmune* represents a rejection of [the] reasonable apprehension of suit test."[47] But it nevertheless held that "jurisdiction generally will not arise merely on the basis that a party learns of the existence of a patent owned by another or even perceives such a patent to pose a risk of infringement, *without some affirmative act by the patentee*."[48] Subsequent cases have made clear that the patent holder must take some threatening action directed at the plaintiff before the plaintiff can file a declaratory judgment action.[49] With respect to the second prong of the pre-*MedImmune* standard, which focused on the declaratory judgment plaintiff's conduct, the Federal Circuit has continued to hold that the plaintiff must demonstrate some "meaningful preparation to conduct potentially infringing activity."[50]

This line reached its apotheosis in *Ass'n for Molecular Pathology v. USPTO*,[51] the gene patents case. In that case, the Federal Circuit held that "to establish an injury in fact traceable to the patentee, a declaratory judgment plaintiff must allege both (1) an affirmative act

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45 *Id.* at 134.

46 SanDisk Corp. v. STMicroelectronics, Inc., 480 F.3d 1372 (Fed. Cir. 2007).

47 *Id.* at 1380.

48 *Id.* at 1381 (emphasis added).

49 *See, e.g.*, Ass'n for Molecular Pathology v. USPTO, 689 F.3d 1303, 1319, 1323 (Fed. Cir. 2012), *aff'd in part, rev'd in part sub nom.* Ass'n for Molecular Pathology v. Myriad Genetics, Inc., 133 S. Ct. 2107 (2013); Innovative Therapies, Inc. v. Kinetic Concepts, Inc., 599 F.3d 1377, 1382 (Fed. Cir. 2010) (holding that "the fact that [the patent holder] had filed infringement suits against other parties . . . does not, in the absence of any act directed toward [the plaintiff], meet the minimum standard" for jurisdiction).

50 Cat Tech LLC v. TubeMaster, Inc., 528 F.3d 871, 880 (Fed. Cir. 2008); *see also SanDisk*, 480 F.3d at 1380 & n.2 (declining to address "the effect of *MedImmune*, if any, on the second prong" of the court of appeals's previous test).

51 Ass'n for Molecular Pathology v. USPTO, 689 F.3d 1303 (Fed. Cir. 2012), *aff'd in part, rev'd in part sub nom.* Ass'n for Molecular Pathology v. Myriad Genetics, Inc., 133 S. Ct. 2107 (2013).

by the patentee related to the enforcement of his patent rights, and (2) meaningful preparation to conduct potentially infringing activity."[52] This test is quite similar to that which the Supreme Court disapproved in *MedImmune*.[53] The analysis is roughly the same, just less demanding. Indeed, the Federal Circuit has at times described *MedImmune*'s impact solely as "lower[ing] the bar"[54] or creating a "more lenient legal standard"[55] for declaratory judgment jurisdiction rather than fundamentally changing the legal analysis.

The *Ass'n for Molecular Pathology* plaintiffs were a group of physicians, medical researchers, and professional organizations, all of whom claimed that they were prevented from carrying out diagnostic genetic testing by the presence of Myriad's patents on the human genes associated with an increased risk of breast cancer.[56] The court first held that only those plaintiffs against whom Myriad had personally directed patent enforcement efforts could bring an action, despite the widespread knowledge that Myriad vigorously enforced its patent rights as a general matter.[57] Of the three remaining plaintiffs who had been the targets of royalty demands, cease-and-desist letters, or the like, only one alleged that if the patents were declared invalid he would immediately begin genetic testing.[58] The court held that this plaintiff alone had standing.[59]

Other panels of the Federal Circuit have articulated different tests for standing in declaratory judgment actions. Some have focused on a mirror image theory of declaratory judgment jurisdiction, in which a case is justiciable only if there is "an underlying legal cause of action that the declaratory *defendant* could have brought or threatened to bring."[60] A few have placed the inquiry in the context

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52 *Id.* at 1318 (citations omitted).

53 *Compare id.*, *with* Gen-Probe Inc. v. Vysis, Inc., 359 F.3d 1376, 1380 (Fed. Cir. 2004) ("There must be both (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 which could constitute infringement or concrete steps taken with the intent to conduct such activity." (internal quotation marks omitted)).

54 Hewlett-Packard Co. v. Acceleron LLC, 587 F.3d 1358, 1361 (Fed. Cir. 2009).

55 Micron Tech., Inc. v. Mosaid Techs., Inc., 518 F.3d 897, 902 (Fed. Cir. 2008).

56 *See Ass'n for Molecular Pathology*, 689 F.3d at 1313–14.

57 *See id.* at 1319.

58 *See id.*

59 *Id.* In the Supreme Court, Myriad renewed its argument that this remaining plaintiff lacked standing. The Court dismissed this argument in a footnote, writing simply that the plaintiff had standing under the standard in *MedImmune*. Ass'n for Molecular Pathology v. Myriad Genetics, Inc., 133 S. Ct. 2107, 2115 n.3 (2013).

60 Arris Grp., Inc. v. British Telecomms. PLC, 639 F.3d 1368, 1374 (Fed. Cir. 2011) (emphasis added); *see also* Powertech Tech. Inc. v. Tessera, Inc., 660 F.3d 1301, 1306 (Fed. Cir. 2011);

of standing or ripeness doctrines more generally.[61] More often the court has chosen to analyze the justiciability of a particular case directly under the standards announced in *MedImmune*. The court will, for example, simply restate *MedImmune*'s holding that "the fundamental inquiry [is] 'whether the facts alleged, under all the circumstances, show that there is a substantial controversy, between parties having adverse legal interests, of sufficient immediacy and reality to warrant the issuance of a declaratory judgment,'"[62] and then proceed to focus on the aspect of that statement that seems most directly implicated by the facts of the case.[63] These cases appear to turn on ad hoc determinations whether both the plaintiff and the defendant have done enough for the court to conclude that they are in an active dispute with each other that looks and feels close to an infringement action.

II. A Theory of Patent Injury

Although the cases described above take divergent approaches to the standing question, they appear to be united in an underlying assumption: "[t]he mere existence of a potentially adverse patent does not cause an injury."[64] That assumption is incorrect. This Part articulates a different concept of the injury arising from potentially adverse patents.

Intellectual property is an exclusive right. It is a grant that enables its holder to exclude others from taking certain actions that may fall within the boundaries of the right. A patent is a right to prevent

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Creative Compounds, LLC v. Starmark Labs., 651 F.3d 1303, 1316 (Fed. Cir. 2011); Benitec Austl., Ltd. v. Nucleonics, Inc., 495 F.3d 1340, 1344 (Fed. Cir. 2007). These cases cite *Microchip Technology Inc. v. Chamberlain Group, Inc.*, 441 F.3d 936 (Fed. Cir. 2006), a pre-*MedImmune* case which held that "[t]he concepts of 'adverse legal rights' and 'legal risk' used in [prior] cases to describe the standard for jurisdiction *require* that there be an underlying legal cause of action that the declaratory defendant could have brought or threatened to bring, if not for the fact that the declaratory plaintiff has preempted it." *Id.* at 943 (emphasis added).

61 *See, e.g.*, Teva Pharm. USA, Inc. v. Eisai Co., 620 F.3d 1341, 1346–47 (Fed. Cir. 2010), *vacated on other grounds*, 131 S. Ct. 2991 (2011) (mem.); Prasco, LLC v. Medicis Pharm. Corp., 537 F.3d 1329, 1338 (Fed. Cir. 2008); Caraco Pharm. Labs., Ltd. v. Forest Labs., Inc., 527 F.3d 1278, 1291–92 (Fed. Cir. 2008); Teva Pharm. USA, Inc. v. Novartis Pharm. Corp., 482 F.3d 1330, 1337 (Fed. Cir. 2007).

62 Matthews Int'l Corp. v. Biosafe Eng'g, LLC, 695 F.3d 1322, 1328 (Fed. Cir. 2012) (quoting MedImmune, Inc. v. Genentech, Inc., 549 U.S. 118, 127 (2007)).

63 *See id.* at 1328–31; *see also* Danisco U.S. Inc. v. Novozymes A/S, 744 F.3d 1325, 1330–33 (Fed. Cir. 2014) (emphasizing the examination is under the totality of the circumstances); Streck, Inc. v. Research & Diagnostic Sys., Inc., 665 F.3d 1269, 1282–84 (Fed. Cir. 2012) (focusing on "reasonable apprehension of suit" arising from unasserted claims).

64 *Prasco*, 537 F.3d at 1338.

others from "mak[ing], us[ing], offer[ing] to sell, or sell[ing] any patented invention."[65] Patent rights are negative rights that confer the ability to exclude others from practicing the invention.[66]

But consider what the patent grant means to those others. From their perspective, a patent is a form of regulation. It is, as Mark Lemley explains, a "regulatory intervention in the marketplace that is designed to restrict what people can do with their own ideas and their own property."[67] In the absence of a patent, ideas are freely appropriable. As the Supreme Court has explained on numerous occasions, the public has a "federal right to copy and to use" that which is not or cannot be the subject of intellectual property protection.[68] "In general, unless an intellectual property right such as a patent or copyright protects an item, it will be subject to copying."[69] The default rule is that an inventor or creator has the freedom to invent and create as she pleases. The presence of intellectual property, on the other hand, places a restraint on that freedom. A patent sets off—as against the world—a portion of the public domain that no one can enter without permission. It is a regulation of inventors' primary behavior. Such persons cannot use the invention without first securing a license to do so. Failing that, they are subject to liability.

But intellectual property rights are uncertain, in several respects. First, intellectual property rights are of uncertain validity. Although the Patent Act provides that issued patents are presumed valid,[70] the final determination whether a patent is valid remains for the courts.[71] A patent holder is free of course to *try* to enforce her rights upon grant. But the validity of her holding is not certain until litigation. Empirical evidence suggests that this is no minor concern—some stud-

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65 35 U.S.C. § 271(a) (2012).

66 *See* Adam Mossoff, *Exclusion and Exclusive Use in Patent Law*, 22 HARV. J.L. & TECH. 321, 327–30 (2009).

67 Mark A. Lemley, *The Regulatory Turn in IP*, 36 HARV. J.L. & PUB. POL'Y 109, 110 (2013); *see also* Mark A. Lemley, *Taking the Regulatory Nature of IP Seriously*, 92 TEX. L. REV. SEE ALSO 107, 107–08 (2014).

68 Bonito Boats, Inc. v. Thunder Craft Boats, Inc., 489 U.S. 141, 165 (1989) (internal quotation marks omitted); *see also* Sears, Roebuck & Co. v. Stiffel Co., 376 U.S. 225, 231 (1964) ("An unpatentable article, like an article on which the patent has expired, is in the public domain and may be made and sold by whoever chooses to do so.").

69 Dastar Corp. v. Twentieth Century Fox Film Corp., 539 U.S. 23, 33 (2003) (internal quotation marks omitted) (quoting TrafFix Devices, Inc. v. Mktg. Displays, Inc., 532 U.S. 23, 29 (2001)).

70 35 U.S.C. § 282(a) ("A patent shall be presumed valid.").

71 *See* Microsoft Corp. v. i4i Ltd. P'ship, 131 S. Ct. 2238, 2242–43 (2011).

ies find that one-third to nearly one-half of patents litigated to judgment will ultimately be found invalid.[72]

Second, patent boundaries are often quite uncertain. This uncertainty hampers potential inventors from determining precisely what actions or behavior they need to eschew to avoid infringement. In brief, patent claims define the metes and bounds of the exclusive right, but those claims are written as broadly as possible and often are vague or, at the very least, subject to multiple competing interpretations.[73] The process of patent litigation does little to resolve this uncertainty. Claim constructions are not definitively resolved until appeal[74] and even then the judges of the Federal Circuit disagree sharply about how to interpret patent claims.[75]

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72 The most recent study of litigation outcomes found that 42% of final decisions on validity result in a judgment of invalidity. *See* John R. Allison, Mark A. Lemley & David L. Schwartz, *Understanding the Realities of Modern Patent Litigation*, 92 TEX. L. REV. 1769, 1787 & fig.4 (2014). This is consistent with older studies, despite great changes in patent law. *See id.* at 1801 & n.110; *see also* John R. Allison & Mark A. Lemley, *Empirical Evidence on the Validity of Litigated Patents*, 26 AIPLA Q.J. 185, 205 (1998) (reporting 46% invalidity rate for patent validity challenges litigated to judgment at trial); Kimberly A. Moore, *Judges, Juries, and Patent Cases—An Empirical Peek Inside the Black Box*, 99 MICH. L. REV. 365, 390 (2000) (reporting 33% invalidity rate for patent validity challenges litigated to judgment at trial). Of course, these studies do not tell us much about the validity of the very large number of patents that are never litigated or that are subject to litigation resolved prior to decisions on the merits. But there is other evidence suggesting that a large number of invalid patents issue. *See* JAMES BESSEN & MICHAEL J. MEURER, PATENT FAILURE: HOW JUDGES, BUREAUCRATS, AND LAWYERS PUT INNOVATORS AT RISK 160–63 (2008) (summarizing evidence).

73 This phenomenon has been well documented. *See, e.g.*, BESSEN & MEURER, *supra* note 72, at 54–62; Dan L. Burk & Mark A. Lemley, *Fence Posts or Sign Posts? Rethinking Patent Claim Construction*, 157 U. PA. L. REV. 1743, 1744–46 (2009); Jeanne C. Fromer, *Claiming Intellectual Property*, 76 U. CHI. L. REV. 719, 774–75 (2009).

74 *See* Teva Pharm. USA, Inc. v. Sandoz, Inc., 135 S. Ct. 831, 840–42 (2015) (holding that district court factfinding in claim construction is subject to clear error review but that "ultimate interpretation [of a patent claim] is a legal conclusion" reviewed de novo); J. Jonas Anderson & Peter S. Menell, *Informal Deference: A Historical, Empirical, and Normative Analysis of Patent Claim Construction*, 108 Nw. U. L. REV. 1, 40 & tbl.3 (2013) (detailing high Federal Circuit reversal rates of district court claim construction rulings).

75 *See, e.g.*, Retractable Techs., Inc. v. Becton, Dickinson & Co., 653 F.3d 1296 (Fed. Cir. 2011). In construing the claim, the majority began by stating, "[i]t is axiomatic that the claim construction process entails more than viewing the claim language in isolation," *id.* at 1305, while the dissent began by noting that it is "a bedrock principle of patent law that the claims themselves . . . define the patented invention," *id.* at 1312 (Rader, C.J., dissenting) (internal quotations omitted); *see also* Anderson & Menell, *supra* note 74, at 6 ("The lack of consensus among judges on the Federal Circuit continues to produce uncertainty and confusion for the patent system.").

As Lemley and Shapiro write, patents are "probabilistic."[76] Because the right is neither certainly valid nor of certain boundaries, it is not a "right to exclude but rather a right to *try* to exclude."[77] Now consider, once again, the alternative perspective. Those working in a field in which there is an extant patent face a *risk* of infringement liability. It is possible that business or investing activity may run afoul of the intellectual property. But it is often quite difficult to know with any degree of certainty whether particular behavior will do so.[78]

That risk is an injury. Economic actors face a present risk of liability if they wish to engage in activity that might fall within the boundaries of the purported exclusive right. In determining whether and how to undertake a particular activity, those actors must account for that risk and alter their behavior in response. The risk posed by intellectual property represents, in any given instant, an *actual* injury. A person wishing to engage in activity that may be the subject of exclusive rights has several choices available to her: she can take a license, she can ignore the rights and proceed with the activity, she can attempt to design around the rights to the extent she can meaningfully assess them, or she can abandon the activity altogether. In all events, the presence of the intellectual property right in a particular field undoubtedly constrains the behavior of those operating in the field.

This effect is due in no small part to the severity and timing of the penalties for infringement. As to the former, patents often are enforced through injunctions.[79] Infringers must often give up all or part of their activity. Substantial damages are also likely. Patent holders may be entitled to lost profits or a reasonable royalty.[80] But in some cases—especially relevant here, where the infringer is on notice of the existence of the patent—courts retain the discretion to enhance those damages up to three times the awarded amount.[81] As to timing, neither the validity of the intellectual property right nor the likelihood of infringement of that right can be determined with certainty until costly litigation is undertaken.[82]

In a world in which this uncertainty did not exist, potential infringers could reasonably determine (1) whether they are subject to

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76 Mark A. Lemley & Carl Shapiro, *Probabilistic Patents*, J. ECON. PERSP., Spring 2005, at 75 (2005).

77 *Id.* at 75.

78 *See supra* note 73 and accompanying text.

79 *See* 35 U.S.C. § 283 (2012).

80 *See id.* § 284.

81 *Id.*

82 *See supra* notes 71–72, 73–75 and accompanying text.

regulation through an existing intellectual property right and, (2) whether their planned conduct would violate that regulation. But because intellectual property is uncertain, potential infringers must make decisions about their behavior in the shadow of a significant threat: that, after their decisions have been made, they may be subject to injunctive relief and treble damages in an infringement suit.[83]

The risk posed by potentially adverse "probabilistic" patents can affect regulated persons' or entities' decisionmaking in several ways. First, as Christopher Leslie explains in the patent context, the risk of infringement liability "can . . . increase entry costs by compelling rivals to research the patent's validity, to attempt to design around the patent, or to pay (unnecessary) license fees."[84] Each of these responses to risk imposes some significant cost. Investigating the validity of intellectual property, for example, usually requires the payment of legal fees to produce a "freedom to operate" report.[85] Designing around requires the expenditure of resources that could otherwise be devoted to innovation in the first instance.[86] Innovators operating in a field occupied by potentially adverse intellectual property may find it difficult to attract capital or may face increased costs of capital.[87]

The risk of infringement usually remains even after these costs are incurred. That makes business planning more difficult. As Leslie also observed, "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."[88] The result is a potentially strong deterrent effect.[89] In some cases, a firm will find it not worth the risk to undertake

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83 *See* §§ 283–284.

84 Christopher R. Leslie, *The Anticompetitive Effects of Unenforced Invalid Patents*, 91 MINN. L. REV. 101, 104 (2006).

85 *See* Mark D. Janis & Timothy R. Holbrook, *Patent Law's Audience*, 97 MINN. L. REV. 72, 116 (2012) (describing "the need for members of the public to consult with counsel to determine whether their activities tread on the property rights of others"); *see also* BESSEN & MEURER, *supra* note 72, at 131–32 (detailing the estimated legal costs of different stages of patent litigation).

86 *See* Leslie, *supra* note 84, at 121.

87 *See id.* at 119–20.

88 *Id.* at 117; *see also id.* at 133–34 (discussing difficulties of prevailing in litigation).

89 Others have observed that patents may deter potentially infringing activity. *See, e.g.*, Rochelle Cooper Dreyfuss, *Dethroning* Lear*: Licensee Estoppel and the Incentive to Innovate*, 72 VA. L. REV. 677, 755 (1986) ("The existence of the patent—and the fear of an infringement action—may deter some potential rivals from competing with the patentee and his licensees."); David Fagundes & Jonathan S. Masur, *Costly Intellectual Property*, 65 VAND. L. REV. 677, 698 (2012) ("Firms that face the prospect of being nickel-and-dimed by owners of dubious patents may well choose to refrain from investing in new technologies or entering new markets in the

activity that requires investment that can then be held up in the face of adverse intellectual property. This is especially so because many startups and technology entrepreneurs are rationally risk averse.[90]

This effect is especially significant when investments must be made over time. Pharmaceutical research and development provides an important example of the problem. The process of discovering, developing, and then securing FDA approval to market a new drug is very time consuming and expensive.[91] If a drug cannot, for any reason, be marketed, the costs of its development generally are sunk.[92] They cannot meaningfully be reallocated to other projects.[93] Pharmaceutical firms therefore must make significant asset-specific investments many years prior to marketing.

Now consider what happens when there is a potentially adverse patent in the field.[94] At the time the firm begins making investments in research and development, it is uncertain whether the patent is valid or whether the firm's ultimate product may infringe.[95] The firm faces a choice. If it goes ahead, it will make sunk investments of many years and many millions of dollars only to face the possibility that those investments will be held up by the patent owner, who can threaten an injunction or treble damages. Or the firm can abandon the project in the face of that risk. Many, perhaps most, rational firms will choose the latter. Indeed, the Federal Trade Commission found in this context that "firms in the biotech industry . . . avoid infringing questionable patents and therefore will refrain from entering or continuing with a particular field of research that such patents appear to cover."[96] This dynamic is not limited to the pharmaceutical or bio-

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first place."); Michael A. Heller & Rebecca S. Eisenberg, *Can Patents Deter Innovation? The Anticommons in Biomedical Research*, 280 SCIENCE 698, 699 (1998); Leslie, *supra* note 84, at 119; Gideon Parchomovsky & Michael Mattioli, *Partial Patents*, 111 COLUM. L. REV. 207, 218 (2011) ("Surveys and practitioner accounts show that the risks of litigation and the potentially high costs of investigating existing patents deter many firms from pursuing certain lines of research and development in the first place.").

90 *See* Leslie, *supra* note 84, at 116–17.

91 *See* Benjamin N. Roin, *Unpatentable Drugs and the Standards of Patentability*, 87 TEX. L. REV. 503, 510–11 & nn.21–22 (2009).

92 *See* Nancy T. Gallini, *The Economics of Patents: Lessons from Recent U.S. Patent Reform*, J. ECON. PERSP., Spring 2002, at 131, 136–37.

93 *See id.*

94 The facts of this discussion roughly mirror those in *Benitec Australia, Ltd. v. Nucleonics, Inc.*, 495 F.3d 1340 (Fed. Cir. 2007), in which the Federal Circuit found that a pharmaceutical firm lacked standing to seek a declaration that a patent was invalid. *Id.* at 1349.

95 This uncertainty is a function both of the potentially fuzzy boundaries of the patent and of the unclear characteristics of the final product.

96 FED. TRADE COMM'N, TO PROMOTE INNOVATION: THE PROPER BALANCE OF COMPETI-

technology industries. It occurs whenever product development cycles require investment prior to potentially infringing activity. There exists some empirical evidence that suggests that such a deterrent effect is a real and significant obstacle to innovation.[97]

So long as intellectual property remains valid, the risk of infringement liability persists regardless of whether or not the owner takes enforcement actions. Judge Learned Hand recognized this dynamic when he referred to unenforced but invalid patents as "scarecrow[s]."[98] More colorfully, Leslie refers to such a patent as "a head on a pike."[99] "Until a court invalidates it, or until the owner explicitly disavows it and dedicates it to the public domain," he writes, "every patent can give pause to potential competitors who know about it."[100]

III. STANDING TO REMEDY PATENT INJURY

Because the Federal Circuit has misconceived the injury in patent challenges, it has developed an inappropriate set of standing rules. The Federal Circuit's "proximity" approach to standing makes sense only if the relevant injury is the infringement action itself. In this Part, I argue that standing to resolve the uncertainty posed by issued pat-

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TION AND PATENT LAW AND POLICY, Exec. Summary at 5 (2003), *available at* http://www.ftc.gov/os/2003/10/innovationrpt.pdf.

97 *See* FED. TRADE COMM'N, *supra* note 96, Exec. Summary at 5; Jean O. Lanjouw & Mark Schankerman, *Enforcement of Patent Rights in the United States*, *in* PATENTS IN THE KNOWLEDGE-BASED ECONOMY 145, 146 (Wesley M. Cohen & Stephen A. Merrill eds., 2003). Mark Lemley is skeptical that deterrence is a significant problem. *See* Mark A. Lemley, *Ignoring Patents*, 2008 MICH. ST. L. REV. 19, 20 [hereinafter Lemley, *Ignoring Patents*] ("Both my own experience and what limited empirical evidence there is suggest that companies do not seem much deterred from making products by the threat of all this patent litigation."); Mark A. Lemley, *Rational Ignorance at the Patent Office*, 95 NW. U. L. REV. 1495, 1516 (2001) [hereinafter Lemley, *Rational Ignorance*] ("Certainly the issuance of bad patents has the *potential* to deter competition that should be lawful in some marginal cases. But this concern can be overstated."). Whether or not deterrence occurs as an empirical matter, however, is irrelevant to the standing analysis. Actual deterrence is evidence that the risk of IP litigation is concrete and particularized to a particular plaintiff. *See infra* notes 140–42 and accompanying text. But ignoring the risk and pressing forward is a response to the risk, not evidence that the risk does not exist.

98 Bresnick v. U.S. Vitamin Corp., 139 F.2d 239, 242 (2d Cir. 1943) (Hand, J.); *see also* Cardinal Chem. Co. v. Morton Int'l, Inc., 508 U.S. 83, 96 (1993) (quoting *Bresnick*, 139 F.2d at 242).

99 Leslie, *supra* note 84, at 115.

100 *Id.* at 115–16. In related work, Leslie describes a range of threatening actions short of filing infringement suit that can deter competitive behavior. These actions include: "publicly flaunting one's patent; stating a general intent to sue infringers; accusing competitors of infringement; threatening competitors' business partners; and licensing activities." Christopher R. Leslie, *Patents of Damocles*, 83 IND. L.J. 133, 142–43 (2008).

ents is supported by well-established constitutional and prudential standing principles.[101]

A. *Article III Standing*

The Federal Circuit's scheme for determining when a case is justiciable would appear odd to a federal jurisdiction expert. In every other area of the law, federal courts apply a familiar framework to determine whether there is standing to sue. A plaintiff must demonstrate that she (1) has suffered or is "under threat of suffering 'injury in fact' that is concrete and particularized; the threat must be actual and imminent, not conjectural or hypothetical;" (2) that injury "must be fairly traceable to the challenged action of the defendant;" and (3) "it must be likely that a favorable judicial decision will prevent or redress the injury."[102] Although the Federal Circuit sometimes references these factors,[103] it does not really grapple with them. Yet, as the Supreme Court has reminded the Federal Circuit on several occasions, "familiar principles" of law "apply with equal force to disputes arising under" the intellectual property statutes.[104]

Start with injury in fact. The injury described in Part II constitutes an injury in fact for standing purposes under several lines of Supreme Court precedent.[105] In *Cardinal Chemical Co. v. Morton*

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101 I focus here on standing to the exclusion of ripeness. As the Supreme Court noted in *MedImmune*, often "standing and ripeness boil down to the same question" in scenarios where threatened enforcement is at issue. *See* MedImmune, Inc. v. Genentech, Inc., 549 U.S. 118, 128 n.8 (2007); *see also* 13B CHARLES ALAN WRIGHT, ARTHUR R. MILLER & EDWARD H. COOPER, FEDERAL PRACTICE & PROCEDURE § 3532.5, at 588 n.32 (3d ed. 2008) (noting closeness of standing and ripeness requirements in threat-of-prosecution in criminal law). In most prospective challenges to the scope or validity of patents, the standing and ripeness issues will merge. That said, I acknowledge that some actions seeking a declaration of noninfringement will be fact-specific enough that ripeness is separately at issue. I put those actions aside in this paper.

102 Summers v. Earth Island Inst., 555 U.S. 488, 493 (2009) (citing Friends of the Earth, Inc. v. Laidlaw Envtl. Servs. (TOC), Inc., 528 U.S. 167, 180–81 (2000)).

103 *See, e.g.*, Ass'n for Molecular Pathology v. USPTO, 689 F.3d 1303, 1318 (Fed. Cir. 2012), *aff'd in part, rev'd in part sub nom.* Ass'n for Molecular Pathology v. Myriad Genetics, Inc., 133 S. Ct. 2107 (2013).

104 eBay, Inc. v. MercExchange, L.L.C., 547 U.S. 388, 391 (2006) (holding that general standard for injunctive relief applied in patent cases); *see also MedImmune*, 549 U.S. at 132 n.11 (holding that the "reasonable apprehension of suit" test was inconsistent with more general interpretations of the Declaratory Judgment Act); Dickinson v. Zurko, 527 U.S. 150, 165 (1999) (holding that ordinary standards of judicial review of administrative actions applied to Federal Circuit review of PTO factfinding).

105 The Court's decision in *Already, LLC v. Nike, Inc.*, 133 S. Ct. 721 (2013), is not to the contrary. In that case, the Court interpreted a covenant not to sue to include all future products. *Id.* at 727–29. In that circumstance, the risk of liability is eliminated. *See id.*

International, Inc.,[106] for example, the Court held that a judgment of noninfringement does not moot a counterclaim for a declaration that a patent is invalid.[107] In that case, Morton sued Cardinal Chemical for patent infringement.[108] Cardinal Chemical counterclaimed for a declaration that the patents in suit were invalid.[109] The district court found Morton's patents to be invalid and not infringed.[110] On appeal, the Federal Circuit affirmed the district court's judgment of noninfringement but vacated and dismissed the judgment of invalidity, reasoning that because the patent was not infringed, no case or controversy remained with respect to validity.[111] The Supreme Court reversed. As described above, the Court first drew a distinction between claims of infringement and validity.[112] The Court then described the injury that would give rise to independent jurisdiction over the validity claim in terms very similar to those used above. The Court explained that the Declaratory Judgment Act was designed to relieve actors of "an *in terrorem* choice between the incurrence of a growing potential liability for patent infringement and abandonment of their enterprises" by allowing suit to "clear the air."[113] The Court concluded that "[m]erely the desire to avoid the threat of a 'scarecrow' patent, in Learned Hand's phrase, may therefore be sufficient to establish jurisdiction under the Declaratory Judgment Act."[114] A judgment of noninfringement in a suit brought by a right holder, in the Court's view, did nothing to address the ongoing risk arising from the exclusive right: "A company once charged with infringement must remain concerned about the risk of similar charges if it develops and markets similar products in the future."[115] *MedImmune* follows a similar logic. In rejecting the requirement that a licensee breach its contract before challenging the validity of the underlying patent, the

106 Cardinal Chem. Co. v. Morton Int'l, Inc., 508 U.S. 83 (1993).

107 *See id.* at 96.

108 *Id.* at 85–86.

109 *Id.* at 86.

110 *Id.*

111 *See id.* at 87.

112 *See id.* at 96.

113 *Id.* (internal quotation marks omitted) (quoting Arrowhead Indus. Water, Inc. v. Ecolochem, Inc., 846 F.2d 731, 734–35 (Fed. Cir. 1988)).

114 *Id.* (footnote omitted) (citing Bresnick v. U.S. Vitamin Corp., 139 F.2d 239, 242 (2d Cir. 1943)).

115 *Id.* at 99–100. The Court's holding in *Cardinal Chemical* was limited to the jurisdiction of the appellate court. *Id.* at 95. Nevertheless, because it was discussing the constitutional case or controversy requirement, its dicta concerning the scope of the injury remains persuasive.

Court necessarily acknowledged that the plaintiff was injured even though it was not presently subject to an enforcement action.[116]

More broadly, recognizing that the risk or uncertainty posed by extant intellectual property is an injury in fact is consistent with several familiar standing principles. The first is that probabilistic harms can constitute injury in fact. This notion received its most prominent expression in *Massachusetts v. EPA*,[117] in which the Supreme Court held that the state of Massachusetts had standing to challenge the EPA's failure to take action to regulate greenhouse gas emissions under the Clean Air Act.[118] The injury in that case was probabilistic; it was a risk of harm from global warming. Nevertheless, the Court held that EPA's "refusal to regulate greenhouse gas emissions presents a risk of harm to Massachusetts that is both 'actual' and 'imminent.'"[119] A decision in Massachusetts' favor—compelling the EPA to regulate greenhouse gas emissions—would reduce the risk of harm that Massachusetts faced.[120] Similarly, in *Monsanto Co. v. Geertson Seed Farms*,[121] the Court held that conventional alfalfa farmers had standing to challenge the Department of Agriculture's decision to deregulate genetically modified alfalfa because that decision created "a significant risk of gene flow to non-genetically-engineered varieties of alfalfa," and because that risk harmed the farmers in a variety of ways "even if their crops are not actually infected with" the genetically modified seed.[122]

A series of lower court decisions have staked out similar positions. The D.C. Circuit, for example, has held that "increases in risk can at times be 'injuries in fact' sufficient to confer standing"[123] and has applied that holding to find that an environmental group had standing to challenge EPA regulations that it alleged created an increased risk of cancer for its members.[124] So too, the Second Circuit

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116 *See* MedImmune, Inc. v. Genentech, Inc., 549 U.S. 118, 132–33 & n.11 (2007).

117 Massachusetts v. EPA, 549 U.S. 497 (2007).

118 *See id.* at 526.

119 *Id.* at 521 (quoting Lujan v. Defenders of Wildlife, 504 U.S. 555, 560 (1992)); *see id.* at 521–23 (describing risks associated with increased greenhouse gas emissions).

120 *Id.* at 525–26.

121 Monsanto Co. v. Geertson Seed Farms, 561 U.S. 139 (2010).

122 *Id.* at 155.

123 Natural Res. Def. Council v. EPA, 464 F.3d 1, 6 (D.C. Cir. 2006).

124 *Id.* at 6–7 (holding that a "lifetime risk that an individual will develop nonfatal skin cancer" of "about 1 in 200,000" is "sufficient to support standing"); *see also* Mountain States Legal Found. v. Glickman, 92 F.3d 1228, 1234–35 (D.C. Cir. 1996) (holding that increased risk of forest fire created by a Forest Service logging rule was sufficient to support group's standing to challenge rule).

held in a case challenging the FDA's decision to permit the use of downed livestock as food for human consumption that "enhanced risk" was "cognizable for standing purposes, where the plaintiff alleges exposure to potentially harmful products."[125] And the Seventh Circuit has held that "even a small probability of injury is sufficient to create a case or controversy—to take a suit out of the category of the hypothetical—provided of course that the relief sought would, if granted, reduce the probability."[126]

To be sure, these cases are in tension with the Court's cases holding that speculative future injuries do not give rise to standing.[127] In *City of Los Angeles v. Lyons*,[128] for example, the Court held that a plaintiff who had previously been subject to a police "chokehold" did not have standing to seek an injunction against future police use of the maneuver because he could only state a "subjective apprehension[ ]" that the event might occur again in the future.[129] In *Lujan v. Defenders of Wildlife*,[130] the Court famously denied standing to plaintiffs to challenge an Interior Department determination that the Endangered Species Act applied only to domestic activities when they could only assert that they might one day travel to foreign countries, where the Department's rule made it less likely they would be able to see endangered species.[131] Most recently, in *Clapper v. Amnesty International USA*,[132] the Court held that plaintiffs challenging the government's warrantless wiretapping authority under the Foreign Intelligence Surveillance Act lacked standing because the risk that they might be sub-

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125 Baur v. Veneman, 352 F.3d 625, 634 (2d Cir. 2003).

126 Vill. of Elk Grove Vill. v. Evans, 997 F.2d 328, 329 (7th Cir. 1993) (Posner, J.).

127 The courts of appeals are split on the issue as well. *See, e.g.*, Pub. Citizen, Inc. v. Nat'l Highway Traffic Safety Admin., 489 F.3d 1279, 1298–99 (D.C. Cir. 2007) (Sentelle, J., concurring in part and dissenting in part); Shain v. Veneman, 376 F.3d 815, 818 (8th Cir. 2004); *Baur*, 352 F.3d at 651 & n.3 (Pooler, J., dissenting). There is also debate among the courts of appeals and in the academic literature over whether *all* increases in risk constitute injury in fact or whether only a subset of risks that are judged sufficiently substantial should qualify. *See, e.g.*, F. Andrew Hessick, *Probabilistic Standing*, 106 Nw. U. L. Rev. 55, 61–65 (2012) (describing caselaw that finds injury in fact only when risk is sufficiently high); Amanda Leiter, *Substance or Illusion? The Dangers of Imposing a Standing Threshold*, 97 Geo. L.J. 391, 403–04 (2009) (arguing that risk thresholds are unique to the D.C. Circuit).

128 City of L.A. v. Lyons, 461 U.S. 95 (1983).

129 *Id.* at 105–07 & n.8.

130 Lujan v. Defenders of Wildlife, 504 U.S. 555 (1992).

131 *Id.* at 558–64 ("Such 'some day' intentions—without any description of concrete plans, or indeed even any specification of *when* the some day will be—do not support a finding of the 'actual or imminent' injury that our cases require.").

132 Clapper v. Amnesty Int'l USA, 133 S. Ct. 1138 (2013).

ject to government monitoring was too speculative and actions taken to mitigate therefore were unreasonable.[133]

The Court's cases in this area are notoriously difficult to harmonize. But there are reasons to believe, at the very least, that they do not preclude standing for plaintiffs who assert the injury in fact arising from IP described above.[134] As several scholars have recently argued, there is a conceptual distinction between actual, that is, present, injuries based on uncertain facts and threatened future injuries.[135] Andrew Hessick argues that "[a] plaintiff facing a threat of injury from a defendant's illegal conduct . . . has an interest in preventing that injury from occurring, or at least an interest in reducing the risk of its occurrence."[136] This interest is a case or controversy under Article III "[s]o long as (1) the challenged activity increases the plaintiff's risk of suffering harm and (2) a judicial order could stop the challenged activity, thereby removing the increased risk of harm."[137] Taking a slightly different approach, Jonathan Remy Nash argues that the risk of injury can be characterized in terms of expected value, proceeding from the common sense premise that one can assign a dollar value to various risks.[138] In his view, "[i]f a positive expected value would be sufficient to support standing were it to arise as a typical 'actual harm,' then the expected value should be deemed sufficient to support standing."[139] In other words, when a risk has present effect, the risk itself is the actual injury and a person who experiences that risk in a concrete and particularized manner has standing to sue to bring about action that may reduce or eliminate the risk.

The difficult question then is how to sort such presently existing injuries from speculative future harms. Of particular relevance here,

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133 *Id.* at 1142–43.

134 The Court appeared to be skeptical of this theory of IP standing in *Already, LLC v. Nike, Inc.*, 133 S. Ct. 721, 730–31 (2013). But the Court in that case construed the relevant covenant to completely eliminate any risk of infringement liability for past, present, or future activities. *See id.* at 727–29. Its statements regarding risk-based theories of standing are therefore dicta.

135 *See* Hessick, *supra* note 127, at 65; Jonathan Remy Nash, *Standing's Expected Value*, 111 MICH. L. REV. 1283, 1307 (2013); Cass R. Sunstein, *Standing Injuries*, 1993 SUP. CT. REV. 37, 47–51; *cf.* Felix T. Wu, *Defining Privacy and Utility in Data Sets*, 84 U. COLO. L. REV. 1117, 1161–65 (2013) (drawing similar distinction with respect to harms occurring in potential privacy breaches).

136 Hessick, *supra* note 127, at 66.

137 *Id.* at 67; *see also* Richard H. Fallon, Jr., *The Linkage Between Justiciability and Remedies—And Their Connections to Substantive Rights*, 92 VA. L. REV. 633, 698–99 (2006) (arguing for low bar to standing for threatened injuries).

138 *See* Nash, *supra* note 135, at 1284.

139 Nash, *supra* note 135, at 1306.

the Court appears more likely to find standing on the basis of present risk when the plaintiff is within or very close to the zone of primary conduct regulation and the costs of uncertainty are high. Consider two lines of decisions. The first are cases that confer standing on plaintiffs seeking to challenge the validity of statutes or regulations before they are enforced. As the Supreme Court noted in *MedImmune*, "where threatened action by government is concerned, we do not require a plaintiff to expose himself to liability before bringing suit to challenge the basis for the threat—for example, the constitutionality of a law threatened to be enforced."[140] In the First Amendment context, for example, the Court has emphasized that standing is appropriate where the "alleged danger . . . is . . . one of self-censorship; a harm that can be realized even without" enforcement.[141] The Court has similarly held with respect to criminal prohibitions that "it is not necessary that [a litigant] first expose himself to actual arrest or prosecution to be entitled to challenge a statute that he claims deters the exercise of his constitutional rights."[142]

In these cases, the plaintiff is subject to regulation by the government. There is a statute telling him what he can or cannot do. And the penalties for noncompliance are high—the plaintiff either ceases otherwise constitutionally protected activity or risks criminal sanctions. IP validity litigation follows this structure. There is an exclusive right in place that purports to regulate others in the field; they must avoid the subject matter of the right or take a license.[143] The penalties for not doing so are high—injunctive relief and significant damages awards.[144] But the lawfulness of the regulation is uncertain.[145] In those circumstances, the plaintiff need not risk liability before bringing suit.

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140 MedImmune, Inc. v. Genentech, Inc., 549 U.S. 118, 128–29 (2007) (emphasis omitted).

141 Virginia v. Am. Booksellers Ass'n, 484 U.S. 383, 393 (1988).

142 Steffel v. Thompson, 415 U.S. 452, 459 (1974); *see* Holder v. Humanitarian Law Project, 561 U.S. 1, 15 (2010) (allowing pre-enforcement review of statute where credible threat of prosecution existed); Babbitt v. United Farm Workers Nat'l Union, 442 U.S. 289, 298 (1979) (same); 13B WRIGHT, MILLER & COOPER, *supra* note 101, § 3532.5, at 585–86 ("If there is a present desire to engage in apparently criminal activity . . . existence of a criminal prohibition should alone be sufficient basis for adjudication. Fear that courts may find the statute valid will deter many from risking violation; defense of criminal proceedings on constitutional grounds simply is not an adequate remedy.").

143 *See supra* notes 84–85 and accompanying text.

144 *See* 35 U.S.C. §§ 283–284 (2012).

145 *See supra* notes 71–72 and accompanying text.

Consider too another source of analogy: real property.[146] We ordinarily presume, as the *MedImmune* court noted, that a developer of real property need not build on that property before going to court to clear title to the property.[147] Indeed, it has long been recognized that resolving disputes over property *prior* to fixed costs being incurred is a legitimate use of the courts.[148] Federal courts appear to follow this presumption.[149] There is little difference for standing purposes between a real estate developer confronting uncertain land title and an innovator confronting uncertain intellectual property in her field. Each experiences a present injury from the uncertainty in the underlying property rights, and each ought to be able to sue to clear the field prior to making costly investments.

These kinds of injuries are distinguishable from those found insufficient for standing in *Defenders of Wildlife*, *Lyons*, and *Clapper*. Take *Defenders of Wildlife*, to start. In that case, there was no question that the "plaintiff's asserted injury ar[ose] from the government's allegedly unlawful regulation . . . of *someone else*."[150] The Court therefore characterized the plaintiffs' injuries not as a present risk of harm, but as threatened harm that would arise upon the unfolding of a long chain of events, none of which were particularly imminent.[151]

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146 My argument from real property is limited. I do not make any claim that intellectual and real property are broadly similar. *Cf.* Mark A. Lemley, *Property, Intellectual Property, and Free Riding*, 83 TEX. L. REV. 1031, 1031–32 (2005) (arguing that real property's "free riding" rhetoric is misguided as applied to intellectual property). I note only the parallel structure of the justiciability problem: in both cases, one litigant must make decisions under a cloud of uncertainty with potentially far-reaching consequences.

147 *See* MedImmune, Inc. v. Genentech, Inc., 549 U.S. 118, 133–34 (2007); Lemley, *Ignoring Patents*, *supra* note 97, at 23 ("If I want to build a house, I'd better be darn sure that I own the land on which the house is built.").

148 *See* BORCHARD, *supra* note 26, at 741.

149 Because most property litigation takes place in state courts, the question who has standing under Article III to clear title to real property arises only rarely. In *MedImmune*, the Court described the facts of a prior case, *Willing v. Chicago Auditorium Ass'n.*, 277 U.S. 274 (1928), in which a lessee brought suit to remove a "cloud" on its lease, and observed that there would likely have been standing under the (subsequently enacted) Declaratory Judgment Act. *See* 549 U.S. at 133–34. The Quiet Title Act, 28 U.S.C. § 2409a (2012), authorizes suit against the United States "to adjudicate a disputed title to real property in which the United States claims an interest." *Id.* § 2409a(a). Courts have held that there is broad standing under the Act to remedy the effects of uncertainty as to land titles. *See, e.g.*, Avista Corp. v. Sanders Cnty., 405 F. App'x 225, 226 (9th Cir. 2010) ("The injury to Avista is caused by the lack of resolution of the question of land ownership. The requested relief of resolution of the title dispute and a determination of the owner of the right of way would redress that injury."); United States v. Carpenter, 526 F.3d 1237, 1240 (9th Cir. 2008) (finding Article III standing to intervene in action to settle land title dispute).

150 Lujan v. Defenders of Wildlife, 504 U.S. 555, 562 (1992).

151 *See id.* at 564–65.

The plaintiff's "apprehension" about the chokehold procedure in *Lyons* was "subjective" because the authorization for such a move, if any, did not directly impact the plaintiff's current behavior.[152] So too in *Clapper*, the risk that one of the plaintiffs might have her communications intercepted was speculative because the wiretapping was directed at *someone else* and it would only be through a long chain of happenstance that the plaintiffs found themselves caught up in the interceptions.[153] The *Clapper* court went further, and held that steps the plaintiffs undertook to minimize their risk did not themselves establish standing, but that holding only follows logically from the first.[154]

The risk of harm arising from invalid IP is, if nothing else, significantly more direct than in the cases above. In an IP validity case, the plaintiff is the object of the regulation. The only barriers to liability are the plaintiff's choice to engage in activity that may fall within the IP holder's exclusive right and the IP holder's choice to enforce those rights. That is precisely the same structure described in the cases allowing pre-enforcement challenges to government statutes or rules.[155] As the Court held in *MedImmune*, it makes no difference whether the enforcement of proscriptions on primary conduct is in the hands of the government or private individuals.[156] In either circumstance, the plaintiff faces a risk of enforcement that forces changes to its present behavior.

With a proper understanding of the nature of the injury in claims alleging that intellectual property is invalid, causation and redressability follow with considerably greater ease.[157] For an injury to be the subject of judicial relief, it must be "fairly traceable" to the defendant.[158] There must be "a causal connection between the injury and the conduct complained of."[159] The defendant's conduct must be a "but for" cause of the injury,[160] and the causal chain between the injury and the defendant cannot be so attenuated that there is no "substantial likelihood" that the relief sought will redress the injury.[161]

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152 *See* City of L.A. v. Lyons, 461 U.S. 95, 105–107 & nn.7–8 (1983).

153 *See* Clapper v. Amnesty Int'l USA, 133 S. Ct. 1138, 1148–50 (2013).

154 *See id.* at 1150–51.

155 *See supra* note 142 and accompanying text.

156 *See* MedImmune, Inc. v. Genentech, Inc. 549 U.S. 118, 128–33 (2007).

157 *See* 13A WRIGHT, MILLER & COOPER, *supra* note 101, § 3531.5, at 305 ("The choice among alternative definitions of the injury may control the determination of causation.").

158 Lujan v. Defenders of Wildlife, 504 U.S. 555, 560 (1992) (internal quotation marks and alteration omitted).

159 *Id.*

160 *See* Duke Power Co. v. Carolina Envtl. Study Grp., Inc., 438 U.S. 59, 75 (1978).

161 Vt. Agency of Nat'l Res. v. U.S. *ex rel.* Stevens, 529 U.S. 765, 771 (2000).

The injury described above—increased risk and uncertainty—is caused by the existence *vel non* of intellectual property in a given field. So long as the intellectual property remains, it can serve as a scarecrow and create a meaningful risk of liability for others working in the field.[162] The existence of the intellectual property, in turn, is caused both by the right holder and the PTO, the government agency responsible for issuing the patent. Under traditional standing principles, either is an acceptable defendant in an action challenging the validity of intellectual property.[163]

In an action against a private party seeking to invalidate that party's intellectual property, the injury described above arises from the defendant's having acquired and then subsequently holding or maintaining the intellectual property. A patent only comes into being through actions of the inventor. An inventor must apply to the PTO for a patent.[164] In so doing, the inventor defines the patent's scope and boundaries.[165] She does more than merely conjure up the patent; she affirmatively shapes the risks to which she exposes others. A patent applicant must disclose her new, useful, and nonobvious invention and must conclude her application with "one or more claims particularly pointing out and distinctly claiming the subject matter which the inventor . . . regards as the invention."[166] The patent applicant drafts the claims, which define the scope of the invention, its metes and bounds.[167] Patentees usually try to draft their claims as broadly as possible.[168] And as a practical matter, patentees then engage in a negotiation with the patent examiner with the goal of having as broad a claim as possible issue.[169] The patent holder then holds her intellectual property and often must take affirmative steps to maintain it, such as by paying periodic maintenance fees to the PTO.[170]

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162 *See supra* notes 98–100 and accompanying text.

163 For the purpose of this argument, I am agnostic about which is the proper defendant as a matter of policy. I address that question *infra* Part IV.C.

164 *See* 35 U.S.C. § 111 (2012).

165 *See id.*

166 *Id.* § 112(b).

167 *See* Markman v. Westview Instruments, Inc., 517 U.S. 370, 372 (1996) (describing the claim as "the portion of the patent document that defines the scope of the patentee's rights"); Phillips v. AWH Corp., 415 F.3d 1303, 1312 (Fed. Cir. 2005) (en banc) ("It is a bedrock principle of patent law that the claims of a patent define the invention to which the patentee is entitled the right to exclude." (internal quotation marks omitted)).

168 *See* Burk & Lemley, *supra* note 73, at 1762–63.

169 *See* Michael J. Burstein, *Rules for Patents*, 52 WM. & MARY L. REV. 1747, 1756 & nn.42–43 (2011).

170 *See, e.g.*, 35 U.S.C. § 41(b)(1).

Of course, the PTO also directly causes the injury when it issues a patent. Because patents do not exist absent government action, the agency that takes such action is a but-for cause of the risk that arises upon their issuance. It is true in a sense that causation is shared between the applicant and the government. In order for a patent to come into existence, an applicant needs to file an application and then the government needs to approve the application and issue the patent.[171] Both are necessary causes of the injury and neither is a sufficient cause alone. But such shared causation does not ordinarily defeat standing.[172]

Redressability, finally, is straightforward. The risk caused by uncertain patents is removed when the patent's validity or boundaries are adjudicated. A judicial finding that a patent is invalid has preclusive effect against the owner.[173] It is a finding that is good in any subsequent litigation. In appeals of administrative actions, the result of a judicial finding of invalidity would be to order the agency to cancel the patent.[174]

B. Prudential Standing

Quite apart from Article III standing, the courts have developed various theories of "prudential" standing: "flexible rules of federal appellate practice designed to protect the courts from deciding abstract questions of wide public significance . . . when other governmental institutions may be more competent to address the questions."[175] They are "judicially self-imposed limits on the exercise of federal jurisdiction"[176] that are "designed to deny standing as a matter of judicial prudence rather than constitutional command."[177] The question whether a patent challenger has standing under Article III is in some ways distinct from the question whether any particular challenger is

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171 *See id.* §§ 111, 151.

172 *See* 13A WRIGHT, MILLER & COOPER, *supra* note 101, § 3531.5, at 311–15 & n.30 ("It may be enough that the defendant's conduct is one among multiple causes." (citing cases)).

173 *See* Blonder-Tongue Labs., Inc. v. Univ. of Ill. Found., 402 U.S. 313, 334, 350 (1971).

174 *See* 35 U.S.C. §§ 311(b), 321(b).

175 United States v. Windsor, 133 S. Ct. 2675, 2686 (2013) (internal quotation marks, alterations, and citation omitted).

176 Allen v. Wright, 468 U.S. 737, 751 (1984).

177 13A WRIGHT, MILLER & COOPER, *supra* note 101, § 3531.7, at 513. There is some debate over whether prudential standing requirements, like constitutional standing requirements, are "jurisdictional" in the sense that parties cannot waive or forfeit them. *See, e.g.*, Grocery Mfrs. Ass'n v. EPA, 693 F.3d 169, 184–85 & n.4 (D.C. Cir. 2012) (Kavanaugh, J., dissenting) (identifying circuit split and arguing that prudential standing is not jurisdictional). I set this debate aside for the purpose of the analysis that follows.

an appropriate plaintiff. Indeed, the latter question more than the former seems to drive much of the Federal Circuit's jurisprudence in this area.

Neither the Federal Circuit nor any other court has developed a consistent theory of prudential standing to challenge the validity of a patent. In other areas of the law, however, prudential standing principles operate primarily to limit standing to instances where statutory objectives are achieved rather than undermined.[178] Most broadly, for example, in the context of challenges to administrative action under the Administrative Procedure Act, the court has required plaintiffs to show that the interests they assert are "arguably within the zone of interests to be protected or regulated by the statute" that provides the relevant decisional law.[179] This test asks whether the plaintiff is among the class of persons protected by the statute, and whether her alleged injury is among the sorts of interests that the statute was designed to protect.[180]

In a similar vein are well-developed principles of prudential standing in particular fields. Take antitrust, for example.[181] Section 4 of the Clayton Act provides broadly that "any person who shall be injured in his business or property by reason of anything forbidden in the antitrust laws . . . shall recover threefold the damages by him sustained."[182] But the Supreme Court has long held that this general lan-

178 *See, e.g.*, Clarke v. Sec. Indus. Ass'n, 479 U.S. 388, 397 n.12 (1987) (stating that the "zone of interest" inquiry "seeks to exclude those plaintiffs whose suits are more likely to frustrate than to further statutory objectives").

179 Ass'n of Data Processing Serv. Orgs. v. Camp, 397 U.S. 150, 153 (1970); *see* Match-E-Be-Nash-She-Wish Band of Pottawatomi Indians v. Patchak, 132 S. Ct. 2199, 2210 (2012). This test has its origin in an interpretation of section 702 of the APA, which provides that "[a] person suffering legal wrong because of agency action, or adversely affected or aggrieved by agency action within the meaning of a relevant statute, is entitled to judicial review thereof." 5 U.S.C. § 702 (2012). Although some cases have suggested that the zone of interests formulation is "most usefully understood as a gloss on the meaning of § 702," *Clarke*, 479 U.S. at 400 n.16, and therefore limited to suits brought under the APA, other cases suggest that the formulation is applicable more broadly. *See, e.g.*, Thompson v. N. Am. Stainless, LP, 131 S. Ct. 863, 870 (2011) (interpreting parallel language in Title VII).

180 *See* Lujan v. Nat'l Wildlife Fed'n, 497 U.S. 871, 882–83 (1990).

181 *See, e.g.*, Sunbeam Television Corp. v. Nielsen Media Research, Inc., 711 F.3d 1264, 1270 (11th Cir. 2013) ("The doctrine of antitrust standing reflects prudential concerns and is designed to avoid burdening the courts with speculative or remote claims. Antitrust standing is a conscientious method to find the proper private plaintiff to enforce the antitrust laws." (citation omitted)); Gatt Commc'ns, Inc. v. PMC Assocs., 711 F.3d 68, 82 n.1 (2d Cir. 2013) (Wesley, J., concurring) ("Antitrust standing involves an analysis of prudential considerations aimed at avoiding counter-productive use of antitrust laws in ways that could harm competition rather than protecting it." (internal quotation marks and alteration omitted)).

182 15 U.S.C. § 15(a) (2012). The Clayton Act also provides that "[a]ny person . . . shall be

guage is "implicitly qualified."[183] These qualifications are primarily twofold. The first is that the plaintiff must successfully allege "antitrust injury." That is, the plaintiff's alleged injury must not only constitute an injury in fact sufficient to invoke the court's Article III jurisdiction, but it must also be an "injury of the type the antitrust laws were intended to prevent and that flows from that which makes defendants' acts unlawful."[184] The facts of the germinal case offer a good example of the concept. In *Brunswick Corp. v. Pueblo Bowl-O-Mat, Inc.*,[185] the plaintiffs were bowling alleys that challenged on antitrust grounds the merger of their struggling competitor with a well-financed supplier that would enable the competitor to remain viable.[186] Even assuming that the merger was a violation of the antitrust laws, the Supreme Court held that the plaintiffs did not have standing to bring their claim because their theory of injury—that they would be injured because they would face competition from the newly rejuvenated bowling alley—was exactly the *opposite* of the injury that the antitrust laws were meant to remedy.[187] The plaintiffs were complaining of *more* competition, while the antitrust laws were intended to provide remedies for injuries arising from *less* competition. The modern "antitrust injury" rule operates to limit antitrust actions to those in which the plaintiff's action supports the statutory goal of antitrust enforcement.[188]

The second major limitation of antitrust standing is to plaintiffs whose injuries are not too remote, derivative, or duplicative of others.[189] Because antitrust violations ripple through the economy, a potentially very large number of plaintiffs can plausibly claim Article III injury. Antitrust law therefore favors direct rather than derivative plaintiffs. If, for example, a supplier is overcharged as a result of illegal price fixing, the supplier's customers—the "indirect purchasers" in antitrust parlance—generally do not have antitrust standing, at least in

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entitled to sue for and have injunctive relief . . . against threatened loss or damage by a violation of the antitrust laws." *Id.* § 26.

183 IIA PHILLIP E. AREEDA, HERBERT HOVENKAMP, ROGER D. BLAIR & CHRISTINE PIETTE DURRANCE, ANTITRUST LAW ¶ 335, at 67 (3d ed. 2007) [hereinafter AREEDA & HOVENKAMP]; *see* Associated Gen. Contractors of Cal., Inc. v. Cal. State Council of Carpenters, 459 U.S. 519, 534–35 (1983).

184 Brunswick Corp. v. Pueblo Bowl-O-Mat, Inc., 429 U.S. 477, 489 (1977).

185 Brunswick Corp. v. Pueblo Bowl-O-Mat, Inc., 429 U.S. 477 (1977).

186 *See id.* at 479–81.

187 *See id.* at 487–89.

188 *See* IIA AREEDA & HOVENKAMP, *supra* note 183, ¶ 337, at 88.

189 *See id.* ¶ 339, at 108.

actions seeking damages.[190] That is because such damages actions are duplicative of actions that can be brought by more direct purchasers. Efficient litigation therefore favors the direct purchasers.

Together, these doctrines add up to a rough preference for certain plaintiffs over others in antitrust cases. Consumers, for example, are usually the preferred plaintiffs. This is consistent with each of the limitations described above. Consumers are the most likely to be injured in a way that the antitrust laws are meant to prevent—by having to pay unlawfully higher prices for goods and services. And consumers are the most direct plaintiffs, thereby making for efficient litigation (particularly when suit is brought on behalf of a class of consumers). This is not to say that other plaintiffs are excluded. But they do have to demonstrate their suitability. As the leading antitrust treatise notes, "consumers almost always have the correct incentives for suit[;] rivals do not."[191] That is because "a competitor opposes efficient, aggressive, and legitimate competition by its rivals," and therefore "it has an incentive to use an antitrust suit to delay their operations or to induce them to moderate their competition."[192] But in cases where the wrongful conduct is exclusionary, such as predatory pricing, then a competitor's incentives are aligned with the ultimate consumer beneficiaries of the law.[193] Similarly, where a competitor is in a better position to detect antitrust violations than a consumer, or where collective action problems may plague consumer suits, a competitor may be an appropriate plaintiff.[194]

For a contrasting example, consider false advertising cases brought under section 43 of the Lanham Act.[195] That statute provides that "any person who believes that he or she is or is likely to be damaged by" false advertising may sue.[196] In those cases, however, and unlike in antitrust cases, *competitors* are the preferred plaintiffs rather than consumers.[197] That is because the purpose of the Lanham Act is

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190 *See* Ill. Brick Co. v. Illinois, 431 U.S. 720, 730–35 (1977). By contrast, the concerns with duplicative recovery raised in damages actions are not present in actions seeking only injunctive relief. Those actions may therefore usually be brought even by indirect purchasers. *See* AREEDA & HOVENKAMP, *supra* note 183, ¶ 346d & n.23, at 166 (citing *In re* Warfarin Sodium Antitrust Litig., 214 F.3d 395 (3d Cir. 2000)).

191 AREEDA & HOVENKAMP, *supra* note 183, ¶ 348a, at 202.

192 *Id.*

193 *See id.*; *see also, e.g.*, Brooke Grp. Ltd. v. Brown & Williamson Tobacco Corp., 509 U.S. 209, 223 (1993).

194 *See* AREEDA & HOVENKAMP, *supra* note 183, ¶ 348a, at 202.

195 15 U.S.C. § 1125 (2012).

196 *Id.* § 1125(a)(1).

197 Indeed, courts have uniformly held that consumers do not have prudential standing to

different from the purpose of the Sherman and Clayton Acts. Unlike the antitrust laws, which ultimately are about consumer welfare,[198] the Lanham Act aims to curb unfair competition.[199] The different statutory purpose yields a different set of potential plaintiffs who may fall within the zone of interests that the statute protects. As the Supreme Court has recently held, a Lanham Act false advertising plaintiff "ordinarily must show economic or reputational injury flowing directly from the deception wrought by the defendant's advertising."[200] Direct competitors whose economic interests are injured by false advertising are the most straightforward plaintiffs.[201] But noncompetitors can sue when their alleged injuries are still within the scope of interests protected by the statute.[202] The reasons are two-fold. First, the modern economy includes a range of market structures such that indirect competitors may nevertheless be subject to injury from unfair competition in the commercial marketplace. Entities may have conflicting interests even if they are located at different levels of a supply chain,[203] or compete in adjacent but not identical product markets.[204] Second, there may be cases in which more appropriate plaintiffs have little incentive to sue.[205] In those cases, more remote plaintiffs can still vindicate the interests protected by the statute. But those plaintiffs need to demonstrate more convincingly that standing is appropriate.[206]

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sue under section 43(a)(1). *See, e.g.*, Made in the USA Found. v. Phillips Foods, Inc., 365 F.3d 278, 280 (4th Cir. 2008); Colligan v. Activities Club of N.Y., Ltd., 442 F.2d 686, 692–93 (2d Cir. 1971).

198 *See, e.g.*, *Brooke Group*, 509 U.S. at 221.

199 *See* 15 U.S.C. § 1127 (stating that the Act is intended "to protect persons engaged in . . . commerce against unfair competition"). To be sure, the Lanham Act also seeks to protect consumers from false advertising. *See* 5 J. THOMAS MCCARTHY, MCCARTHY ON TRADEMARKS AND UNFAIR COMPETITION § 27:31 (4th ed. 2014) (noting that "§ 43(a) was passed to protect consumers as well as competitors," and describing "commercial plaintiff[s]" as "'vicarious avenger[s]' of consumer interests"). The courts' denial of standing to consumer plaintiffs reflects congressional intent to exclude those plaintiffs.

200 Lexmark Int'l, Inc. v. Static Control Components, Inc., 134 S. Ct. 1377, 1391 (2014).

201 *See, e.g.*, *id.* at 1393 (noting that "the classic Lanham Act false-advertising claim [is one] in which one competitor directly injures another by making false statements about his own goods or the competitor's goods and thus inducing consumers to switch" (internal quotation marks and alterations omitted)); *see also* Famous Horse Inc. v. 5th Ave. Photo Inc., 624 F.3d 106, 113 (2d Cir. 2010), *abrogated in part on other grounds*, *Lexmark*, 134 S. Ct. 1377.

202 *See Lexmark*, 134 S. Ct. at 1393–95 (holding that competitor's supplier had standing to bring false advertising claim).

203 *See, e.g.*, *Famous Horse*, 624 F.3d at 113.

204 *See, e.g.*, Johnson & Johnson v. Carter-Wallace, Inc., 631 F.2d 186, 190 (2d Cir. 1980).

205 *See* Brief of Law Professors as *Amici Curiae* in Support of Neither Side at 20, *Lexmark*, 134 S. Ct. 1377 (No. 12-873) (citing Merck Eprova AG v. Brookstone Pharm., LLC, 920 F. Supp. 2d 404 (S.D.N.Y. 2013), as an example).

206 *See Famous Horse*, 624 F.3d at 113.

Together, these limitations seek to effectuate two prudential concerns. The first has to do primarily with congressional intent. When courts ask whether a plaintiff's injury falls within the "zone of interests" created by a statute—or whether a plaintiff has experienced "antitrust injury" or "competitive injury" for purposes of the Lanham Act—they are inquiring whether Congress intended for the courts to intervene in the way they are being asked.[207] As the Supreme Court has stated in the APA context, the question is whether "the plaintiff's interests are so marginally related to or inconsistent with the purposes implicit in the statute that it cannot reasonably be assumed that congress intended to permit the suit."[208] Second, there are circumstances in which it is appropriate for courts to consider the structure and function of litigation in determining who are proper plaintiffs.[209]

How do these considerations map onto patent validity challenges? Any assessment of the relevant zone of interests must begin with the Patent Act.[210] Neither the Supreme Court nor the Federal Circuit has defined the "zone of interests" created by the Patent Act in those terms precisely.[211] But some well-understood principles point the way. It is widely accepted that the purpose of the patent law is to promote innovation. This purpose is reflected both in the constitu-

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207 *See Lexmark*, 134 S. Ct. at 1388–90; Clarke v. Sec. Indus. Ass'n, 479 U.S. 388, 400 (1987) ("[A]t bottom the reviewability question turns on congressional intent . . . .").

208 *Clarke*, 479 U.S. at 399.

209 Note, however, that courts' authority to consider matters of judicial prudence does not extend so far as to enable courts to engage in free-wheeling policymaking concerning standing requirements. *See, e.g.*, Holmes v. Sec. Investor Protection Corp., 503 U.S. 258, 289 (1992) (Scalia, J., concurring) (noting that concerns over the threat of nuisance litigation may be relevant but "are surely not alone enough to restrict standing to purchasers or sellers under a text that contains no hint of such a limitation").

210 Unlike the antitrust or unfair competition laws, or the APA, the Patent Act does not contain an express cause of action for persons seeking to challenge the scope or validity of a patent. Section 281 provides only that "[a] patentee shall have remedy by civil action for infringement of his patent." 35 U.S.C. § 281 (2012). As described above, the Declaratory Judgment Act forms the basis for most present-day patent challenges, and the Patent Act's provisions for judicial review of post-grant challenges in the PTO furnishes statutory authority for another class of challenges. *See infra* Part I; 35 U.S.C. §§ 311(b), 321(b).

211 In *Animal Legal Defense Fund v. Quigg*, 932 F.2d 920 (Fed. Cir. 1991), the Federal Circuit rejected the idea that the zone of interests included a broad conception of "the public good." *Id.* at 938 (internal quotation marks omitted). That is probably correct. Such a wide zone of interests could swallow all of prudential standing, since arguably every statute that Congress passes purports to protect the public good. I part ways here with those scholars who seek to expand standing to include citizen suits. *See, e.g.*, La Belle, *supra* note 20; Amelia Smith Rinehart, *Patent Cases and Public Controversies*, 89 NOTRE DAME L. REV. 361, 392–400 (2013). The Supreme Court is also highly unlikely to sanction such suits given its hostility to statutory citizen suit provisions expressed in *Defenders of Wildlife* and subsequent cases. *See supra* notes 179–80 and accompanying text; Lujan v. Defenders of Wildlife, 504 U.S. 555, 572–78 (1992).

tional grant of authority to Congress to promulgate a patent act "[t]o promote the Progress of Science and useful Arts,"[212] and in the text and structure of the Patent Act itself.[213] Of course, "promoting innovation" is hardly self-defining. Innovation promotion could encompass a wide range of activities and a wide range of social goals, from the production of new goods and services to the preservation of competition to the distribution of goods and services throughout the economy.[214] If nothing else, however, the promotion of innovation must entail creating incentives to engage in the production of new and useful goods and services. That utilitarian goal is the classic justification for the patent system, as recognized both by scholars[215] and by the courts.[216] Equally well understood is that the patent system is limited, again, as both a constitutional and a statutory matter. The statute is thought to balance the incentives for invention provided by a grant of exclusive rights with the "recognition that imitation and refinement through imitation are . . . necessary to invention itself and the very lifeblood of a competitive economy."[217]

This suggests that the zone of interests surrounding the Patent Act centers upon incentives to innovate. The Patent Act articulates the bases for and conditions upon granting patents,[218] enumerates the rights that attach to a patent grant,[219] and provides for remedies that patent holders may secure against infringers.[220] These provisions are all the subjects of legislative and judicial change based on the extent to which they promote or retard incentives to innovate. And, because ensuring that the PTO issues only valid grants is important to innovation, Congress has provided mechanisms for parties to challenge the validity of patents in the agency.[221] Christina Bohannon and Herbert Hovenkamp fashion these well-understood purposes of the patent

212 U.S. CONST. art. I, § 8, cl. 8.

213 The Supreme Court consistently refers to this statutory purpose. *See, e.g.*, Bonito Boats, Inc. v. Thunder Craft Boats, Inc., 489 U.S. 141, 146 (1989).

214 *See* Brett Frischmann & Mark McKenna, *Comparative Analysis of (Innovation) Failures and Institutions in Context* (Sept. 1, 2014) (unpublished manuscript) (on file with The George Washington Law Review).

215 *See, e.g.*, Peter S. Menell & Suzanne Scotchmer, *Intellectual Property Law*, *in* 2 HANDBOOK OF LAW AND ECONOMICS 1473, 1476 (A. Mitchell Polinsky & Steven Shavell eds., 2007).

216 *See, e.g.*, Ass'n for Molecular Pathology v. Myriad Genetics, Inc., 133 S. Ct. 2107, 2116 (2013) (stating that "the very point of patents" is "to promote creation"); Mayo Collaborative Servs. v. Prometheus Labs., Inc., 132 S. Ct. 1289, 1293 (2012).

217 *Bonito Boats*, 489 U.S. at 146; *see also, e.g.*, *Mayo*, 132 S. Ct. at 1301–02.

218 35 U.S.C. §§ 101–112 (2012).

219 *Id.* § 154(d).

220 *Id.* §§ 271, 281–284.

221 *See id.* §§ 311–319; 321–329; Matal, *supra* note 11 (legislative history).

laws into a concept of "IP injury."[222] Their argument proceeds by analogy to the concept of antitrust injury described above. Just as antitrust actions are limited to those which promote competition, notwithstanding the seemingly broad statutory standing for all persons to challenge antitrust violations, so too, they argue, should actions to enforce patent rights be limited to those where the plaintiff can "demonstr[ate] injury that is tied to the purpose for which the IP laws were passed in the first place."[223] They argue that "IP law should recognize harm"—infringement—"only for uses that are likely to interfere with IP holders' decisions to create or distribute their works—that is, only for harms that are consistent with the constitutional mandate that the purpose of the patent . . . system[ ] is to further innovation."[224]

Bohannon and Hovenkamp's theory of IP injury works just as well in reverse. If the zone of interests protected by the patent law is innovation incentives, then challengers to the scope or validity of patents have prudential standing if they allege harm to innovation incentives. To be sure, this concept is expansive. But it is not boundless.[225] It does not, for example, include broad notions of consumer welfare. Unlike the antitrust laws, the Patent Act is not a consumer welfare statute.[226] It does not aim to keep prices at competitive levels; to the contrary, it aims to induce innovation through supracompetitive pricing. And the concerns that courts express about patent breadth or scope are almost always framed in terms of the effect of patent strength on *innovation*, not on prices.[227]

The injury described in Part I fits squarely within this zone of interests. Risk and uncertainty about the scope and validity of patents directly affect the innovative process. Those who seek to develop or market competing goods that may infringe are rationally "chilled" and

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222 *See* CHRISTINA BOHANNON & HERBERT HOVENKAMP, CREATION WITHOUT RESTRAINT: PROMOTING LIBERTY AND RIVALRY IN INNOVATION 50–55 (2012).

223 *Id.* at 51.

224 *Id.*; *see also* Paul R. Gugliuzza, *IP Injury and the Institutions of Patent Law*, 98 IOWA L. REV. 747, 751–53 (2013).

225 *Cf.* Animal Legal Def. Fund v. Quigg, 932 F.2d 920, 938 (Fed. Cir. 1991) (rejecting claim that "the patent statute's 'zone of interests' encompasses any member of the public who perceives they will be harmed by an issued patent which they believe to be invalid").

226 *Compare* Brunswick Corp. v. Pueblo Bowl-O-Mat, 429 U.S. 477, 485–87 (1977), *with* Bonito Boats, Inc. v. Thunder Craft Boats, Inc., 489 U.S. 141, 146 (1989). *See also* Ritz Camera & Image, LLC v. SanDisk Corp., 700 F.3d 503, 507–08 (Fed. Cir. 2012).

227 *See, e.g.*, Mayo Collaborative Servs. v. Prometheus Labs., Inc., 132 S. Ct. 1289, 1303 (2012).

choose not to do so.[228] As described above, a definitive adjudication of the scope or validity of a patent can clear the way for innovative activity that might not otherwise take place.[229] If the patent is found valid, then the parties can bargain toward an efficient license and innovation can proceed under the terms of the license.[230] If it is invalid, then the innovation can proceed unencumbered. Either way, removing the cloud of title for the party seeking to make unlicensed use is in furtherance of the fundamental goal of the patent system, which is to incentivize innovation. It therefore falls within the zone of interests of the statute.

As to the second concern of prudential standing doctrine, which attempts to avoid duplicative or wasteful litigation, allowing standing for plaintiffs who allege the injury described above would generally not pose a problem. Actions adjudicating the scope or validity of patents do not present the problems of duplicative recovery that antitrust damage actions present.[231] Declaratory relief is equitable in nature.[232] Because there are no damages, there is no risk to the defendants of duplicative awards and over-recoveries to the plaintiffs. This explains why even in antitrust, prudential standing restrictions like the indirect purchaser rule are relaxed when the plaintiff is seeking only injunctive relief.[233] It also explains why standing under the Lanham Act tends to be broader than antitrust standing. Most false advertising cases seek only injunctive relief.[234] To be sure, there may be situations in which judicial economy concerns favor channeling declaratory relief to particular plaintiffs; I discuss those situations in the next section. But as a general matter, there is no reason to think that a broadly restrictive prudential standing rule is justified on the ground that it is necessary to prevent injustice.[235]

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228 *See supra* notes 84–87 and accompanying text.

229 *See supra* notes 71–72 and accompanying text.

230 Understanding, of course, that for a variety of reasons, licensing markets may be inefficient. *See, e.g.*, Mark A. Lemley & Nathan Myhrvold, *How to Make a Patent Market*, 36 HOFSTRA L. REV. 257, 257 (2007).

231 *See* Ill. Brick Co. v. Illinois, 431 U.S. 720, 730–32 (1977); AREEDA & HOVENKAMP, *supra* note 183, ¶ 346c, at 165.

232 *See* BORCHARD, *supra* note 26, at 741.

233 *See* AREEDA & HOVENKAMP, *supra* note 183, ¶ 346d, at 166 ("An equity suit neither threatens duplicative recoveries nor requires complex tracing through the distribution chain. . . . *Illinois Brick* has not therefore barred an indirect purchaser's suit for an injunction.").

234 *See* MCCARTHY, *supra* note 199, § 27:37.

235 To the extent that the Federal Circuit appears concerned with (1) allowing patent holders to sit on their rights without having to worry about litigating to preserve the validity of their grants; or (2) vexatious or harassing litigation against patent holders, neither of those concerns justify narrow standing. As I describe in Part IV, *infra*, the former concern is not troubling as a

C. *Summary: Who Has Standing to Challenge a Patent?*

These constitutional and prudential considerations suggest that standing to challenge the scope or validity of patents ought to be significantly broader than the Federal Circuit currently allows. As described above, the Federal Circuit's "proximity" test effectively precludes suit by any entities other than competitors.[236] And even then, in order for a competitor to file suit, it has to be the target of some action by the patentee sufficient to put it on notice of a likely infringement suit.[237] By contrast, a focus on the injury that arises from the existence of uncertain intellectual property yields a greater number of potential plaintiffs who may constitutionally bring suit, and prudential concerns support granting standing to most of them.

1. *Competitors, Potential Competitors, and Similar Actors*

The injury described above is felt most directly by competitors in the field. They are the ones whose activities are most likely to be chilled by uncertain patents. Two important points distinguish competitor standing under the theory developed in this Article from the Federal Circuit's current practice. First, the chilling effects of uncertain patents are independent of any actions that the patent holder may take; that means that action by the patent holder is not required to establish standing. Second, the chilling effects of uncertain patents may be felt long before actual infringement becomes imminent. That is because "quiet title" actions are best brought *before* fixed investments can be subjected to the threat of holdup. Together these considerations mean that not only competitors, but also potential and indirect competitors have standing. In addition, academic or other noncommercial actors might also be at risk and therefore entitled to file suit to clear the fields in which they are working of adverse patents.

Take *Myriad* as an example. The only plaintiff with standing in that case was a doctor who (1) received a cease-and-desist letter from the patent holder, and (2) alleged that he would immediately begin using the claimed subject matter upon a judicial finding that the patent he challenged was invalid.[238] That case would come out differently under the analysis that I propose. Physicians who might consider of-

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normative matter, and the latter can be addressed through other less restrictive changes to the litigation ecosystem.

236 *See supra* Part I.

237 *See supra* Part I.

238 *See* Ass'n for Molecular Pathology v. USPTO, 689 F.3d 1303, 1319 (Fed. Cir. 2012), *aff'd*

fering their own genetic testing services for the genes that are linked with breast cancer face a risk of liability regardless of whether they have actually been contacted by Myriad Genetics or not. And they face a risk of liability not only if they would immediately be able to infringe, but also if they would need time to plan their businesses or facilities.

To be sure, a plaintiff must still show that her injury is "concrete and particularized," that is, it "must affect the plaintiff in a personal and individual way."[239] Plaintiffs must demonstrate facts that support their claim that a "quiet title"-like determination will actually remove the cloud of uncertainty from their plans. These facts are likely to be easier to demonstrate the closer a competitor is to launching an infringing product or service. But early stage competitors are by no means excluded. Antitrust again provides a useful example. In that area of the law, nascent firms may bring suit claiming that they would have entered a market but for a defendant's anticompetitive conduct. In such cases, courts consider a variety of factors including "the financial ability to enter the market, the background and experience that makes success possible, and that [the firm] has undertaken such significant steps toward entry as architectural plans or building commitments, contracts with prospective customers, or substantial marketing expenditures."[240] Similarly, in the patent context, courts deciding whether potential competitors legitimately have standing can consider the extent and detail of their business plans, their existing commitments, and other such factors. The inquiry is not about the imminence of infringement, but about the likelihood that the plaintiff actually is chilled by uncertainty.

Neither do competitors need to be threatened directly by patent holders. In a series of recent Federal Circuit cases, patent holders sued their competitors' *customers* for infringement arising out of their use of the competitors' products. When the competitors themselves sought declaratory judgments that their products were not infringing—no doubt to protect their customers, at least in part—the Federal Circuit held that the competitors had standing only if they could reasonably be accused of contributory infringement or inducement.[241]

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in part, rev'd in part sub nom. Ass'n for Molecular Pathology v. Myriad Genetics, Inc., 133 S. Ct. 2107 (2013).

239 Lujan v. Defenders of Wildlife, 504 U.S. 555, 560 & n.1 (1992).

240 AREEDA & HOVENKAMP, *supra* note 183, ¶ 349, at 227–28 (footnotes omitted).

241 *See* Microsoft Corp. v. DataTern, Inc., 755 F.3d 899, 903–04 (Fed. Cir. 2014); Cisco Sys., Inc. v. Alta. Telecomms. Research Ctr., 538 F. App'x 894, 897–98 (Fed. Cir. 2013); Arris Grp., Inc. v. British Telecomms. PLC, 639 F.3d 1368, 1375–77 (Fed. Cir. 2011).

Under the analysis proposed here, such a showing would be unnecessary. Competitors' economic activity is chilled not only by direct threats, but also by indirect threats. No company would market a product if customers were under constant threat of infringement for using it. And the competitor is likely to be the more efficient litigator in these circumstances; suits against customers rather than the supplier are likely patent holder gamesmanship.

2. Consumers

Consumers usually will not experience the type of injury that gives rise to standing under the analysis here. Consumers typically purchase a protected product from a manufacturer. If the manufacturer is making the product under license, then the only possible basis for the consumer's suit is that the consumer would pay less money for the product in the absence of a patent. But that is not the risk described here. Nor is that alleged injury within the zone of interests described above. Complaints about price are the province of the antitrust rather than the patent laws. Indeed, the Federal Circuit recently drew a sharp distinction between the two. In *Ritz Camera & Image, LLC v. SanDisk Corp.*,[242] the court declined to apply its restrictive patent standing rules to the direct purchaser plaintiff's antitrust claim based on *Walker Process* fraud.[243] That claim, that fraud on the PTO resulted in the improper issuance of a patent that was then used to anticompetitive effect, includes as one of its elements the need to show that the patent was invalid.[244] The court wrote that "[a] *Walker Process* antitrust claim is a separate cause of action from a patent declaratory judgment action" and is therefore "governed by principles of antitrust law."[245]

There may, however, be certain circumstances in which consumer suits are appropriate. First, some consumers might engage in user innovation.[246] These consumers not only purchase goods, but alter them and engage in further downstream innovation.[247] Those activities may

242 Ritz Camera & Image, LLC v. SanDisk Corp., 700 F.3d 503 (Fed. Cir. 2012).

243 *Id.* at 507–08 (citing *Walker Process Equip., Inc. v. Food Mach. & Chem. Corp.*, 382 U.S. 172 (1965)).

244 *Id.* at 506.

245 *Id.* at 508.

246 *See* ERIC VON HIPPEL, DEMOCRATIZING INNOVATION 19–32 (2005); William W. Fisher III, *The Implications for Law of User Innovation*, 94 MINN. L. REV. 1417, 1418–30 (2010) (describing a variety of user innovations); Katherine J. Strandburg, *Users as Innovators: Implications for Patent Doctrine*, 79 U. COLO. L. REV. 467, 469 (2008) ("User innovators develop technology for their own use, rather than to sell it.").

247 *See* VON HIPPEL, *supra* note 246.

be placed at risk because of uncertain intellectual property, and those who engage in them may therefore have standing to remove that uncertainty. Second, if a consumer purchases a good that is infringing and not under license, the consumer can be liable for infringement. Most of the time, the patent holder will find it more economical to sue a manufacturer than a large number of dispersed users. But suits against consumers are not unheard of.[248] Consumers facing such suits are facing regulation of their primary behavior. But so are the manufacturers, who, for the prudential reasons described above, are likely to be the preferred plaintiffs.[249] When the preferred plaintiff does not have adequate incentive to sue, however, consumers may be granted standing instead.[250] That may occur, for example, when a consumer can show that she has been threatened with litigation (a requirement that a competitor would not have to meet) or that the relevant competitors for whatever reason have declined to sue.

3. *Interest Groups*

Finally, interest groups that raise purely ideological objections to particular patents are unlikely to have standing under the theory described here. They are not themselves the subjects of regulation through patent enforcement and have no innovative activities to be chilled by patent uncertainty.

Interest groups may, however, be able to sustain claims of associational standing. Under that doctrine, "an association has standing to bring suit on behalf of its members when: (a) its members would otherwise have standing to sue in their own right; (b) the interests it seeks to protect are germane to the organization's purpose; and (c) neither the claim asserted nor the relief requested requires the participation of individual members in the lawsuit."[251] Interest groups that represent firms or individuals who may be subject to risk and uncertainty from existing patents may therefore be able to sue as well.

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248 *See generally, e.g.*, Gaia Bernstein, *The Rise of the End User in Patent Litigation*, 55 B.C. L. REV. 1443 (2014); Joe Mullin, *Patent Trolls Want $1,000—For Using Scanners*, ARS TECHNICA (Jan. 2, 2013, 9:30 AM), http://arstechnica.com/tech-policy/2013/01/patent-trolls-want-1000-for-using-scanners/; *see also supra* note 241.

249 *See supra* Part III.B.

250 *Cf.* AREEDA & HOVENKAMP, *supra* note 183, ¶ 348, at 202. In antitrust, where consumers are the preferred plaintiffs, competitors may have standing where consumers do not have adequate incentives to sue. *See id.*

251 Hunt v. Wash. State Apple Adver. Comm'n, 432 U.S. 333, 343 (1977).

IV. Broader Patent Standing Is Consistent with Sound Policy

The previous Parts described how patents may injure those working in fields they occupy, even in the absence of enforcement efforts by the patent holder, and argued that such injuries are sufficient for standing purposes under current doctrine. That analysis yields a broader concept of standing to challenge patent scope or validity than the courts of appeals currently contemplate. This Part defends that broader standing as a normative matter.

A. The Need for Patent Challenges

Patents are generated in vast quantities in the United States. The PTO now receives, for example, more than 560,000 utility patent applications every year and issues over 265,000 utility patents.[252] At that volume, the PTO does not have the resources to examine every one of them accurately. It is estimated, for example, that each patent examiner spends roughly eighteen hours examining each application.[253] In these conditions, errors are inevitable. The PTO will necessarily issue patents that do not meet the standards for eligibility and that should not have been issued. Some empirical work in patents suggests that such errors are frequent—between 33% and 46% of patents litigated to judgment are found invalid.[254] And even more commonly, the PTO will issue patents with uncertain boundaries.[255]

Invalid patents are socially costly. They are patents that should not have been granted in the first instance. As such, their issuance is in derogation of the background principle that those works ineligible for protection under state or federal intellectual property laws are presumptively available to the public. As the Supreme Court has explained, "[s]haring in the goodwill of an article unprotected by patent or trade-mark is the exercise of a right possessed by all—and in the free exercise of which the consuming public is deeply interested."[256]

Invalid intellectual property imposes social costs both when it is enforced and when it is merely extant.[257] The classic justification for

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252 *See* U.S. Patent & Trademark Office, *supra* note 1, at 189 tbl.2, 192 tbl.6.

253 *See* Dan L. Burk & Mark A. Lemley, The Patent Crisis and How the Courts Can Solve It 23 & 172 n.10 (2009).

254 *See supra* note 72.

255 *See supra* notes 73–77 and accompanying text.

256 Kellogg Co. v. Nat'l Biscuit Co., 305 U.S. 111, 122 (1938).

257 *See generally* Lemley, *supra* note 146, 1058–59 (describing five types of social costs of intellectual property: static inefficiency, dynamic inefficiency, encouraging rent-seeking, administrative costs, and overinvestment in research and development).

intellectual property is that the costs of excluding others from practicing the subject of the intellectual property are outweighed by the benefits that come from encouraging innovation.[258] If an invention is not eligible for patent protection, for example, it is thought that a patent is not necessary to provide incentives to produce the invention.[259] That implies that invalid IP imposes all of the social costs of exclusive rights but confers none of the social benefits. And those social costs are significant—exclusive rights not only restrict access and create deadweight losses when consumer demand cannot be satisfied at marginal cost, but also impose significant restraints on further downstream innovation.[260]

As described above, however, invalid patents need not be enforced to remain socially harmful. Their mere existence can serve as a powerful competitive deterrent, stifling the development of competitive markets and distorting innovative resources to less socially productive ends.[261] The proliferation of patents in itself poses challenges. Multiple, potentially overlapping intellectual property rights give rise to the risk of "patent thickets" that companies must work through in order to commercialize products covered by multiple patents,[262] and "anticommons" scenarios in which multiple dispersed rights must be aggregated in order to engage in innovative activity.[263]

These costs are especially salient in light of the development of new business models based on the assertion of intellectual property. I refer here to the phenomena of patent "trolls." These are entities that use patents primarily to obtain licensing fees or litigation settlements rather than to support the development or transfer of technology.[264]

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258 *See* Menell & Scotchmer, *supra* note 215, at 1476–78, 1536–37.

259 *See, e.g.*, Michael Abramowicz & John F. Duffy, *The Inducement Standard of Patentability*, 120 YALE L.J. 1590, 1594 (2011).

260 The canonical statement of this problem can be found in Kenneth J. Arrow, *Economic Welfare and the Allocation of Resources for Invention*, *in* THE RATE AND DIRECTION OF INVENTIVE ACTIVITY: ECONOMIC AND SOCIAL FACTORS 609, 619–20 (Nat'l Bureau of Econ. Research ed., 1962); *see also* Menell & Scotchmer, *supra* note 215, at 1499–1500.

261 *See supra* notes 84–87 and accompanying text.

262 *See* Carl Shapiro, *Navigating the Patent Thicket: Cross Licenses, Patent Pools, and Standard Setting*, *in* 1 INNOVATION POLICY AND THE ECONOMY 119, 120–21 (Adam B. Jaffe et al. eds., 2001).

263 *See* Heller & Eisenberg, *supra* note 89, at 698. To be sure, empirical evidence about the scale of the anticommons problem is mixed. *See* Rebecca S. Eisenberg, *Noncompliance, Nonenforcement, Nonproblem? Rethinking the Anticommons in Biomedical Research*, 45 HOUS. L. REV. 1059, 1061–62 (2008). I assume that this anticommons problem remains a threat that might be alleviated by reducing the number of existing invalid patents.

264 There is no single definition of a "patent troll." I follow Colleen Chien's definition of "patent assertion entities." *See* Chien, *supra* note 2, at 300.

The patent troll business model takes advantage of the asymmetry of costs between plaintiffs and defendants to extract nuisance settlements.[265] Because these entities do not themselves practice any inventions or use any creative works that may be subject to counterclaims, the cost of asserting their intellectual property is far lower than defendants' costs of defense.[266] Yet infringement judgments may subject defendants to devastating losses—injunctive relief and very high damages multiples. As a result, many defendants choose to settle.[267] Trolls increase the social cost associated with invalid intellectual property. Because their business model depends less on success in court than on the extraction of nuisance settlements, and because they source most of their intellectual property from other parties that have no interest in or ability to commercialize it, their assertions may be of disproportionately invalid patents.[268]

An exponential increase in the number of issued patents coupled with increasing concerns about the behavior and social costs of patent assertion entities has led to widespread calls to increase the "quality" of issued patents—that is, to reduce the number of invalid patents and their attendant social costs.[269] There are, broadly speaking, two ways one can do this. The PTO can be more thorough in applying the criteria for patent validity during its initial examination. Or the agency and courts can apply a light initial screen and then a deeper review in litigation after the patent issues. Mark Lemley has argued that it makes little sense to improve patent quality solely by increasing the

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265 *See* Colleen Chien, Presentation at FTC-DOJ Joint Public Workshop on Patent Assertion Entity Activities: Patent Assertion Entities, 13–19 (Dec. 10, 2012), *available at* http://ssrn.com/abstract=2187314.

266 *See id.* at 19.

267 *See id.* at 13–19.

268 There are several sources of evidence to suggest that trolls press particularly weak IP claims. Allison, Lemley, and Walker find that non-practicing entities (NPEs) who file multiple lawsuits to enforce a single patent win only 9.2% of the cases that they litigate to judgment. *See* John R. Allison, Mark A. Lemley & Joshua Walker, *Patent Quality and Settlement Among Repeat Patent Litigants*, 99 GEO. L.J. 677, 691–95 & fig.4 & tbl.9 (2011). Nearly 70% of the most-litigated patents in their study—most of which are held by NPEs—were found invalid. *See id.* at 706. Risch reports similar results for the most-litigated patents, but is skeptical about the connection between this finding and the asserting entity's status as a troll. *See* Michael Risch, *Patent Troll Myths*, 42 SETON HALL L. REV. 457, 481–84 (2012). Finally, Chien reports based on survey data that some 40% of startup companies targeted by patent trolls "stated that they were being targeted because of their use of another's or a widely available technology." Colleen V. Chien, *Startups and Patent Trolls*, 17 STAN. TECH. L. REV. 461, 464–65 (2014).

269 *See, e.g.*, R. Polk Wagner, *Understanding Patent-Quality Mechanisms*, 157 U. PA. L. REV. 2135, 2136–37 & n.1 (2009) (citing sources); *id.* at 2138–39 (defining patent quality as "the capacity of a granted patent to meet (or exceed) the statutory standards of patentability").

resources expended in patent examination.[270] In brief, a large number of patents are applied for and issue, but very few are ever the subject of litigation or licensing.[271] In Lemley's view, the cost of more detailed examination to weed out bad patents is not justified because few of those patents ultimately will be of any importance.[272] Instead, he argues that it is rational to apply a light screen at the examination stage and then allow interested parties to devote the more significant resources necessary for a detailed examination in litigation once it becomes clear which patents will be important and which will not.[273] Although this argument has its limits,[274] its basic logic suggests at the very least that the problem of invalid patents cannot be solved by administrative solutions alone, or even primarily. The costs of such a solution will inevitably exceed its benefits.

The courts therefore have a critical role to play in screening out invalid patents. Indeed, the courts are the ultimate arbiters of patent validity (and scope).[275] Recognizing this role, the Supreme Court has, on numerous occasions, "emphasized the importance to the public at large of resolving questions of patent validity."[276] And it has "encourage[d] authoritative testing" of patent validity in court.[277] Importantly, the courts enjoy primacy in determinations of patent validity notwithstanding Congress's enactment of procedures for administrative post-grant review. Those procedures—found in the America Invents Act[278]—aim to provide a less costly way to challenge the validity

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270 *See* Lemley, *Rational Ignorance*, *supra* note 97, at 1497.

271 *Id.*

272 *Id.*

273 *See id.* at 1508–11.

274 Importantly, Lemley's argument is not an argument against any improvements to the screening process. And, indeed, a number of proposals for reform make sense even accounting for the "rational ignorance" that Lemley describes. *See, e.g.*, Doug Lichtman & Mark A. Lemley, *Rethinking Patent Law's Presumption of Validity*, 60 STAN. L. REV. 45, 50 (2007) (proposing heightened PTO review of certain patent applications).

275 *See supra* note 71–72 and accompanying text.

276 Cardinal Chem. Co. v. Morton Int'l, Inc., 508 U.S. 83, 100 (1993).

277 Blonder-Tongue Labs., Inc. v. Univ. of Ill. Found., 402 U.S. 313, 344 (1971). The Court has done so through a number of mechanisms. *See* MedImmune, Inc. v. Genentech, Inc., 549 U.S. 118, 130–34 (2007) (licensee need not violate license to bring action for declaratory judgment of invalidity); *Cardinal Chem.*, 508 U.S. at 100–01 (finding of noninfringement does not moot counterclaims for invalidity); *Blonder-Tongue*, 402 U.S. at 346–48 (patent holder estopped from re-litigating finding of invalidity); Lear, Inc. v. Adkins, 395 U.S. 653, 663–68 (1969) (licensees not estopped from asserting invalidity of a patent as a defense in contract action for unpaid royalties).

278 *See* 35 U.S.C. §§ 311, 321 (2012).

of patents.[279] But because their results too can be appealed to the federal courts,[280] it is those courts that retain the final word.

B. *The Misalignment Between Current Standing Rules and Incentives to Bring Patent Challenges*

Most basically, expanded standing along the lines I describe in Part III will promote more "authoritative testing" of patent scope and validity. It stands to reason that if it is easier for plaintiffs to bring invalidity cases, more such cases will be brought. Broader standing can also discourage certain bad behaviors that have become common among IP holders. One common tactic, for example, is for a patent holder to threaten potential infringers in a way that falls just short of the now malleable standard for declaratory judgment jurisdiction.[281] That way the patent owner can induce behavioral changes yet shield its patent from challenge.[282] Similarly, some patent holders will file suit and then, when it appears that their patent is legitimately threatened, settle and make a unilateral covenant not to sue that may moot any declaratory judgment counterclaim.[283] The risk-based standing analysis proposed above reduces the effectiveness of this gamesmanship.[284] No particular behavioral trigger controlled by the patent holder is necessary for jurisdiction, and mooting a present infringement controversy generally would have no effect on an infringement defendant's standing to eliminate the risk that such a dispute might arise again in the future.[285]

This could also help alleviate the asymmetric structure of troll litigation that contributes to nuisance settlements.[286] Broader standing would allow potential infringers to make credible threats of validity litigation even in the absence of direct threats from the troll. That

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279 *See* Matal, *supra* note 11.

280 *See* 35 U.S.C. § 319, 329 (2012).

281 *See, e.g.*, Innovative Therapies, Inc. v. Kinetic Concepts, Inc., 599 F.3d 1377, 1381 (Fed. Cir. 2010).

282 *See* Leslie, *supra* note 84.

283 *See, e.g.*, Already, LLC v. Nike, Inc., 133 S. Ct. 721, 733–34 (2013) (Kennedy, J., concurring); Benitec Austl., Ltd. v. Nucleonics, Inc., 495 F.3d 1340, 1351–52 (Fed. Cir. 2007) (Dyk, J., dissenting).

284 *See* Rochelle Cooper Dreyfuss & Lawrence S. Pope, *Dethroning* Lear*? Incentives to Innovate After* MedImmune, 24 BERKELEY TECH. L.J. 971, 979–82 (2009).

285 The courts in *Already*, 133 S. Ct. at 728–29, and *Organic Seed Growers & Trade Ass'n v. Monsanto Co.*, 718 F.3d 1350, 1357–58 (Fed. Cir. 2013), interpreted covenants not to sue and statements disclaiming intent to sue broadly enough to cover future conduct, thereby leaving open the question whether covenants that are limited to past or present conduct—the vast majority of such covenants—moot invalidity claims.

286 *See supra* notes 264–68 and accompanying text.

in itself would serve as a check on troll behavior similar to the threat of counterclaim suits for practicing entities. It would also, as described above, help to reduce trolls' ability to engage in strategic behaviors that allow them to simultaneously assert their patents and shield them from challenge.[287]

There is, however, a deeper reason why broader standing is justified. The current standing rules result in an underproduction of invalidity litigation. Even where sufficient incentives exist in plaintiffs that can qualify under the current rules, the standing rules may distort the *types* of patent challenges that the courts hear. This is because, as described above,[288] the current standing regime largely limits standing to presently existing competitors. Those competitors are unlikely to bring the most socially valuable validity challenges.

Several scholars have observed that the Supreme Court's decision in *Blonder-Tongue Laboratories, Inc. v. University of Illinois Foundation*,[289] which gives findings of invalidity preclusive effect in subsequent litigation between different parties,[290] makes invalidity litigation a "public good," subject to familiar problems of underproduction.[291] In the typical case, a single challenger bears the full cost of the invalidity litigation. But the rule in *Blonder-Tongue* means that the challenger must share the fruits of her labors with the world. This creates several problems. The first is free riding. Because the costs of challenging patents are borne singly but the benefits are spread globally, parties who might be interested in such challenges have an incentive to free ride on the efforts of others.[292] In other words, because patent

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287 *See supra* notes 264–68 and accompanying text. It is worth noting that trolls engage in a variety of legal strategies, which may be affected to varying degree by the possibility of easier validity challenges. *See* Mark A. Lemley & A. Douglas Melamed, *Missing the Forest for the Trolls*, 113 COLUM. L. REV. 2117, 2119–29 (2013).

288 *See supra* note 238 and accompanying text.

289 Blonder-Tongue Labs., Inc. v. Univ. of Ill. Found., 402 U.S. 313 (1971).

290 *Id.* at 333–34.

291 *See* Joseph Farrell & Robert P. Merges, *Incentives to Challenge and Defend Patents: Why Litigation Won't Reliably Fix Patent Office Errors and Why Administrative Patent Review Might Help*, 19 BERKELEY TECH. L.J. 943, 951–55 (2004); Jay P. Kesan, *Carrots and Sticks to Create a Better Patent System*, 17 BERKELEY TECH. L.J. 763, 787–97 (2002); Joseph Scott Miller, *Building a Better Bounty: Litigation-Stage Rewards for Defeating Patents*, 19 BERKELEY TECH. L.J. 667, 685–88 (2004); John R. Thomas, *Collusion and Collective Action in the Patent System: A Proposal for Patent Bounties*, 2001 U. ILL. L. REV. 305, 333–34.

292 *See* Miller, *supra* note 291, at 687–88 ("*Blonder-Tongue*, considered alone, eliminates a patent attacker's ability to exclude others from appropriating the benefit of its successful patent attack. It thus turns patent invalidity judgments into public goods. And the resulting free rider problem, which discourages patent challenges, is at least as stark as the one that justifies providing a patent system in the first place."); Thomas, *supra* note 291, at 334 ("[A]mong [*Blonder-*

challenges generate positive spillovers, we can expect to see fewer of them than is optimal.[293]

But the dynamics of patent challenges are even more pernicious. The free rider problem described above is exacerbated by the fact that those who would benefit from patent challenges are often competitors of one another. A successful challenger therefore not only shares the benefits of his challenge with the world at large, but more particularly shares them with his competitors. This means not only that the collective action problem described above is that much harder to overcome, but also that challengers may have an incentive to engage in collusive settlement with patent holders.[294] Beyond a simple desire not to benefit competitors, it may be advantageous for one competitor armed with a strong invalidity argument to strike a deal with the patent holder. As Thomas writes, "[s]o 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."[295] Reverse payment settlements from branded drug manufacturers to generic drug manufacturers are a particularly salient example of this problem.[296] In those cases, a generic manufacturer chooses to accept payment to stay off the market rather than proceed with its challenge to a patent covering a branded pharmaceutical product.[297] This arrangement may be in both parties' interests—the branded manufacturer protects its patent and the challenger receives a large sum to drop the challenge—but it is in derogation of the broader social interest in eliminating the potentially invalid pharmaceutical patent.

The existing literature suggests several ways to better align the incentive of potential patent challengers with the socially optimal

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Tongue's] drawbacks is that a potential opponent cannot appropriate the benefits of a successful charge of patent invalidity to itself. In economic terms, the benefits of a successful charge of patent invalidity become nonexcludable.").

293 *See* Brett M. Frischmann & Mark A. Lemley, *Spillovers*, 107 COLUM. L. REV. 257, 286–89 (2007) (describing spillovers problem in the context of copyright defenses); Gideon Parchomovsky & Alex Stein, *Intellectual Property Defenses*, 113 COLUM. L. REV. 1483, 1487 (2013).

294 *See* Thomas, *supra* note 291, at 335–37.

295 *Id.* at 335; *see also* Dreyfuss, *supra* note 89, at 701–02 (noting that, contra to the Supreme Court's reasoning in *Lear*, licensees often have little incentive to challenge patents).

296 *See* FTC v. Actavis, Inc., 133 S. Ct. 2223, 2225 (2013); C. Scott Hemphill, *Paying for Delay: Pharmaceutical Patent Settlement as a Regulatory Design Problem*, 81 N.Y.U. L. REV. 1553, 1557–60 (2006).

297 *See* Hemphill, *supra* note 214, at 1553.

amount of challenges: bounties,[298] fee shifting,[299] and defensive cost-sharing.[300] But there is another solution: broader standing.[301] The challenges of collective and collusive action described above are most severe with respect to competitors. Because the current standing rules largely permit suit only by that class of challengers, there is a mismatch between the optimal incentives to challenge patents and the justiciability rules governing who can bring such suits.

The standing principles described in Part III would authorize suit by a variety of persons who face different incentives to challenge patents but who are currently precluded from doing so. These persons include potential competitors, indirect competitors, and those who respond to nonpecuniary incentives.[302] Begin with potential competitors. There are reasons to believe that potential competitors may be in a position to overcome the collective action problem described above. Their cost-benefit calculus tends to focus more on investments over time than on present competitive positioning. The relevant question for a potential competitor is whether the costs of challenging a patent exceed the risk-adjusted costs of potential holdup by that patent after several years of costly investments. It may then be rational to bear the full cost of litigation if it either saves the company from potential losses due to holdup or clears the way for investments over time. The fact that others may free ride upon such efforts does not enter that calculus. Free riding may be of less importance to potential competitors for another reason. These competitors usually play in nascent or underdeveloped markets where direct competition does not yet exist. While it is true that their efforts to challenge patents may benefit others who are developing the nascent market,[303] that

298 *See* Miller, *supra* note 291, at 704–11; Thomas, *supra* note 291, at 340–42.

299 *See* Kesan, *supra* note 291, at 795–97.

300 *See* Lemley & Shapiro, *supra* note 76, at 89–90.

301 The analyses above were all made during the time when the "reasonable apprehension of suit" test defined the limits of declaratory judgment jurisdiction and appear to assume this restrictive test for standing as the baseline for determining who can bring suit. *See, e.g.*, Farrell & Merges, *supra* note 291, at 946–47. Lemley & Shapiro do suggest "encourag[ing] public interest organizations to challenge suspect patents," *supra* note 76, at 90, but do not link the feasibility of this suggestion to standing rules.

302 *See supra* Part III.C.

303 Abramowicz and Duffy have argued that there may be underproduction of new markets when competitors can appropriate the information generated by the first experimenter. *See* Michael Abramowicz & John F. Duffy, *Intellectual Property for Market Experimentation*, 83 N.Y.U. L. REV. 337, 367–369 (2008). In previous work, I have disputed that intellectual property is necessary to solve that production problem. *See* Michael J. Burstein, *Exchanging Information Without Intellectual Property*, 91 TEX. L. REV. 227, 240 (2012).

benefit does not represent a direct and presently existing competitive threat in the absence of well-defined products and markets.

Indirect competitors similarly may be less sensitive to free riding. These are entities that do not compete in the same market as the patentholder and therefore are unlikely themselves to be infringers.[304] Instead, they typically compete "upstream" as suppliers to direct infringers. That business model usually involves either licensing technology or facilitating the use of patented technology by others.[305] Their revenues are dependent not upon their own exploitation of patented technology, but on the widespread exploitation of that technology *by others*.[306] They should therefore be relatively indifferent to—and indeed, supportive of—widespread adoption of the patented technology should they be successful in their suit. Indeed, collusion with the patent holder to limit the spread of the technology is unlikely to be in their interest.

Finally, there is a class of plaintiffs whose incentives to bring suit are not limited to pecuniary interests. Among this class are public interest groups like the Public Patent Foundation or the Electronic Frontier Foundation and the test plaintiffs they recruit such as nonprofit or academic researchers or technologists. Academic researchers, for example, may be motivated by a desire to spread the benefits of scientific research more widely and this motivation may trump financial motivations to exploit the technology for monetary gain.[307] Because these plaintiffs see it as part of their mission to encourage widespread dissemination of technology, they are willing to expend the funds and share the benefits broadly. Indeed, to these plaintiffs, free riding is a feature rather than a bug.

Of course, patent challenges *do* happen even under existing rules, and potential challengers do have *some* incentive to bring suit, though perhaps with less frequency than optimal.[308] But even where the in-

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304 *Cf.* Matthews Int'l Corp. v. Biosafe Eng'g, LLC, 695 F.3d 1322, 1328–31 (Fed. Cir. 2012) (holding that indirect competitor lacked standing).

305 *See id.* at 1330.

306 *See id.*

307 *See, e.g.*, Arti Kaur Rai, *Regulating Scientific Research: Intellectual Property Rights and the Norms of Science*, 94 Nw. U. L. REV. 77, 88–94 (1999) (describing traditional norms of sharing in scientific communities). This view is necessarily a simplification. *See, e.g.*, Peter Lee, *Patents and the University*, 63 DUKE L.J. 1, 35–38 (2013). I do not mean to argue that *all* academics experience these incentives, but rather that enough do that a legal change granting broader standing would likely result in more challenges brought by those who have incentive to do so.

308 *See* Lemley & Shapiro, *supra* note 76, at 89 (concluding that the incentive to challenge invalid IP depends on a myriad of fact-specific circumstances).

centive exists to challenge patents, there is a further under-explored problem. The precise nature of the challenge will of course depend on the challenger's interests. Competitors' interests may again diverge from the social optimum. There are a number of different ways to contest the validity of any given patent. Some are specific to the patent itself. A claim that the patent fails the requirements of novelty and nonobviousness usually has this structure. It is a claim based on specific facts about whether the subject matter claimed in the patent existed in the world prior to invention or application or whether the subject matter of the patent would have been obvious to a person having ordinary skill in the art. But other defenses operate more categorically. A claim that a patent falls outside of eligible subject matter, for example, purports to exclude from patentability certain content altogether. Take the example of human gene patents. A patent-specific claim of invalidity, say, that the patent is not novel, is a claim that someone else had previously discovered the particular gene.[309] By contrast, an argument that the patent does not claim eligible subject matter is an argument that genes are not patentable.[310] That latter argument affects far more than the single patent; it potentially has the effect of invalidating a large number of issued patents.[311]

Now consider who has an incentive to bring a particular kind of challenge. Competitors are likely to bring only patent-specific challenges. Any challenge that sweeps more broadly likely impacts their intellectual property as well. So a competitor challenging a gene patent will argue that *that patent* is invalid, but not that genes as a category are unpatentable. If he owns similar patents, then that latter argument will redound to his detriment.[312] This phenomenon may explain why the question whether genes constitute patentable subject matter remained unresolved for almost thirty years after the PTO began issuing such patents.[313] The current standing rules, by limiting standing for the most part to competitors, distort the development of

309 *See* 35 U.S.C. § 102(a) (2012). I am over-simplifying here. The more specific argument is that the subject matter of the claim existed in the prior art at the date of application.

310 *See id.* § 101; Ass'n for Molecular Pathology v. USPTO, 689 F.3d 1303 (Fed. Cir. 2012), *aff'd in part, rev'd in part sub nom.* Ass'n for Molecular Pathology v. Myriad Genetics, Inc., 133 S. Ct. 2107 (2013).

311 *See Ass'n for Molecular Pathology*, 689 F.3d at 1347–48 (Moore, J., concurring in part).

312 *See* Parchomovsky & Stein, *supra* note 293, at 1512–14 (noting that class and general defenses may suffer from underproduction relative to individualized defenses because they are accompanied by significant spillovers).

313 *See Ass'n for Molecular Pathology*, 689 F.3d at 1343–44 (Moore, J., concurring in part). The Supreme Court resolved the issue on appeal—it held that genes were not patentable. *Myriad*, 133 S. Ct. 2107 at 2117.

the substantive law of patents. By limiting standing to a particular class of plaintiffs, they encourage challenges based on arguments that are in those plaintiffs' interests, rather than based on the full spectrum of validity issues that any given patent may present.

Broader standing along the lines described in this article could help solve that more specific under-production problem. Just as those plaintiffs other than direct competitors may have more incentive to bring patent challenges in the first place, so too may they have incentive to bring a wider *range* of challenges. Potential and indirect competitors often operate in markets adjacent to the intellectual property they are challenging. They are therefore less likely to shy away from broader challenges to that intellectual property. Similarly, those motivated by nonpecuniary concerns are likely to be relatively uninhibited in the scope of challenges that they bring.

C. *Mitigating the Potential Costs of Expanded Standing*

Of course, broader standing is not costless. It encourages more litigation. The costs of that litigation will be borne primarily by patent holders who need to defend against cases that they otherwise could avoid. This section briefly explains why those increased costs likely do not outweigh the benefits described above.

Broader standing increases the possibility that a patent holder may have to incur costs to defend her patent in an administrative action or a lawsuit. One objection to broader standing, then, is that a patent holder should not have to bear such costs. There are two ways to conceptualize this objection. The first is to argue that once a patent has issued, a patent holder that chooses not to enforce it for whatever reason should not be compelled to defend it in court. This formulation of the objection, however, assumes that unenforced intellectual property is harmless. As described above, that assumption is not justified.[314] It also reflects a view that patent holders should be left alone once their IP has issued. But patents are only *presumed* to be valid when they issue. They are not actually valid until they are tested in court.[315] And Congress, by providing for administrative review *after* grant, has at least indicated that patent owners must be prepared to defend their exclusive rights upon application by a third party.[316] There is no reason why the expectation should be any different with

314 *See supra* Part II.

315 *See supra* note 4.

316 *See* 35 U.S.C. §§ 311(a)–(b), 321(a)–(b) (2012).

respect to actions brought initially or subsequently to administrative review in the federal courts.

A different formulation of the objection posits that patent applicants will have to factor the possibility of incurring post-grant litigation costs into their decision whether to obtain the IP in the first instance. Broader standing in this view makes it more expensive on average to obtain a grant of exclusive rights.[317] It is far from clear, however, that increasing the expense of intellectual property results in a social welfare loss. At the margin, it is likely to result in fewer issued patents. But as David Fagundes and Jonathan Masur write, the costly nature of the patent acquisition process is a "classic costly screen."[318] The cost of acquisition "forc[es] actors who seek to acquire legal rights to consider whether acquisition of the right will be worth the cost of doing so."[319] With respect to patents, there is reason to believe that the effect of the costly screen is to deter the production of low private value rights that also have low social value.[320] The argument is that because the PTO employs only a rough screen, as described above,[321] it is highly likely that patents of low social value will issue—that is, patents whose mere existence imposes costs but whose issuance is unaccompanied by a significant social benefit because they are invalid. Imposing a cost deters applicants whose private valuation of the patent does not meet the cost threshold. It is then highly likely that patents of low private value also have low social value, so this cost is socially beneficial.

It is of course difficult to determine the optimal cost of the screen, and therefore difficult to say with certainty that increasing the cost of obtaining a patent by making it more likely the holder will have to defend that patent in a subsequent proceeding will confer a social benefit. But there is reason to believe it is so. Consider, for example, that the cost of patenting has remained roughly similar for the last several years even as the volume of patent applications has skyrocketed.[322] Meanwhile, the problems associated with low social

317 Justice Harlan, concurring in *Walker Process Equipment, Inc. v. Food Machinery & Chemical Corp.*, 382 U.S. 172 (1965), expressed concern that validity challenges might "chill" patenting activity. *Id.* at 180 (Harlan, J., concurring). That case, however, involved the threat of treble damages in an antitrust suit. Suits or administrative actions seeking a declaration of invalidity do not subject patent holders to such damages.

318 David Fagundes & Jonathan S. Masur, *Costly Intellectual Property*, 65 VAND. L. REV. 677, 680 (2012).

319 *Id.* at 679–80.

320 *See id.* at 696–700.

321 *See supra* notes 252–54 and accompanying text.

322 *See* U.S. PATENT & TRADEMARK OFFICE, *supra* note 1, at 189 tbl.2 (total patent applica-

value patents, like patent trolls in the software and telecom industries, have gained increasing public salience.[323] This suggests that additional deterrence may be socially valuable.

Aside from imposing costs on patent holders, which may do more good than harm, there is a different and more concerning problem that arises from the operation of *Blonder-Tongue*'s preclusion rule. Recall that *Blonder-Tongue* gives judgments of invalidity preclusive effect in subsequent litigation between different parties.[324] It does *not* extend that preclusion, however, to judgments of *validity*.[325] This asymmetry means that a patent holder must defend against every claim of invalidity. If she loses only once, her patent is invalid. But challengers can bring actions repeatedly. This rule therefore presents a real threat of vexatious or harassing litigation. Broader standing may increase this risk to patent holders.

There are several mechanisms, however, that can help to mitigate this risk. One is simply the cost of litigation. Patent challenges are expensive for both plaintiffs and defendants. Plaintiffs in such cases can obtain a declaration that the patent in question is invalid or not infringed, but cannot collect damages or attorneys' fees. The nuisance value of such suits is therefore limited.[326] For the most part, we can expect such suits to be legitimate because plaintiffs will not be incentivized to bring the suit for a reason other than actual invalidation of the intellectual property.

But suppose that cost is no issue. Say that a large corporation decides to set up a $1 billion fund to attack any and all software patents that it can find. Again, as to meritorious suits, there are reasons to think that the cost to patent holders is justified, as described above. Repeated or harassing litigation enabled by this structure, however, represents a real danger. I offer both a set of modest solutions based

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tions filed more than doubled between 1999 and 2013); Fagundes & Masur, *supra* note 318, at 689–90 & nn.38–39.

323 *See supra* note 2.

324 *See* Blonder-Tongue Labs., Inc. v. Univ. of Ill. Found., 402 U.S. 313, 333–34 (1971).

325 *See* 6A DONALD S. CHISUM, CHISUM ON PATENTS § 19.02[2][e], at 19–112 (2013). The same is true of judgments of noninfringement in cases that pose different fact-specific questions among the various potential plaintiffs.

326 One potential exception may be in the context of licensing negotiations, where a credible threat to initiate invalidity proceedings could give a potential licensee significant leverage. *See* Dreyfuss & Pope, *supra* note 284, at 984–91; SanDisk Corp. v. STMicroelectronics, Inc., 480 F.3d 1372, 1383–85 (Fed. Cir. 2007) (Bryson, J., concurring in the result). One solution to this problem, which Dreyfuss & Pope advocate, is reconsideration of the doctrine of licensee estoppel. *See* Dreyfuss & Pope, *supra* note 284, at 1006. This is a more tailored solution to a particular problem of incentives to innovate than is a blanket restriction on standing.

on the application of existing preclusion law and discretionary limits on jurisdiction and a more radical solution to redirect validity litigation away from patent holders and toward the government.

Ordinary preclusion principles are likely to prevent repeated litigation. Although *Blonder-Tongue* establishes an asymmetry between findings of validity and invalidity as a matter of *issue preclusion*, principles of *claim preclusion* continue to bar subsequent suits by the same parties.[327] A challenger who is unsuccessful in asserting a claim of invalidity cannot simply assert the same claim against the same patent holder in a different forum, even if the precise grounds for challenge are different or there has been an intervening change of law in between the suits.[328] It is also worth noting in this context that Congress has designed post-grant review proceedings with these principles in mind.[329]

Claim preclusion does not, of course, bind different parties. A subsequent challenger can still bring a substantially identical suit, forcing the patent holder to litigate multiple proceedings. A solution to this problem might be to soften or eliminate the asymmetry that *Blonder-Tongue* creates. Many courts have recognized the potential unfairness to patent holders that results from having to relitigate "wins" but not "losses" and therefore grant some weight to previous judgments of validity under principles of comity.[330] The danger in extending full preclusive effect to judgments of validity is that it may not be the case that a single plaintiff has an interest in bringing every possible challenge to a particular patent.[331] So a finding in one litigation that a patent is valid likely should not bar subsequent challenges on different grounds *by different parties* who could not litigate *their* claims in the first action. A useful middle ground would be to grant issue preclusive effect in subsequent cases that raise the same grounds for or turn on the same evidence of invalidity as a previous case.

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327 *See* Roche Palo Alto LLC v. Apotex, Inc., 531 F.3d 1372, 1379 (Fed. Cir. 2008) ("[C]laim preclusion applies where: '(1) the same parties, or their privies, were involved in the prior litigation, (2) the prior litigation involved the same claim or cause of action as the later suit, and (3) the prior litigation was terminated by a final judgment on the merits." (quoting Cent. Delta Water Agency v. United States, 306 F.3d 938, 952 (9th Cir. 2002))).

328 *See id.* at 1380–81 (holding that subsequent counterclaim of invalidity was barred by claim preclusion where parties litigated previous claim arising out of same operative facts).

329 Under the new procedures in the America Invents Act, for example, a petitioner before the agency may not bring a subsequent petition for review "on any ground that the petitioner raised or reasonably could have raised during that post-grant review." 35 U.S.C. § 325(e)(1) (2012). That principle applies as well to subsequent actions brought in court. *See id.* § 325(e)(2).

330 *See* 6A CHISUM, *supra* note 325, § 19.02[2][e], at 19-112–19 (collecting cases).

331 *See supra* note 308 and accompanying text.

The courts also have a variety of discretionary mechanisms that they can use to screen out cases that appear to be particularly vexatious. The ripeness doctrine, for example, provides courts with a means to delay adjudication until particular issues become more focused between the parties, and could be used in this context to screen out particularly attenuated claims of injury that nonetheless meet the Article III and prudential standing bars described above. The federal courts also have broad discretion under the Declaratory Judgment Act to decline to hear a suit seeking declaratory relief.[332] These prudential or discretionary mechanisms are flexible. They operate for the most part on a case-by-case basis. They allow courts, therefore, selectively to deny access to the court for a variety of reasons without erecting a firm doctrinal barrier. Judicious application of these doctrines can likely prevent abuses by validity challengers while at the same time allowing for the benefits of broad standing described above.

A more radical solution to the problem of vexatious litigation against patent holders would be to redirect validity litigation away from private parties and toward the government. In a sense the existing administrative review procedures are an attempt to encourage this. In those procedures, the PTO is the defendant and incurs the litigation cost. The AIA procedures even go so far as to preclude a petitioner electing administrative review from bringing the same claims against a private party in court.[333] But the Federal Circuit has been reluctant to apply ordinary principles of administrative review to patent challenges.[334] It may be time to reconsider that position. To the extent that a patent challenge is fundamentally an argument that the PTO acted wrongly when it issued the patent, the agency is the more natural defendant. The PTO can defend its ruling according to ordinary principles of administrative review; the patent holder can intervene if necessary to develop additional facts. Symmetry between infringement litigation and challenger-initiated validity litigation could be achieved through mandatory joinder of the PTO or the use of something akin to a primary jurisdiction referral to give the PTO

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332 *See* MedImmune, Inc. v. Genentech, Inc., 549 U.S. 118, 136 (2007) ("The Declaratory Judgment Act provides that a court '*may* declare the rights and other legal relations of any interested party,' not that it *must* do so." (citation omitted) (quoting 28 U.S.C. § 2201(a))).

333 *See* 35 U.S.C. § 325(a)(2) (providing for automatic stay of subsequently-filed civil action); *id.* § 325(e)(2) (precluding subsequent civil suits for same claim of invalidity).

334 *See, e.g.*, Pregis Corp. v. Kappos, 700 F.3d 1348, 1357–61 (Fed. Cir. 2012) (holding that review of PTO validity determinations under the Administrative Procedure Act is precluded by the Patent Act).

the first opportunity to defend its action.[335] Putting the burden of validity defense on the agency that issues the intellectual property also can help solve a particular asymmetry in the law that encourages patent grants rather than denials. Because the PTO currently receives greater scrutiny for its denials than its grants, it is incentivized to grant more and to take an expansive view of the law.[336] Requiring administrative defense of patent validity may simultaneously relieve this problem and reduce the burden on patent holders described above.

CONCLUSION

"Patent standing" is just standing. There is no justification for treating patent standing differently from any other justiciability problem. And the application of traditional standing principles to patent challenges yields a broader concept of standing than the courts addressing the issue currently contemplate. The injury in such cases is the risk and uncertainty that patents create for others working in the same field. When those other market participants are deterred from engaging in innovative activity—when they rationally choose to forego making costly investments before resolving the uncertainty—they have standing to bring what amounts to a quiet title action. They can clear the field of the adverse patent *before* making those investments. And this result is consistent with sound policy—it supports the innovation-promoting goals of the patent laws while avoiding the ills that standing doctrine is supposed to prevent. Broader standing should help to rein in some of the abuses of the patent system that have become increasingly prevalent in recent years. It will contribute to more meaningful public participation in developing patent policy. And it will help to ensure that patents serve not just private interests but those of the public more broadly.

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335 *See* John F. Duffy, *On Improving the Legal Process of Claim Interpretation: Administrative Alternatives*, 2 WASH. U. J.L. & POL'Y 109, 136–48 (2000) (arguing for use of primary jurisdiction referrals from courts to the agency in patent cases).

336 *See* Jonathan Masur, *Patent Inflation*, 121 YALE L.J. 470, 503 (2011); Melissa F. Wasserman, *The PTO's Asymmetric Incentives: Pressure to Expand Substantive Patent Law*, 72 OHIO ST. L.J. 379, 401 (2011).