

EXTRATERRITORIALITY IN U.S. PATENT LAW

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ABSTRACT

Globalization has eroded traditional territorial limits on intellectual property laws. Although this pressure was first seen in trademark and copyright law, recent court decisions have demonstrated that the territorial lines of U.S. patents are also under assault. Indeed, the Supreme Court recently considered extraterritoriality in U.S. patent law in its 2007 decision in Microsoft Corp. v. AT&T Corp., discussed thoroughly in this Article. Courts and commentators have offered two primary approaches to deal with the issue of the extraterritorial reach of U.S. patents. First, many courts, including the Supreme Court, continue to adhere to a strict view of a patent's territorial limits, affording protection only within the United States. This approach is overly broad in that it precludes effective protection for patent holders even when the usual concerns surrounding extraterritoriality are not present. Second, other courts and commentators would adopt far-sweeping, effects-based tests, in which any effect on the U.S. market is a basis to permit the patent to cover acts occurring outside the United States. Such approaches,

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however, fail to explicitly consider foreign law and risk creating conflicts with foreign jurisdictions.

This Article rejects both approaches and articulates a novel approach that would require courts to explicitly consider foreign law in assessing whether to enforce a patent extraterritorially. In essence, to infringe the U.S. patent, the patentholder would have to prove that the infringer would also infringe under the laws of the foreign country. If there would be some sort of conflict with foreign law, then the patent cannot be enforced. This balanced approach requires courts to address potential conflicts of law and comity concerns transparently, which fosters greater understanding of foreign patent law and hopefully facilitates international patent law norms that may help harmonize national patent laws through this informal mechanism.

TABLE OF CONTENTS

| | |
|---|------|
| INTRODUCTION | 2123 |
| I. VARYING APPROACHES TO QUESTIONS OF TERRITORIALITY | 2129 |
| A. <i>A Strict Territorial Approach to Patent Infringement</i> | 2129 |
| 1. <i>The Supreme Court’s Strict Adherence to Territorial Limits for Patents</i> | 2130 |
| 2. <i>The Federal Circuit’s Occasional Strict Territorial Approach</i> | 2136 |
| a. <i>Limiting the Extraterritorial Reach of Injunctive Relief</i> | 2137 |
| b. <i>Section 271(g) Liability for Importing Products of Patented Processes</i> | 2139 |
| 3. <i>The Advantages and Disadvantages of Drawing Strict Territorial Lines for Patent Infringement</i> | 2142 |
| B. <i>Affording Extraterritorial Reach to U.S. Patents</i> | 2144 |
| 1. <i>Federal Circuit Case Law Evincing Broader Extraterritorial Protection</i> | 2145 |
| a. <i>Injunctions Reaching Outside of the United States</i> | 2145 |
| b. <i>Federal Circuit’s Expansive Interpretation of § 271(f)</i> | 2146 |
| c. <i>Expanding § 271(g)’s Liability for Importing the Product of a Patented Process</i> | 2148 |
| d. <i>Section 271(a)—Finding Infringement “Within the United States” Even If Some Acts Occur Outside of the United States</i> | 2150 |
| 2. <i>Effects-based Approaches—Does the Conduct Affect the United States?</i> | 2154 |
| 3. <i>The Advantages and Disadvantages of Effects-based Approaches</i> | 2157 |
| C. <i>Neither Strict Territoriality Nor Effects-based Tests Are Satisfactory</i> | 2162 |
| II. A NEW APPROACH—EXPRESSLY CONSIDERING FOREIGN PATENT LAW | 2163 |
| A. <i>Is There Some Nexus to the United States?</i> | 2170 |
| B. <i>Ignoring Territorial Lines, Would the U.S. Patent Be Infringed?</i> | 2171 |

| | |
|---|------|
| <i>C. Does the U.S. Patentee Have a Patent in the Relevant Country?</i> | 2172 |
| 1. <i>The Patentee Has Patents in All Relevant Countries</i> | 2172 |
| 2. <i>The Patentee Does Not Have Patents in All Relevant Countries</i> | 2175 |
| a. <i>U.S. Patent Holder Does Not Have Patent Because Someone Else Does</i> | 2176 |
| b. <i>U.S. Patent Holder Tried and Failed To Procure Patent Protection in the Countries in Question</i> | 2177 |
| c. <i>Patent Holder Simply Does Not Have a Patent, Nor Does Anyone Else</i> | 2178 |
| 3. <i>The Problem of Rogue Countries</i> | 2182 |
| <i>D. Would the Infringer's Activities Infringe in the Foreign Country?</i> | 2183 |
| III. IS THE COMPARATIVE METHOD DESIRABLE? | |
| THE PROS AND CONS | 2185 |
| A. <i>The Advantages of the Proposed Methodology</i> | 2185 |
| 1. <i>The Comparative Approach Minimizes Conflicts of Law</i> | 2185 |
| 2. <i>Consideration of Foreign Law Can Create Dialogue and Help Develop International Norms of Patent Law</i> | 2186 |
| B. <i>Problems with the Comparative Approach</i> | 2188 |
| 1. <i>Are Courts Institutionally Competent To Address These Issues?</i> | 2188 |
| 2. <i>Reduction in Ex Ante Certainty and Predictability</i> .. | 2189 |
| 3. <i>The Loss of Legal Diversity</i> | 2190 |
| CONCLUSION | 2191 |

INTRODUCTION

The world is truly a smaller place. Markets are increasingly global in nature, with goods and services crossing borders routinely. Such a shift is in stark contrast to intellectual property rights, which are still national in nature: a patent, copyright, or trademark only affords the owner the right to exclude within a given country's borders.¹ This divergence between markets and property rights can create difficulties for companies seeking to protect such intangible assets.² Differing national intellectual property laws raise transaction costs in navigating international business transactions because the rights afforded may differ from country to country. Businesses must anticipate the varying levels of protection and attempt to maximize their opportunities on a country-by-country basis. The ascendance of the Internet as a medium for business transactions, coupled with technology that has digitized many works, has placed considerable stress on the copyright and trademark regimes, resulting in considerable debate about the best way to deal with territoriality issues.³

1. Some regional patent arrangements provide supranational procedures for obtaining patents, such as the European Patent Convention, OAPI and ARIPO (both in Africa), and the Eurasian Patent Convention. See Tshimanga Kongolo, *The African Intellectual Property Organizations: The Necessity of Adopting One Uniform System for All Africa*, 3 J. WORLD INTEL. PROP. 265, 270 (2000) (discussing francophone Organisation Africaine de la Propriété Intellectuelle (OAPI) and anglophone African Regional Industrial Property Organization (ARIPO)); John Richards, *Recent Patent Law Developments in Asia*, 7 FORDHAM INTEL. PROP. MEDIA & ENT. L.J. 599, 605-08 (1997) (describing the standard for patentability under the Eurasian Convention as novelty and industrial applicability). These procedures still result in national patents. See, e.g., European Patent Convention pt. 2, ch. iii, art. 64, Oct. 5, 1973, 1065 U.N.T.S. 274 (noting grant of national-level rights); Protocol on Patents and Industrial Designs Within the Framework of the African Regional Industrial Property Organization (ARIPO) § 3, Dec. 10, 1982, available at http://www.wipo.int/clea/docs_new/en/zz/zz004en.html [hereinafter Harare Protocol]; Kongolo, *supra*, at 270; Richards, *supra*, at 608 n.37 (describing the Convention on the Grant of European Patents).

2. See, e.g., Greg Hitt, *Patent System's Revamp Hits Wall*, WALL ST. J., Aug. 27, 2007, at A3 ("The spillover of [globalization] worries into the patent debate 'shows the breadth of concerns about this model of globalization'").

3. See, e.g., Graeme B. Dinwoodie, *A New Copyright Order: Why National Courts Should Create Global Norms*, 149 U. PA. L. REV. 469, 477-89 (2000); Rochelle Dreyfuss, *The ALI Principles on Transnational Intellectual Property Disputes: Why Invite Conflicts?*, 30 BROOK. J. INT'L L. 819, 823-25 (2005); Rochelle C. Dreyfuss & Jane C. Ginsburg, *Draft Convention on*

In contrast to copyright and trademark law, many commentators viewed patent law as the most territorially based form of intellectual property because most inventions were tangible in nature and because patents are subject to extensive review by a national government prior to the patent rights being granted.⁴ The expansion of subject matter to cover intangible inventions, such as business methods and software,⁵ has begun to place pressure on these historical territorial limits in patent law. Recent cases confirm that patent law is now beginning to buckle under the pressure.⁶ Moreover, numerous commentators have noted this pressing issue within the court system,⁷ although none have offered a satisfying solution

Jurisdiction and Recognition of Judgments in Intellectual Property Matters, 77 CHI.-KENT L. REV. 1065, 1066-67 (2002). See generally Andrew T. Guzman, *Choice of Law: New Foundations*, 90 GEO. L.J. 883, 884 (2002).

4. See Donald S. Chisum, *Normative and Empirical Territoriality in Intellectual Property: Lessons from Patent Law*, 37 VA. J. INT'L L. 603, 604 (1997) ("The territorial scope of patent and other intellectual property laws is no longer a problem at the periphery of intellectual property policy deliberations."); Timothy R. Holbrook, *Territoriality Waning? Patent Infringement for Offering in the United States To Sell an Invention Abroad*, 37 U.C. DAVIS L. REV. 701, 704-05 (2004) [hereinafter Holbrook, *Territoriality*]; John R. Thomas, *Litigation Beyond the Technological Frontier: Comparative Approaches to Multinational Patent Enforcement*, 27 LAW & POLY INT'L BUS. 277, 278 (1996).

5. See, e.g., *Eolas Techs. Inc. v. Microsoft Corp.*, 399 F.3d 1325, 1338-41 (Fed. Cir. 2005) (finding software components on golden master discs to be protectable under 35 U.S.C. § 271(f)); *State St. Bank & Trust Co. v. Signature Fin. Group, Inc.*, 149 F.3d 1368, 1377 (Fed. Cir. 1998) (granting protection for business methods). But see *In re Comiskey*, 499 F.3d 1365, 1379 (Fed. Cir. 2007) (holding arbitration method not appropriate subject matter under 35 U.S.C. § 101).

6. See, e.g., *NTP, Inc. v. Research in Motion, Ltd. (NTP II)*, 418 F.3d 1282 (Fed. Cir. 2005); *AT&T Corp. v. Microsoft Corp.*, 414 F.3d 1366 (Fed. Cir. 2005), *rev'd*, 127 S. Ct. 1746 (2007).

7. See, e.g., Graeme W. Austin, *Importing Kazaa—Exporting Grokster*, 22 SANTA CLARA COMPUTER & HIGH TECH. L.J. 577, 600-01 (2006); Dan L. Burk & Mark A. Lemley, *Inherency*, 47 WM. & MARY L. REV. 371, 410 n.181 (2005); Yar Chaikovsky & Adrian Percer, *Globalization, Technology Without Boundaries & the Scope of U.S. Patent Law*, 9 U.S.F. INTELL. PROP. L. BULL. 95, 95 (2005); Christopher Cotropia, *Observations on Recent Patent Decisions: The Year in Review*, 88 J. PAT. & TRADEMARK OFF. SOC'Y 46, 68 (2006); Denise W. DeFranco & Adrienne N. Smith, *Technology and the Global Economy: Progress Challenges the Federal Circuit To Define the Extraterritorial Scope of U.S. Patent Law*, 34 AIPLA Q.J. 373, 374 (2006); Alan M. Fisch & Brent H. Allen, *The Application of Domestic Patent Law to Exported Software: 35 U.S.C. § 271(f)*, 25 U. PA. J. INT'L ECON. L. 557, 584-89 (2004); Eric W. Gutttag, *When Offshore Activities Become Infringing: Applying § 271 to Technologies that "Straddle" Territorial Borders*, 14 RICH. J.L. & TECH. 1 (2007); Holbrook, *Territoriality*, *supra* note 4, at 705-06; Dariush Keyhani, *U.S. Patent Law and Extraterritorial Reach*, 7 TUL. J. TECH. & INTELL. PROP. 51, 52 (2005); Andrew F. Knight, *Software, Components, and Bad*

to the erosion of territorial lines. Patented inventions now routinely transcend national borders, which places patent owners in the difficult position of protecting these assets.

One approach to dealing with this problem is to harmonize intellectual property laws so that they are generally uniform from country to country. This uniformity reduces the cost of evaluating the varying laws of the relevant countries. In fact, many efforts have been made to harmonize international intellectual property rights, although most resulting agreements have set floors of protection instead of equivalent levels of protection.⁸ Even if all of the rights are the same, however, enforcing the rights would require litigation in each and every country where there is infringement. Such piecemeal litigation is a costly endeavor.⁹ Moreover, it may be subject to

Logic: Recent Interpretations of Section 271(f), 87 J. PAT. & TRADEMARK OFF. SOC'Y 493, 493 (2005); Mark A. Lemley et al., *Divided Infringement Claims*, 33 AIPLA Q.J. 255, 263 (2005); John W. Osborne, *A Rational Analytical Boundary for Determination of Infringement by Extraterritorially-Distributed Systems*, 46 IDEA 587, 588 (2006); Barry Sookman, *Extra-Territorial Application of Patent Law: A First Look at the NTP v. RIM Litigation*, 18 INTELL. PROP. J. 453, 453 (2005); William R. Thornewell II, *Patent Infringement Prevention and the Advancement of Technology: Application of 35 U.S.C. § 271(f) to Software and "Virtual Components"*, 73 FORDHAM L. REV. 2815, 2815-16 (2005); Daniel P. Homiller, Note, *From DeepSouth to the Great White North: The Extraterritorial Reach of United States Patent Law After Research in Motion*, 2005 DUKE L. & TECH. REV. 17; Elizabeth M.N. Morris, Comment, *Territorial Impact Factors: An Argument for Determining Patent Infringement Based Upon Impact on the U.S. Market*, 22 SANTA CLARA COMPUTER & HIGH TECH. L.J. 351, 351-53 (2006); Bridget A. O'Leary Smith, Note, *NTP, Inc. v. Research in Motion, Ltd.: Losing Control and Finding the Locus of Infringing Use*, 46 JURIMETRICS 437, 438 (2006); Tyler J. Overall, Note, *Physical Supply of Intangible Components: Misapplication of § 271(f) Haunts Microsoft*, 16 FED. CIR. B.J. 219, 220-21 (2006); Steven C. Tietsworth, Comment, *Exporting Software Components—Finding a Role for Software in 35 U.S.C. § 271(f) Extraterritorial Patent Infringement*, 42 SAN DIEGO L. REV. 405, 408 (2005); Virginia Zaunbrecher, Note, *Eolas, AT&T, & Union Carbide: The New Extraterritoriality of U.S. Patent Law*, 21 BERKELEY TECH. L.J. 33, 33-34 (2006). Professor Dan Burk was quite prescient in his description of these potential territoriality issues. See Dan L. Burk, *Patents in Cyberspace: Territoriality and Infringement on Global Computer Networks*, 68 TUL. L. REV. 1, 5-6 (1993) [hereinafter Burk, *Cyberspace*]; Dan L. Burk, *Transborder Intellectual Property Issues on the Electronic Frontier*, 6 STAN. L. & POL'Y REV. 9, 11-12 (1994) [hereinafter Burk, *Transborder*].

8. See, e.g., Agreement on Trade-Related Aspects of Intellectual Property Rights art. 3, Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1C, Legal Instruments—Results of the Uruguay Round, 1869 U.N.T.S. 299, 33 I.L.M. 1197 (1994) [hereinafter TRIPS]. See generally Timothy R. Holbrook, *The Treaty Power and the Patent Clause: Are There Limits on the United States' Ability To Harmonize?*, 22 CARDOZO ARTS & ENT. L.J. 1, 1-3 (2004) [hereinafter Holbrook, *Treaty Power*].

9. Cf. Dinwoodie, *supra* note 3, at 534-35 ("The economic premises underlying the

failure because the patent holder must anticipate the markets in which infringing activity may arise. Once the patents have issued in one country, it is generally impossible to seek later patent protection. Thus, if the patentee guesses wrong—and someone begins to infringe in a country where she failed to seek protection—she will be unable to enforce the patent.

Intellectual property rights holders theoretically could bring claims for infringement of foreign patents within a single country's courts. For example, a U.S. patent holder could sue not only for infringement of the U.S. patent but also for infringement of a Japanese patent. The entire case would be litigated in the U.S. court. This approach would eliminate the need for litigation in every country where IP rights are held. Unfortunately, at least with respect to patents, the Federal Circuit has closed this door, holding that it is an abuse of discretion for district courts to hear claims for infringement of foreign patents.¹⁰

A third way of dealing with these problems is to provide extraterritorial reach to domestic intellectual property rights.¹¹ If domestic rights can reach activity outside of a given state, then the rights holder can coordinate activities through the use of fewer domestic rights, as opposed to assembling a portfolio of national rights from a variety of countries. Of course, the extraterritorial application of nationally based rights is strongly disfavored and risks interfering with the sovereignty of the other country into whose territory the rights holder is reaching. Patent laws vary from country to country,

international copyright conventions—namely, creation and exploitation of copyrighted works nationally and, if internationally, serially on a country by country basis—have become detached from social and economic reality.”)

10. See *Voda v. Cordis Corp.*, 476 F.3d 887 (Fed. Cir. 2007) (holding that it is an abuse of discretion to exercise supplemental jurisdiction over foreign patent infringement claims). For a thorough discussion of the history of U.S. courts hearing—or not hearing—claims of infringement of foreign patents, see Kendra Robins, Note, *Extraterritorial Patent Enforcement and Multinational Patent Litigation: Proposed Guidelines for U.S. Courts*, 93 VA. L. REV. 1259, 1279-86 (2007). I believe that U.S. courts *should* be willing to hear foreign patent claims, although such a conclusion does not alter the need for a reassessment of the extraterritorial reach of U.S. patent.

11. Robins's proposal blends the use of multinational litigation and extraterritoriality. See Robins, *supra* note 10, at 1310-13. There is much to commend in this approach, although the extraterritorial component of her proposal causes some concern, as discussed *infra* in note 172.

and the use of a U.S. patent to regulate behaviors in another country can run afoul of policy differences in the affected country.

Until recently, Congress was the primary agent of change as it relates to the territorial nature of patent rights. The courts would strictly construe the territorial limits of U.S. patent rights,¹² and Congress would amend the Patent Act to deal with these perceived loopholes.¹³ But recent cases show that Congress is not acting expediently in closing new perceived loopholes that are arising in protection. In some cases, the courts have been willing to step up and extend the extraterritorial reach of U.S. patents in ways that are shockingly different from the reticence expressed in the past. These efforts often are made to avoid gaming of the system by parties aware of the territorial limits of the patent system, but even these judicial efforts may not eliminate all such gamesmanship.¹⁴ In other cases, however, the courts have limited patent rights strictly to cover activities only within the United States. As such, the current state of the law is unclear and lacks a firm theoretical foundation. The courts have failed to articulate a persuasive jurisprudence for assessing the extraterritorial reach of U.S. patent rights.

In light of these new pressures on domestic patent laws, the time has come to make a systemic reevaluation of the territorial nature of U.S. patent rights. Included within this assessment is whether Congress or the courts should be the agents of change and what type of steps should be taken, if any, to protect patent holders in the global marketplace. This Article presents a comprehensive analysis of this problem. It concludes that Congress does not have the dexterity to react to an ever-changing marketplace of new technologies, leaving the courts in the best position to address these concerns. Currently, however, the courts are not appropriately

12. *Deepsouth Packing Co. v. Laitram Corp.*, 406 U.S. 518, 527 (1972).

13. 35 U.S.C. § 271(f) (2000); *see Rotec Indus., Inc. v. Mitsubishi Corp.*, 215 F.3d 1246, 1252 n.2 (Fed. Cir. 2000) (acknowledging that § 271(f) overruled *Deepsouth* in part). Calling this a “loophole” of course reveals a normative bias that U.S. patents should cover these acts. One could view these “loopholes” as the proper functioning of a territorially based patent system.

14. *See Lemley et al., supra* note 7, at 266, 269, 271, 283 (showing examples of gaming the system).

balancing the variety of interests in these cases and instead are myopically focusing on strict statutory interpretation without considering the broader consequences of their decisions. This Article offers an approach to extraterritoriality in which courts would explicitly consider foreign patent laws to determine whether the enforcement of the U.S. patent would create a conflict with the foreign law. If there is no conflict, then generally the U.S. patent can be enforced against the infringer notwithstanding that some of the acts may be outside of the United States. A conflict with foreign law, however, would preclude the extraterritorial application of the U.S. patent.

Part I explores the two approaches to the extraterritoriality of U.S. patents currently discussed by the courts and commentators: either applying a strict territorial approach to U.S. law or using an effects-based analysis. Both of these approaches contain significant flaws that preclude their efficacy. Part II, therefore, articulates the new, conflicts-based approach. This section posits that courts should be willing to enforce U.S. patents extraterritorially, but only after carefully considering the interests of the implicated foreign countries. Patent laws and policies can vary from country to country, and these differences often are worthy of respect and deference. The Article offers a methodology for navigating these complicated issues in hopes of balancing the interests of U.S. patent holders and foreign countries. Part III then explores various possible disadvantages and potential objections to the comparative method, ultimately concluding that these concerns are unwarranted. Significantly, this proposal would afford broader protection to patent holders while respecting the variations in patent law that frequently arise amongst countries. Although some may question the institutional competence of courts to decide such issues, this Article will demonstrate that courts—with perhaps some assistance from the executive—sit in the best position to address these concerns. In an era of considerable debate about the patent system, the time has come to reconsider—and reform—the territoriality principle.

I. VARYING APPROACHES TO QUESTIONS OF TERRITORIALITY

Courts, Congress, and commentators have reacted to the increasing pressure to use national patent rights as a means to regulate foreign conduct in two primary ways. One approach is to apply a strict territorial rule: patent rights will be confined to the territorial United States, and any aspect of the invention that occurs outside the United States is outside the scope of the patent right. Until recently, this approach had been the norm; courts would apply U.S. law to extraterritorial activities only reluctantly. A second approach is to afford broad application of U.S. patent rights to activities occurring outside the United States that may impact the U.S. market in some way. Courts have used both of these approaches in different contexts. This Part will explore the strict territorial approach and the broader, effects-based approaches that are present in current patent law. Ultimately, neither of these approaches is satisfactory.

A. *A Strict Territorial Approach to Patent Infringement*

Although Congress undeniably has the authority to regulate acts outside the territorial limits of the United States, the courts generally have required a clear statement from Congress that it intended to exercise this authority. The reluctance to afford reach to domestic laws is rooted in a number of concerns: potential conflicts with another nation's laws, international comity, choice-of-law issues, congressional intent, and separation of powers.¹⁵ Although the Supreme Court has articulated a presumption against the extraterritorial application of U.S. laws, it is not consistently applied.¹⁶

In the context of patent law, Congress's clear statement generally has been to have strict territorial limits. The infringement provi-

15. Curtis A. Bradley, *Territorial Intellectual Property Rights in an Age of Globalism*, 37 VA. J. INT'L L. 505, 513-16 (1997).

16. *Microsoft Corp. v. AT&T Corp.*, 127 S. Ct. 1746, 1758 (2007); *EEOC v. Arabian Am. Oil Co.*, 499 U.S. 244, 248 (1991).

sions of the Patent Act contain such limits stated expressly within them: these provisions apply only to acts within the United States. Specifically, 35 U.S.C. § 271 prescribes what constitutes infringement of a patent. Currently, § 271(a) of the Patent Act states that “whoever without authority makes, uses, offers to sell, or sells, any patented invention, within the United States ... during the term of the patent therefor, infringes the patent.”¹⁷ The statute therefore explicitly contains a territorial restriction: all infringing activities must occur within the United States. The Supreme Court has long adhered to the view that patent rights are strictly territorial in nature.

1. The Supreme Court’s Strict Adherence to Territorial Limits for Patents

The Supreme Court has recognized that patent rights are territorially limited, even before the 1952 Patent Act. As far back as 1856, the Supreme Court noted that “these acts of Congress do not, and were not intended to, operate beyond the limits of the United States; and as the patentee’s right of property and exclusive use is derived from them, they cannot extend beyond the limits to which the law itself is confined.”¹⁸ Almost sixty years later, the Court

17. See 35 U.S.C. § 271(a) (2000) (requiring all provisions to connect to the United States).

18. *Brown v. Duchesne*, 60 U.S. (19 How.) 183, 195-96 (1856) (holding use of invention on foreign vessel in U.S. harbor not infringement). The Court suggested that Congress’s constitutional power under the Patent Clause was also territorially limited. *Id.* at 195 (“The power thus granted is domestic in its character, and necessarily confined within the limits of the United States.”). This language predates modern understandings of both the Patent and Commerce Clauses. For discussions on Congress’s constitutional authority as it relates to intellectual property, see generally Graeme B. Dinwoodie, *Copyright Lawmaking Authority: An (Inter)Nationalist Perspective on the Treaty Clause*, 30 COLUM. J.L. & ARTS 355, 355-64 (2007); Paul J. Heald & Suzanna Sherry, *Implied Limits on the Legislative Power: The Intellectual Property Clause as an Absolute Constraint on Congress*, 2000 U. ILL. L. REV. 1119, 1167; Holbrook, *Treaty Power*, *supra* note 8, at 2-3; Thomas B. Nachbar, *Intellectual Property and Constitutional Norms*, 104 COLUM. L. REV. 272, 361-62 (2004); Kevin A. Goldman, Comment, *Limited Times: Rethinking the Bounds of Copyright Protection*, 154 U. PA. L. REV. 705, 740 (2006); Joseph C. Merschman, Note, *Anchoring Copyright Laws in the Copyright Clause: Halting the Commerce Clause End Run Around Limits on Congress’s Copyright Power*, 34 CONN. L. REV. 661, 692-93 (2002); Carolyn T. Ngyuen, Note, *Expansive Copyright Protection For All Time? Avoiding Article I Horizontal Limitations Through the Treaty Power*, 106 COLUM. L. REV. 1079, 1079-84 (2006).

reaffirmed this strict view of the reach of the patent laws, denying damages for sales in Canada of a patented item because “[t]he right conferred by a patent under our law is confined to the United States and its Territories and infringement of this right cannot be predicated of acts wholly done in a foreign country.”¹⁹

In the modern era, the Supreme Court has twice emphasized the presumption against the extraterritorial application of U.S. patents: in *Deepsouth Packing Co. v. Laitram* in 1972,²⁰ and in *Microsoft Corp. v. AT&T* in 2007.²¹ In *Deepsouth*, the Court confronted the situation in which all components of the invention were manufactured within the United States, but the complete machines were never assembled within the United States. Instead, the accused infringer, Deepsouth, sought “to make the parts of [the patented] machines, to sell them to foreign buyers, and to have the buyers assemble the parts and use the machines abroad.”²² It was undisputed that the completed machine would have infringed the patent at issue if the defendant had built completely assembled machines within the United States. Although the patentee did have foreign patents, it seemingly did not enforce them.²³

The Supreme Court concluded that there was no infringement in this context. The Court reasoned that “[t]he statute makes it clear that it is not an infringement to make or use a patented product outside of the United States,” so the infringer could not be liable under those forms of infringement.²⁴ The key question, thus, was whether Deepsouth had sold the invention in the United States. The Court concluded that Deepsouth had not made such a sale and therefore there was no infringement. The Court easily could have interpreted “make” simply to mean the creation of the various components without actually putting the pieces together.²⁵

19. *Dowagiac Mfg. Co. v. Minn. Moline Plow Co.*, 235 U.S. 641, 650 (1915) (citations omitted).

20. 406 U.S. 518 (1972).

21. 127 S. Ct. 1746 (2007).

22. *Deepsouth*, 406 U.S. at 523.

23. *Id.* at 531 (“Respondent holds foreign patents; it does not adequately explain why it does not avail itself of them.”).

24. *Id.* at 527. *But see id.* at 532-33 (Blackmun, J., dissenting) (rejecting this interpretation of “make” as too narrow).

25. The four dissenting justices would have done just that. *See id.* at 532-34. The Federal

Similarly, the Court could have held that these acts constituted a sale of the invention even without its complete construction. But they did no such thing. In part due to “this Nation’s historical antipathy to monopoly,”²⁶ the Court construed the statute, in the absence of a “clear and certain signal from Congress,” to “strictly enforce” the limits on the enforcement of a patent.²⁷

Congress provided the “clear and certain” signal regarding the scope of patent protection. In 1984, Congress adopted 35 U.S.C. § 271(f) statutorily abrogating the holding in *Deepsouth*. Under § 271(f)(1), the exportation of the unassembled components of a patented invention is an infringement if the exporter actively induces the assembly of the device outside of the United States.²⁸ Congress went further than even the *Deepsouth* problem, however, by enacting § 271(f)(2). Now exporting a single component of an invention that is neither a staple article of commerce nor which has a substantial noninfringing use is also infringement if the exporter knows that the component’s only use is in the patented device and also knows that it will be combined outside of the United States into the completed device.²⁹

The Supreme Court interpreted § 271(f) for the first time in *Microsoft*, in which the Court addressed two separate but related questions: whether computer software could constitute a “component,” and whether the copying of such software constitutes “supplying” under § 271(f).³⁰ AT&T owned a patent covering “an

Circuit also applied a broader meaning to the word “make,” although in the context of assessing the temporal, not the territorial, limits of a patent. See *Paper Converting Mach. Co. v. Magna-Graphics Corp.*, 745 F.2d 11, 19-20 (Fed. Cir. 1984) (finding infringement because the device was an “operable assembly” even though it was never completely assembled during the patent term).

26. *Deepsouth*, 406 U.S. at 530 (majority opinion) (citation omitted). But see Timothy R. Holbrook, *Liability for the “Threat of a Sale”: Assessing Patent Infringement for Offering To Sell an Invention and Implications for the On-Sale Patentability Bar and Other Forms of Infringement*, 43 SANTA CLARA L. REV. 751, 799 (2003) [hereinafter Holbrook, *Threat of a Sale*].

27. *Deepsouth*, 406 U.S. at 531. But see Holbrook, *Threat of a Sale*, *supra* note 26, at 759 (arguing that the Supreme Court inappropriately conflated infringement by selling and making).

28. 35 U.S.C. § 271(f)(1) (2000).

29. § 271(f)(2).

30. *Microsoft Corp. v. AT&T Corp.*, 127 S. Ct. 1746, 1750-52 (2007).

apparatus for digitally encoding and compressing recorded speech.”³¹ Microsoft sent its Windows operating software abroad by either e-mail or by sending physical master discs.³² Microsoft’s overseas customers in turn would copy the software from the master disc onto other discs, which then would be used to install the software on computers.³³ The master discs were never used to directly install software onto the computers.³⁴ Microsoft conceded that it would infringe AT&T’s patent once the software was installed on a computer, if those computers were located within the United States.³⁵ The Federal Circuit affirmed the district court’s judgment of infringement, concluding that software could be a “component” of an invention even though it is intangible,³⁶ and that copying the software was an impermissible supplying of the component.³⁷

The former question had been addressed by the Federal Circuit in an earlier case, *Eolas Technologies, Inc. v. Microsoft Corp.*³⁸ In that case, the Federal Circuit reasoned that nothing in the statute limits § 271(f) to physical components. Given the Patent Act’s broad definition of invention, the court concluded that “every form of invention eligible for patenting falls within the protection of section 271(f),” and therefore that “every component of every form of invention deserves the protection of section 271(f).”³⁹ Moreover, the court concluded that the code on the master disc was a component under § 271(f), rejecting the argument that such code was more akin to a blueprint or set of instructions because the code was functionally essential to the software invention. The court recognized that

31. *Id.* at 1750.

32. *Id.* at 1753.

33. *Id.*

34. *Id.*

35. *Id.*

36. *AT&T Corp. v. Microsoft Corp.*, 414 F.3d 1366, 1369 (Fed. Cir. 2005), *rev’d*, 127 S. Ct. 1746 (2007).

37. *Id.* at 1370. In answering that question, the Federal Circuit reasoned that because “supplying” software requires making a copy, copying is subsumed in supplying software components. The court admittedly interpreted the statute broadly to produce the legislative intent behind the provision. *Id.* at 1371.

38. 399 F.3d 1325 (Fed. Cir. 2005).

39. *Id.* at 1339.

software and hardware can be interchangeable, suggesting that software could be a component. The Federal Circuit also believed the legislative history of § 271(f) suggested a broad interpretation, as the purpose of the provision was to provide protection “for all forms of patented inventions.”⁴⁰

The Supreme Court disagreed with the reasoning of the Federal Circuit and reversed. As to the first question—whether software could be a “component” under § 271(f)—the Court distinguished between software in the abstract and software as found in a tangible medium, such as CD-ROM. The Court noted that the Federal Circuit had failed to identify whether its holding in *Eolas* dealt with software in the abstract or in a tangible medium.⁴¹ The Court recognized that this distinction had significant implications for the second question presented regarding whether copying of software constituted supplying the component:

If the relevant components are the copies of Windows actually installed on the foreign computers, AT&T could not persuasively argue that those components, though generated abroad, were “supplie[d] ... from the United States” as § 271(f) requires for liability to attach. If, on the other hand, Windows in the abstract qualifies as a component within § 271(f)’s compass, it would not matter that the master copies of Windows software dispatched from the United States were not themselves installed abroad as working parts of the foreign computers.⁴²

The language of the statute requires a component be combinable with other components, suggesting a physical aspect to it. The Court concluded that, although software in a tangible medium can be such a component, software in the abstract cannot be in this case.⁴³ Notably, the Court narrowly construed its holding, declining to

40. *Id.* at 1340.

41. *Microsoft*, 127 S. Ct. at 1754 n.10.

42. *Id.* at 1754.

43. *Id.* at 1755 (“Until it is expressed as a computer-readable ‘copy,’ *e.g.*, on a CD-ROM, Windows software—indeed any software detached from an activating medium—remains uncombinable. It cannot be inserted into a CD-ROM drive or downloaded from the Internet; it cannot be installed or executed on a computer. Abstract software code is an idea without physical embodiment, and as such, it does not match § 271(f)’s categorization: ‘components’ amenable to ‘combination.’”).

answer whether software in the abstract could *never* be a component, whether other intangibles could be components, and whether method and process inventions qualify for protection under § 271(f).⁴⁴

The Supreme Court then held that copying the software from the master disc to other discs did not constitute “supplying” under § 271(f) because the copies actually installed on the foreign computers came from the copies made from the master disc and not from the master disc directly.⁴⁵ The Court rejected the Federal Circuit majority’s view that copying subsumes supplying and instead embraced Judge Rader’s dissenting opinion in this case.⁴⁶ The Court reasoned that “the copies of Windows actually installed on the foreign computers were not themselves supplied from the United States. Indeed, those copies did not exist until they were generated by third parties outside the United States.”⁴⁷

Importantly, the Supreme Court based much of its reasoning on the presumption against the extraterritorial application of U.S. patent laws. Noting that “[t]he presumption that United States law governs domestically but does not rule the world applies with particular force in patent law,” the Court explained that “the presumption tugs strongly against construction of § 271(f) to encompass as a ‘component’ not only a physical copy of software, but also software’s intangible code, and to render ‘supplie[d] ... from the United States’ not only exported copies of software, but also duplicates made abroad.”⁴⁸ The Court applied the presumption even though § 271(f) represents an exception to the territorial principle, noting that “the presumption is not defeated ... just because [a

44. *Id.* at 1756 n.13; *cf.* *Union Carbide Chems. & Plastics Tech. Corp. v. Shell Oil Co.*, 425 F.3d 1366, 1380 (Fed. Cir. 2005) (applying § 271(f) to a method claim). The concurrence in *Microsoft* by Justice Alito, joined by Justices Thomas and Breyer, concluded that components must be tangible items; because nothing *physical* from the master discs was transferred to either the software copies or computers, there could be no infringement. *See Microsoft*, 127 S. Ct. at 1762 (Alito, J., concurring). Justice Alito suggested that there could be infringement in this case only if the computer used the CD-ROM itself to run the software. *See id.* Justice Stevens would have concluded that software in the abstract could be a component of a patented invention. *Id.* at 1763 (Stevens, J., dissenting).

45. *Id.* at 1757 (majority opinion).

46. *Id.* at 1756-57.

47. *Id.* at 1757 (footnotes omitted).

48. *Id.* at 1758.

statute] specifically addresses [an] issue of extraterritorial application;’ it remains instructive in determining the *extent* of the statutory exception.”⁴⁹ In sum, the Court explained, “foreign law alone, not United States law, currently governs the manufacture and sale of components of patented inventions in foreign countries. If AT&T desires to prevent copying in foreign countries, its remedy today lies in obtaining and enforcing foreign patents.”⁵⁰

The Court recognized that its decision could create a “loophole,” but nevertheless concluded that Congress, not the courts, was the proper institutional actor to correct such concerns.⁵¹ Just as in *Deepsouth*, any further expansion of the extraterritorial reach of U.S. patents was left “in Congress’ court.”⁵²

Although the courts’ application of the presumption against extraterritorial application of U.S. laws has been inconsistent in other contexts,⁵³ the Supreme Court has consistently applied it in the context of patent law.⁵⁴ The Court, therefore, espouses a dialectic approach in which courts narrowly construe the Patent Act to limit the extraterritorial reach of U.S. patents to trigger an appropriate response, if any, from Congress.

2. *The Federal Circuit’s Occasional Strict Territorial Approach*

The Federal Circuit’s exploration of the issue of extraterritoriality has given, at best, inconsistent results. One can discern two strands of the court’s jurisprudence: a strict territorial approach on the one hand, and a willingness to provide extraterritorial relief on the other. Conspicuously absent from either approach, however, is a

49. *Id.* (citations omitted).

50. *Id.* at 1759 (citation omitted); *see also id.* at 1759 n.17 (noting AT&T’s patents in Canada, France, Germany, Great Britain, Japan, and Sweden).

51. *Id.* at 1759 (“While the [Federal Circuit] majority’s concern is understandable, we are not persuaded that dynamic judicial interpretation of § 271(f) is in order. The ‘loophole,’ in our judgment, is properly left for Congress to consider, and to close if it finds such action warranted.”); *see also id.* at 1760 (“Given that Congress did not home in on the loophole AT&T describes, and in view of the expanded extraterritorial thrust AT&T’s reading of § 271(f) entails, our precedent leads us to leave in Congress’ court the patent-protective determination AT&T seeks.”).

52. *Id.* at 1760.

53. *See Bradley, supra* note 15, at 507.

54. *See id.* at 508.

consistent theory, method, or justification for the court's conclusions. Instead, the court has treated these issues as isolated matters of statutory interpretation with little concern for the extraterritorial consequences of these decisions. This subsection will examine the cases that have generally rejected the extraterritorial application of a U.S. patent.

a. Limiting the Extraterritorial Reach of Injunctive Relief

Acts of infringement often implicate foreign conduct; as such, courts may need to wrestle with the appropriate scope of injunctive relief when dealing with acts that might have implications for the U.S. patent holder. In this context, the Federal Circuit has recognized that, although it may have the authority to issue an injunction with extraterritorial effect,⁵⁵ it should be hesitant to do so.

For example, in *Johns Hopkins University v. CellPro, Inc.*, the Federal Circuit rejected the district court's injunction requiring the infringer to return vials of the infringing good to the United States for destruction.⁵⁶ The infringer had prepared the vials prior to the issuance of the patent and exported them to Canada post-issuance to supply foreign markets.⁵⁷ The Federal Circuit acknowledged that the equitable powers of federal courts "can reach extraterritorial activities ... even if these activities do not themselves constitute infringement."⁵⁸ The injunction, however, must prevent current or future infringement.⁵⁹ The court noted that the pre-issuance creation and subsequent exportation of the vials did not infringe the relevant patent, nor was it likely to cause future infringement.⁶⁰ The

55. *Johns Hopkins Univ. v. CellPro, Inc.*, 152 F.3d 1342, 1366-67 (Fed. Cir. 1998).

56. *Id.* at 1366.

57. *Id.* at 1353.

58. *Id.* at 1366.

59. *Id.* at 1366-67.

60. *Id.* at 1366 ("Mere possession of a product which becomes covered by a subsequently issued patent does not constitute an infringement of that patent until the product is used, sold, or offered for sale in the United States during the term of the patent. Likewise, neither export from the United States nor use in a foreign country of a product covered by a United States patent constitutes infringement." (citations omitted)).

court specifically noted that injunctive relief, however, cannot be used to exert extraterritorial control over foreign markets:

[T]o the extent that Hopkins complains that CellPro's infringement has damaged its ability to service foreign markets, Hopkins must rely on foreign patent protection. *See Deepsouth*, 406 U.S. at 531, 173 U.S.P.Q. at 774 ("Our patent system makes no claim to extraterritorial effect.... To the degree that the inventor needs protection in markets other than those of this country, the wording of 35 U.S.C. §§ 154 and 271 reveals a congressional intent to have him seek it abroad through patents secured in countries where his goods are being used.") Such a complaint cannot be remedied by the imposition of an injunction under Section 283.⁶¹

Consequently, the Federal Circuit rejected the district court's repatriation injunction.⁶²

More recently, the Federal Circuit emphasized the need to constrain the scope of injunctions to avoid reaching extraterritorially. In *International Rectifier Corp. v. Samsung Electronics Co.*,⁶³ the court addressed whether an injunction against an infringer could reach activities that took place outside the United States when those acts, if occurring in the United States, would have been contemptuous.⁶⁴ Samsung was previously enjoined from infringing the relevant patent, but, along with a third party IXYS, performed otherwise infringing acts outside of the United States.⁶⁵ The court explicitly recognized the territorial limits of a U.S. patent⁶⁶ and reasoned that "none of the cases cited by the district court purports to extend the scope of liability under the Patent Act beyond the territorial boundaries of the United States."⁶⁷ As a result, the

61. *Id.* at 1367 (some internal citations omitted).

62. *Id.* ("Those portions of the district court's permanent injunction order that ordered repatriation and destruction of vials exported by CellPro to Biomira and by-products produced thereby are not consistent with the stated purpose of Section 283—to prevent infringement.")

63. 361 F.3d 1355 (Fed. Cir. 2004).

64. *Id.* at 1360.

65. *Id.* at 1357-58.

66. *Id.* at 1360.

67. *Id.* at 1361.

Federal Circuit rejected the district court's judgment of contempt,⁶⁸ drawing a strong territorial line and prohibiting an injunction from reaching activity occurring wholly outside of the United States.

b. Section 271(g) Liability for Importing Products of Patented Processes

Aside from exportation protection under § 271(f), Congress adopted a similar provision to prevent arbitrage of process patents due to territorial limits. In 1988, Congress passed the Process Patent Amendments Act⁶⁹ that provided additional extraterritorial protection by adopting § 271(g).⁷⁰ This provision defines as an act of infringement the importation of, sale of, or offer to sell in the United States a product made by a patented process, even if that process is performed outside of the United States.⁷¹ There is no infringement, however, if the final product either "is materially changed by subsequent processes" or "becomes a trivial and nonessential component of another product."⁷² Absent § 271(g), a competitor could circumvent a U.S. process patent by performing the process outside of the United States and importing the unpatented product into the United States. Section 271(g) is Congress's response to this problem and closes, in patch-work fashion, another perceived territorial wrinkle in patent protection. Affording this type of protection is also required under our international treaty obligations.⁷³

The Federal Circuit's interpretation of this provision has been far from consistent. In some decisions, the court has afforded extraterritorial reach to this provision, whereas in others it appears to apply a strict territorial view. In contrast to the Federal Circuit's gradual expansion of the scope of § 271(f) before the Supreme Court's intervention in *Microsoft*, the court did restrict the reach of § 271(g). In *Bayer AG v. Housey Pharmaceuticals, Inc.*,⁷⁴ the Federal Circuit addressed whether importation of intangible information alone

68. *Id.* at 1361-62.

69. Pub. L. No. 100-418, §§ 9001-07, 102 Stat. 1563-67 (1988).

70. § 9003, 102 Stat. at 1563-64.

71. 35 U.S.C. § 271(g) (2000).

72. § 271(g)(1)-(2).

73. See TRIPS, *supra* note 8, art. 28(1)(b).

74. 340 F.3d 1367 (Fed. Cir. 2003).

constituted the product of a patented process, and held that it did not.⁷⁵ The process claims at issue covered a method of identifying substances that activated or inhibited the production of proteins in a cell.⁷⁶ Thus, the “product” of the process was not a physical item but instead was data. The patent owner asserted that using the process overseas and then relying on the information to produce the activator or inhibitor in the United States was importation of the “product” of the process, the information regarding the activator or inhibitor.⁷⁷

The court rejected this argument and narrowly construed § 271(g) to cover only the physical products of methods of manufacturing products. Using traditional statutory interpretation methodology, the court reasoned that the term “made” refers to its ordinary usage of “to manufacture,” requiring the creation of a physical item.⁷⁸ The statutory defense for a product that has been materially changed suggests that the product must be physical and not merely data.⁷⁹ Finally, the court reviewed the legislative history, concluding that Congress intended only physical products of patented processes to be covered. One purpose for adopting § 271(g) was to supplement the protections available through proceedings at the International Trade Commission, which covers “articles” imported into the United States. This legislative history suggested that Congress intended only physical products to be covered. The court has subsequently determined that the sending of e-mails into the United States does not count as the importation of the product of a process because there is no physical construct imported.⁸⁰

In a world with business method patents and other processes in which the key output of the process is purely data,⁸¹ this interpretation significantly narrows the reach of U.S. law. For example,

75. *Id.* at 1377.

76. *Id.* at 1368-69.

77. *Id.* at 1371.

78. *Id.* at 1372.

79. *Id.*

80. *See NTP II*, 418 F.3d 1282, 1323-24 (Fed. Cir. 2005).

81. The Federal Circuit has recognized that the scope of patent eligible subject matter is not coextensive with the reach of the various infringement provisions. *See id.* at 1324 (“*AT&T*, *State Street Bank*, *Alappat*, and *Chakrabarty* do not command a different result because sections 101 and 271(g) are not coextensive in their coverage of process inventions.”).

clinicians could avoid infringement of a gene patent, or method claims correlating certain mutations with disease, by sending a patient's tissue sample abroad, having it purified and analyzed there, and sending the data results back to the United States. Sending a raw tissue sample would not implicate § 271(f), and importing the resulting data about the sequence would not be the physical importation of the product itself.

Importantly, *Bayer* highlights the hopelessly inconsistent methodology used by the Federal Circuit in analyzing these issues. The result in *Bayer* cannot be reconciled with the Federal Circuit's *Eolas* decision. Unlike *Eolas*, the court in *Bayer* used the ambiguity of the term "made" and the legislative history to conclude that § 271(g) is limited to the production of physical items.⁸² Although both statutory provisions were designed to address issues created by the territorial nature of patent rights, these two provisions now have considerably different scope.⁸³ There seems to be no legitimate basis for treating the two provisions differently when they both address similar concerns.⁸⁴

82. *Bayer*, 340 F.3d at 1374 ("Even if the legislative history did not affirmatively suggest an intent to limit coverage to manufactured 'articles' in accordance with section 1337, we have been directed to nothing in the legislative history suggesting that Congress was concerned that the preexisting statutory scheme failed to reach intangible information").

83. See Catherine Tornabene, Note, *The Export-Import Dilemma: Inventions and Employment Abroad*, 58 HASTINGS L.J. 153, 154 (2006).

84. Cf. Lemley et al., *supra* note 7, at 283 (suggesting interpreting § 271(g) to include "the importation of data produced abroad by a patented process"). But see Tietsworth, *supra* note 7, at 439-40 (arguing against interpreting §§ 271(f) and (g) similarly). A recent district court case has attempted to bridge these inconsistencies. In *CNET Networks, Inc. v. Etilize, Inc.*, the Northern District of California held that an intangible electronic catalog could be the product of a patented process under § 271(g). 528 F. Supp. 2d 985, 994 (N.D. Cal. 2007). Relying on the Supreme Court's decision in *Microsoft v. AT&T*, the court distinguished *Bayer* by noting:

This court agrees with CNET that *Microsoft* is instructive for the concept that an electronic catalog, like computer software, is not simply an intangible collection of information, but can also be thought of as having a physical, tangible embodiment once it is expressed and stored on computer readable media in the form of magnetic fields on a hard drive or etchings on a CD-ROM. The catalog in this case, therefore, is distinguishable from the abstract information at issue in *Bayer*. The claims in this case are directed toward *creation* of a product catalog *stored on computer readable media*, not the identification of whether a particular substance inhibits or does not inhibit a particular protein. In other words, the electronic catalog in this case, far from being abstract information or knowledge, is a physical article no different from

3. *The Advantages and Disadvantages of Drawing Strict Territorial Lines for Patent Infringement*

The apparently simplest approach to dealing with territoriality issues is to strictly limit patent infringement to acts entirely within the United States, much like the Supreme Court has done in *Deepsouth* and *Microsoft*. If any part of the patented invention exists or is performed outside of the United States then there is no infringement. A strict adherence to the territoriality principle would make it much easier to predict whether there should be infringement. Congress could then address any concerns legislatively, as it did in adopting §§ 271(f) and (g). If Congress concluded that the interest in the U.S. patent is sufficient, then it could adopt legislation to expand patent protection in response to the courts' adherence to territoriality. This approach would be consistent with the Supreme Court's insistence on clear signals from Congress that it intends to extend the reach of American law outside the territorial U.S.⁸⁵ The primacy of Congress in establishing the scope of patent rights would be retained.

This colloquy between the courts and Congress does have significant downsides, however. Congress must react to the courts' overtures, which can take time. For instance, *Deepsouth* was decided in 1972, and Congress did not overrule it with § 271(f) until 1984. Such delays could be costly to the affected patent holders, particularly for those whose patent terms expire during the period of delay. Moreover, congressional action will always be piecemeal and reactive; it is unlikely that Congress would be able to anticipate various ways that companies would arbitrage the system to take advantage of the rules of territoriality. Instead, a problem would

a product catalog manufactured and assembled on paper bound with stitching, glue or staples. The court holds that the catalog is a "product" within the meaning of section 271(g) which is "made by" CNET's patented processes and is "imported" and "used" in the United States by Etilize and Etilize's customers.

Id.

85. *Deepsouth Packing Co. v. Laitram*, 406 U.S. 518 (1972); *see also* *EEOC v. Arabian Am. Oil Co.*, 499 U.S. 244, 248 (1991) ("We assume that Congress legislates against the backdrop of the presumption against extraterritoriality. Therefore, unless there is 'the affirmative intention of the Congress clearly expressed,' ... we must presume it 'is primarily concerned with domestic conditions.'" (citations omitted)).

develop and Congress would respond. In contrast, the courts will be the first to confront these scenarios and would be better situated to address them up-front.

The position of the courts on the “front lines” of these issues highlights another problem with adhering to territoriality. Faced with these scenarios where a seeming injustice is being perpetrated against a patent holder, a court may engage in arguably tortured statutory constructions to combat the situation. Instead of waiting for Congress, the courts may try to address the problem, resulting in odd and disingenuous statutory interpretations like those of *Eolas* and *AT&T*.⁸⁶ It was precisely this concern that motivated the Federal Circuit to afford § 271(f) such broad protection in the *Microsoft* case:

Were we to hold that Microsoft’s supply by exportation of the master versions of the Windows® software—specifically for the purpose of foreign replication—avoids infringement, we would be subverting the remedial nature of § 271(f), permitting a technical avoidance of the statute by ignoring the advances in a field of technology—and its associated industry practices—that developed after the enactment of § 271(f). It would be unsound to construe a statutory provision that was originally enacted to encourage advances in technology by closing a loophole, in a manner that allows the very advances in technology thus encouraged to subvert that intent. Section 271(f), if it is to remain effective, must therefore be interpreted in a manner that is appropriate to the nature of the technology at issue.⁸⁷

Such a strained interpretation undermines the territorial approach, subverts Congress’s role in the process, and only serves to create uncertainty. It also shows that courts may feel compelled to act unilaterally to remedy perceived unfairness that may arise due to changes in technology, short-circuiting the Supreme Court’s preferred deference to Congress.

86. The Federal Circuit’s decision in *NTP, Inc. v. Research in Motion, Ltd.*, 418 F.3d 1282, 1322 (Fed. Cir. 2005), is another example of such tortured statutory construction. That decision is discussed rigorously *infra* at notes 122-37 and accompanying text.

87. *AT&T Corp. v. Microsoft Corp.*, 414 F.3d 1366, 1371 (Fed. Cir. 2005).

Finally, strict territorial limits often may be overkill. One key reason the courts do not generally afford extraterritorial reach to U.S. laws is the fear of creating a conflict with the laws of another sovereign.⁸⁸ In some cases, particularly in patent law where much of the law is harmonized, these fears of conflict are overstated and the extraterritorial application may not create a problem. Indeed, it could be helpful for courts to consider the variations in patent law amongst other nations instead of simply closing the door for every case. The complete absence of balancing potential competing policy interests in these interpretations is rather stark and unfortunate in terms of creating a greater dialogue on patent law and policy. A strict territorial approach, therefore, does not in fact guarantee that those limits will be enforced and fails to truly consider whether a conflict would develop.

B. Affording Extraterritorial Reach to U.S. Patents

In contrast to strictly limiting U.S. patent rights to cover acts solely within the United States, the courts could afford a broader extraterritorial reach to U.S. patents. A strand of this approach can be seen in the Federal Circuit's case law. In fact, these cases are in tension with the previously discussed cases that have limited the scope of patent protection in favor of a strict territorial approach. The court has interpreted the same provision to give broad extraterritorial protection. Moreover, several commentators have proposed even broader extraterritorial application of U.S. patents based on an effects-based approach: if the activities affect the U.S. market for the patented good in some way, then there should be infringement of the U.S. patent. Section one of this Part explores the Federal Circuit cases extending the extraterritorial reach of U.S. patents. This review demonstrates the lack of consistency and coherency in the Federal Circuit's approach to these issues. Section two explores the various effects-based proposals offered by commentators. Finally, section three evaluates the benefits and disadvantages of affording broad extraterritorial coverage for patents.

88. *See supra* note 15 and accompanying text.

1. Federal Circuit Case Law Evincing Broader Extraterritorial Protection

Although some Federal Circuit decisions declined to allow U.S. patent rights to cover foreign acts, others demonstrated a willingness to extend the protection afforded by patents to activities outside the United States. This section explores these decisions and notes that, even where the court provides greater protection in this regard, the court lacks a coherent justification for this expansion. Moreover, many of these cases are irreconcilably inconsistent with other decisions that hold the territorial line more strictly.

a. Injunctions Reaching Outside of the United States

Although the Federal Circuit in some cases emphasized the importance of limiting an injunction's extraterritorial reach, in others the court has provided such a remedy. In *Spindelfabrik Suessen-Schurr v. Schubert & Salzer Maschinenfabrik Aktiengesellschaft*, the Federal Circuit reviewed an injunction that the district court had expanded in light of a recalcitrant infringer.⁸⁹ The injunction covered goods that were not in the United States but were "destined for delivery" into the United States.⁹⁰ The injunction also required "all advertising materials, promotional literature, brochures, press releases and the like" to note that the machine was "not available for sale or use in, or delivery to the United States" and that all goods be labeled as "not available for sale or use in, or delivery to, the United States."⁹¹ The injunction therefore regulated conduct outside of the United States. Regardless, the Federal Circuit rejected the infringer's argument that the injunction "impermissibly extends the reach of American patent law beyond the boundaries of the United States by applying its prohibitions to those machines" that were manufactured in Germany.⁹² The court found the provisions to be "a reasonable and permissible endeavor to prevent

89. 903 F.2d 1568, 1577-78 (Fed. Cir. 1990).

90. *Id.* at 1577 (citations omitted).

91. *Id.*

92. *Id.* at 1577-78.

infringement in the United States”⁹³ The court, therefore, allowed the injunction to reach goods that were not in the United States on the basis that they *could* at some point be infringing.

b. Federal Circuit’s Expansive Interpretation of § 271(f)

Before the Supreme Court reined in the scope of § 271(f) to some extent in *Microsoft Corp. v. AT&T Corp.*, the Federal Circuit consistently gave that provision a rather broad scope. For example, in *Waymark Corp. v. Porta Systems Corp.*,⁹⁴ the court addressed the question of whether the patented device actually had to be assembled outside of the United States for infringement. The accused infringer had manufactured all of the components and exported them but never assembled the complete patented system.⁹⁵ Nevertheless, the Federal Circuit decided there could be infringement, holding that exportation of the components without assembly was in fact infringement under § 271(f)(1).⁹⁶ Although “infringement without a completed infringing embodiment is not the norm in patent law,” the court concluded that the failure to assemble the device did not preclude a finding of infringement.⁹⁷ An intent to make the combination is sufficient to trigger § 271(f)(1) liability.⁹⁸

In justifying its decision, the Federal Circuit feared that requiring overseas assemblage would “pose the appearance of ‘giving extraterritorial effect to United States patent protection.’”⁹⁹ Ironically, by allowing infringement without actual assembly, the court broadened

93. *Id.* at 1578.

94. 245 F.3d 1364 (Fed. Cir. 2001). Prior to *Waymark* the court declined to reach the issue of whether § 271(f) applied to method and process inventions when the appellant had failed to preserve the issue for appeal. *See Sw. Software, Inc. v. Harlequin Inc.*, 226 F.3d 1280, 1290 (Fed. Cir. 2000). The court addressed § 271(f) in *Rotec Industries, Inc. v. Mitsubishi Corp.*, 215 F.3d 1246 (Fed. Cir. 2000), rejecting the argument that an “offer to supply” a component was sufficient to trigger liability when the infringer never actually supplied the component. *Id.* at 1258.

95. *Waymark*, 245 F.3d at 1365. The accused infringer did not assemble the components because of the lawsuit. *Id.*

96. *Id.* at 1368.

97. *Id.*

98. *Id.*

99. *Id.* (quoting *Paper Converting Mach. Co. v. Magna-Graphics Corp.*, 745 F.2d 11, 17 (Fed. Cir. 1984)).

the category of infringing acts, creating even greater extraterritorial consequence.¹⁰⁰ Consequently, the court initially took a broad view of § 271(f), giving the provision considerable scope over acts outside of the United States.

Subsequently—though temporarily—the court took a more restrained view of § 271(f). In *Pellegrini v. Analog Devices, Inc.*,¹⁰¹ the accused infringer “designed [the components] within the United States” and transmitted “the instructions for their manufacture and disposition ... from within the United States.”¹⁰² The components themselves were never made in the United States, however. The Federal Circuit held that these acts did not constitute infringement under § 271(f): “[T]here can be no liability under § 271(f)(1) unless components are shipped from the United States for assembly.”¹⁰³ In discussing the scope of § 271(f), the court stated that the components must be “physically present in the United States,”¹⁰⁴ suggesting that those components could not be something intangible.

After *Pellegrini*, the Federal Circuit concluded in *Eolas* that “components” could be intangible items such as software,¹⁰⁵ and that the copying of software constituted supplying the component.¹⁰⁶ Although the Supreme Court subsequently rejected the latter conclusion and left the former in doubt, the Federal Circuit had already moved beyond *Eolas* and *AT&T* to give more extraterritorial reach to § 271(f). In *Union Carbide Chemicals & Plastics Technology Corp. v. Shell Oil Co.*, the court concluded that infringement under § 271(f)(2) was possible for the exportation of a catalyst to be used abroad in a patented process.¹⁰⁷ Previously, the court suggested that § 271(f) would not apply to method claims;¹⁰⁸ nevertheless, relying

100. See Joan E. Beckner, Note, *Patent Infringement by Component Export: Waymark Corp. v. Porta Systems Corp. and the Extraterritorial Effect of U.S. Patent Law*, 39 HOUS. L. REV. 803, 832 (2002); see also Holbrook, *Threat of a Sale*, *supra* note 26, at 819 n.386.

101. 375 F.3d 1113 (Fed. Cir. 2004).

102. *Id.* at 1115.

103. *Id.* at 1117.

104. *Id.*

105. *Eolas Techs. Inc. v. Microsoft Corp.*, 399 F.3d 1325, 1339 (Fed. Cir. 2005).

106. *AT&T Corp. v. Microsoft Corp.*, 414 F.3d 1366, 1369 (Fed. Cir. 2005), *rev'd*, *Microsoft Corp. v. AT&T Corp.*, 127 S. Ct. 1746 (2007).

107. 425 F.3d 1366, 1380 (Fed. Cir. 2005).

108. See *NTP II*, 418 F.3d 1282, 1322 (Fed. Cir. 2005). The Supreme Court, although skeptical of applying § 271(f) to methods, did not answer the question. See *Microsoft*, 127 S.

on the same statutory interpretation methodology used to give expansive protection under § 271(f) in *Eolas* and *AT&T*, the court concluded that nothing in the statute excludes patented methods from protection under this provision. As such, the catalyst could be viewed as a part of the patented process, and its exportation—so long as it had no substantial non-infringing use—would trigger liability under § 271(f)(2). Although some believed that § 271(f) was limited to physical inventions,¹⁰⁹ the Federal Circuit has now broadly expanded this provision to cover not only intangible components but also method claims.

c. Expanding § 271(g)'s Liability for Importing the Product of a Patented Process

Although the Federal Circuit circumscribed the scope of § 271(g) in *Bayer* by limiting it to the importation of physical items, in other ways it has expanded the extraterritorial reach of the provision. For example, in *Bio-Technology General Corp. v. Genentech, Inc.*, the court interpreted the term “product” in the statute in an appeal of the grant of a preliminary injunction.¹¹⁰ The process as claimed covered the production of a plasmid that could produce a protein, but the product made by the accused infringer was just the protein. The court concluded there was still infringement and afforded the term “product” a broad reading¹¹¹ notwithstanding the differences between the final products.¹¹²

Ct. at 1756 n.13 (“If an intangible method or process, for instance, qualifies as a ‘patented invention’ under § 271(f) (a question as to which we express no opinion), the combinable components of that invention might be intangible as well.”).

109. See *Union Carbide Chems. & Plastics Tech. Corp. v. Shell Oil Co.*, 434 F.3d 1357, 1358 (2006) (Lourie, J., dissenting from the order denying rehearing of the case en banc) (“The whole tenor of that provision relates to physical inventions, *i.e.*, apparatus or compositions, not methods.... [T]he inventions in [*Eolas* and *AT&T*] were apparatus or systems, not methods or process.... A component of a process is a step in the process; it is not the physical material to be used in the process.”).

110. 80 F.3d 1553, 1560 (Fed. Cir. 1996).

111. *Id.* at 1560-62.

112. *Id.* The court has treated § 271(g) inconsistently in other ways as well. For example, in *Bio-Technology*, the court also held that the acts that trigger liability are the selling, offering to sell, or importing the product of the patented process; if these acts took place after the statutory provision came into place—even if the process had been performed *before* the date the statute was enacted—there is infringement. *Id.* at 1560.

A broad reading of the statute affords greater extraterritorial reach to the U.S. patent. Such concerns counsel against broad interpretations, contrary to the reasoning of the Federal Circuit. The court failed to take into account the lesson from *Deepsouth* that statutes that risk extraterritorial consequences should be afforded a narrow reading, not a broad one. Moreover, conspicuously absent from the court's discussion was any concern for the possible interference with foreign patent law that this interpretation could create. For example, the patented process could be viewed as unpatentable in the relevant country, and allowing the use of the U.S. patent to control this activity undermines that policy choice by a foreign country.

The Federal Circuit continued down this flawed path by concluding that § 271(g) could be violated even when the use of the patented process abroad was authorized.¹¹³ According to the court, authorization was irrelevant; all that mattered was whether the sale, offer to sell, or importation of the process's *product* into the United States was unauthorized.¹¹⁴ Analysis of infringement under § 271(g) is thus limited to (1) whether the process that was used was patented in the United States, and (2) whether the product was sold, offered to be sold, or imported without authorization in the United States. This holding allows a U.S. patent to regulate extraterritorial behavior, even if the patentee may have already authorized and been

Subsequently, however, the court held that § 271(g) does not apply to products imported during the patent term if the products were made by the patented process before the patent issued. See *Mycogen Plant Sci., Inc. v. Monsanto Co.*, 252 F.3d 1306, 1319 (Fed. Cir. 2001), *vacated on other grounds*, 535 U.S. 1109 (2002) ("We hold ... that in imposing liability for selling or using products 'made by a process patented in the United States,' section 271(g) requires that the patent be issued and in force at the time that the process is practiced and the product is made."). The Federal Circuit reasoned that the statute requires a "process patented in the United States," and before issuance, the process is not patented. *Id.* at 1318. The court distinguished *Bio-Technology* on the grounds that the patent in that case was already in force when the process was performed, although the statute was not in effect. *Id.* Of course, this distinction is inapposite given that the *Bio-Technology* court concluded that it was not applying the statute retroactively because the triggering act was the importation of the item, not the use of the method. *Bio-Technology*, 80 F.3d at 1560. Consequently, the key act for assessing infringement was the importation of the product, not the use of the process.

113. See *Ajinomoto Co., Inc. v. Archer-Daniels-Midland Co.*, 228 F.3d 1338 (Fed. Cir. 2000).

114. *Id.* at 1348 ("When the process used abroad is the same as the process covered by a United States patent, liability for infringement arises only upon importation, sale or offers, or use in the United States as set forth in § 271(g).").

compensated for that behavior. Typically, authorized unconditional sales by the patent holder exhaust the rights as to those particular goods, eliminating the ability of the patent holder to sue subsequent purchasers or users as infringers.¹¹⁵ Now, however, no exhaustion would take place. Even if the party using the process overseas has permission from the patent holder, subsequent purchasers or users within the United States may still be liable for patent infringement, potentially allowing the patentee double compensation for the single use of the process.

d. Section 271(a)—Finding Infringement “Within the United States” Even If Some Acts Occur Outside of the United States

The Federal Circuit’s interpretation of § 271(a) is the most telling of the court’s expansive extraterritorial interpretation of the Patent Act’s infringement provisions. Section 271(a) contains the basic exclusive rights afforded under a patent and particularly notes that these rights are limited to acts “within the United States.”¹¹⁶ Even this seemingly strict territorial provision has created considerable ambiguity as to the extent to which a U.S. patent can reach overseas activity. Originally, the provision only afforded the right to exclude others from making, using, or selling an invention, but in 1994 Congress added § 271 to include “offers to sell” and “importation” of an invention to satisfy the United States’s obligations under TRIPS.¹¹⁷ Congress provided no guidance as to the scope of this provision or the meaning of this new form of infringement, save to note that the sales of any offers must be completed during the patent term in order for there to be infringement.¹¹⁸

Due to this new form of infringement and the ambiguities surrounding it, the courts have had to confront whether an offer made in the United States to sell a device abroad would infringe a

115. See, e.g., *LG Elecs., Inc. v. Bizcom Elecs., Inc.*, 453 F.3d 1364, 1369-70 (Fed. Cir. 2006), cert. granted sub nom. *Quanta Computer, Inc. v. LG Elecs., Inc.*, 128 S. Ct. 28 (2007). The Supreme Court will review the Federal Circuit’s patent exhaustion doctrine in this case.

116. 35 U.S.C. § 271(a) (2000).

117. See Holbrook, *Territoriality*, supra note 4, at 722.

118. § 271(i).

U.S. patent.¹¹⁹ The district courts are currently split on this issue,¹²⁰ and the Federal Circuit so far has avoided expressly answering the question.¹²¹ Allowing there to be infringement when only the *offer* and nothing else has been made would afford a U.S. patent significant extraterritorial reach. All of the physical acts of making and using the device would occur outside the United States, yet there would be liability.

More recently, and famously, the Federal Circuit addressed the extraterritorial bounds of § 271(a) in *NTP, Inc. v. Research in Motion, Ltd. (NTP II)*,¹²² otherwise known as the Blackberry case. The invention at issue was a remote e-mail system that was integrated into the user's computer-based e-mail system.¹²³ The relevant patents contained both system and method claims.¹²⁴ The accused infringer, Research in Motion (RIM), offered the Blackberry system to users in the United States even though part of the system, the relay, was physically located in Canada.¹²⁵

The Federal Circuit concluded that there was infringement.¹²⁶ In analyzing the patent at issue, the court drew a distinction between the method and system claims, addressing both the use and sale of these types of claims. The court noted that § 271(a) is ambiguous as to "how the territoriality requirement limits direct infringement

119. See generally Holbrook, *Territoriality*, *supra* note 4.

120. Compare *Synaptic Pharm. Corp. v. MDS Panlabs, Inc.*, 265 F. Supp. 2d 452, 462-63 (D.N.J. 2002), *Cybiotronics, Ltd. v. Golden Source Elecs., Ltd.*, 130 F. Supp. 2d 1152, 1167-71 (C.D. Cal. 2001), and *Quality Tubing, Inc. v. Precision Tube Holdings Corp.*, 75 F. Supp. 2d 613, 618-21 (S.D. Tex. 1999) (finding no infringement if sale is outside U.S.), with *SEB, S.A. v. Montgomery Ward & Co.*, 412 F. Supp. 2d 336, 342 n.8 (S.D.N.Y. 2006), *Wesley Jessen Corp. v. Bausch & Lomb, Inc.*, 256 F. Supp. 2d 228, 232-35 (D. Del. 2003), and *Fieldturf, Inc. v. Sw. Recreational Indus., Inc.*, 235 F. Supp. 2d 708, 730-34 (E.D. Ky. 2002), *dismissed on standing grounds*, 357 F.3d 1266 (Fed. Cir. 2004) (allowing infringement where ultimate sale is outside U.S.).

121. See *Rotec Indus., Inc. v. Mitsubishi Corp.*, 215 F.3d 1246, 1251-57 (Fed. Cir. 2000). Judge Newman would have concluded that offers in the United States to sell abroad cannot constitute infringement of a U.S. patent. See *id.* at 1258 (Newman, J., concurring).

122. 418 F.3d 1282 (Fed. Cir. 2005), *superseding* *NTP, Inc. v. Research in Motion, Ltd. (NTP I)*, 392 F.3d 1336 (Fed. Cir. 2004).

123. *NTP II*, 418 F.3d at 1289.

124. *Id.* at 1317-18.

125. *Id.* at 1290.

126. *Id.* at 1314-18. The court's reasoning shifted slightly from its first opinion. Originally, the court did not rely upon the system-method dichotomy, central to its second decision. See *NTP I*, 392 F.3d 1336.

where the location of at least a part of the ‘patented invention’ is not the same as the location of the infringing act.”¹²⁷ The court provided a more nuanced analysis of the various acts of infringement in § 271(a)—making, using, selling, or offering to sell—and the nature of claims at issue—a system or method.¹²⁸

The court concluded that in this case there had been an infringing use of the patented system.¹²⁹ Relying on precedent from the Court of Claims, *Decca Ltd. v. United States*,¹³⁰ the court held that the use of an invention occurs in “the place at which the system as a whole is put into service, *i.e.*, the place where control of the system is exercised and beneficial use of the system obtained.”¹³¹ In contrast to the use of a system, however, the court held that “a process cannot be used ‘within’ the United States as required by section 271(a) unless each of the steps is performed within this country.”¹³² Because one of the steps in this case was performed in Canada, there was no use of the patented method and thus no infringement.¹³³

The *NTP II* decision is striking on a number of levels. As a matter of statutory construction, its differential application of § 271(a)’s provisions to method and system claims runs contrary to the clear language of the statute. Section 271(a) provides protection for inventions generally, and inventions are defined as being any process,

127. *NTP II*, 418 F.3d at 1315.

128. *Id.*

129. *Id.* at 1282.

130. 544 F.2d 1070 (Ct. Cl. 1976).

131. *NTP II*, 418 F.3d at 1317.

132. *Id.* at 1318.

133. The court further reasoned that there were no sales or offers to sell the patented method, but not on the basis of territorial limits. Instead the court concluded that Congress did not intend inventions for methods to be infringed by sales or offers to sell. *Id.* at 1319-20. Although the court declined to adopt a bright-line rule that method claims could *never* be infringed by sales or offers to sell, the court reasoned that there was no infringement in the present case:

We need not and do not hold that method claims may not be infringed under the “sells” and “offers to sell” prongs of section 271(a). Rather, we conclude only that RIM’s performance of at least some of the recited steps of the asserted method claims as a service for its customers cannot be considered to be selling or offering to sell the invention covered by the asserted method claims. The sale or offer to sell handheld devices is not, in and of itself, enough.

Id. at 1320-21.

machine, manufacture, or composition of matter.¹³⁴ Nothing in the statute suggests that method claims should be treated differently from other types of claims for the purposes of infringement.¹³⁵ Resort to the legislative history is only appropriate when the statutory language is ambiguous, which it is not on this occasion. The infringement provisions apply to inventions, and as defined by the statute, inventions include methods. Indeed the court's methodology in interpreting § 271(a) is utterly inconsistent with its approach to § 271(f), where it concluded that § 271(f) applied to "inventions" of all types, including patented methods.¹³⁶

Similarly, the bifurcated approach to explaining the "use" of an invention belies the clear statutory structure. There is no reason that "use" of a method should be viewed as different from the "use" of a system. Under a traditional, strict territorial reading of patent rights, the court should have concluded that, as all of the limitations of the claim were not met within in the United States—be they method or systems limitations—there should not have been infringement.¹³⁷

The *NTP II* decision represents an approach to issues of extraterritoriality that differs significantly from that of the Supreme Court. The Supreme Court prefers to interpret the statute narrowly, leaving the decision to expand the reach of U.S. patent laws to Congress. In *NTP II*, the court, not Congress, performed this expansion. Moreover, *Decca*, unlike *NTP II*, involved the U.S. government and could be justified on the unique circumstances of the federal government being an infringer of an invention that necessitated extraterritorial aspects in order to function. At a minimum, this case demonstrates, as has already been seen in copyright and trademark law, that the traditional territorial

134. 35 U.S.C. § 101 (2000) (defining "Inventions patentable").

135. The court noted that there is no such distinction in the on-sale bar validity context for methods and other claims, although some offers to sell methods might more appropriately be viewed as licenses rather than invalidating offers to sell. Timothy R. Holbrook, *The Risks of Early Commercialization of an Invention: The On-Sale Bar to Patentability*, in II INTELLECTUAL PROPERTY AND INFORMATION WEALTH 37, 45-46 (Peter K. Yu ed., 2007).

136. See *supra* Part I.B.1.b.

137. Cf. *Deepsouth Packing Co., Inc. v. Laitram Corp.*, 406 U.S. 518, 524 (1972) (finding no infringement even though all of the components were manufactured in the United States, since the completed device was never entirely built in the United States).

principles of patent law are beginning to erode in an increasingly global marketplace.

2. Effects-based Approaches—Does the Conduct Affect the United States?

The Federal Circuit, in some circumstances, has broadened the reach of U.S. patent protection to cover acts outside of the United States, although the court's jurisprudence lacks a consistent theory that underlies this expansion. Commentators, recognizing this flaw, have offered a number of generalized approaches to determining the extraterritorial reach of a U.S. patent, offering some version of an "effects-based" test.¹³⁸ Under these approaches, there will be liability for infringement of the U.S. patent if there is some sort of "effect" on the market for the patented good within the United States.

This approach is similar to that used in trademark, antitrust, and securities law. In antitrust law, for example, U.S. law "applies to foreign conduct that was meant to produce and did in fact produce some substantial effect in the United States."¹³⁹ Securities law operates similarly: U.S. law applies if there is an intent to produce harm in the United States and an actual harm in the United States results from those foreign acts.¹⁴⁰ The Supreme Court has used a slightly narrower, but still effects-based methodology in trademark law, to determine whether there is jurisdiction under the Lanham Act. The Court identified three key factors: the effect on U.S.

138. See, e.g., Burk, *Transborder*, *supra* note 7, at 15 ("A statute based on this approach would extend the force of United States law to electronic actions that affect U.S. interests, regardless of the physical situs of the actor."); Osborne, *supra* note 7, at 611; Morris, *supra* note 7, at 352 ("This paper argues that United States patent infringement cases should be analyzed based on factors that determine the economic impact on the United States market rather than based on the statutory technicalities of where each element is made, used, or sold."); see also Chisum, *supra* note 4, at 608-09; Keyhani, *supra* note 7, at 65.

139. *Hartford Fire Ins. Co. v. California*, 509 U.S. 764, 796 (1993). Antitrust law, unlike patent law, requires an intent and an actual harm. See *Associated Gen. Contractors v. Cal. State Council of Contractors*, 459 U.S. 519, 545 (1983).

140. See, e.g., *Bersch v. Drexel Firestone, Inc.*, 519 F.2d 974, 988-89 (2d Cir. 1975); *Schoenbaum v. Firstbrook*, 405 F.2d 200, 208-09 (2d Cir. 1968), *overruled on other grounds*, 405 F.2d 215 (2d Cir. 1968) (en banc).

commerce, the citizenship of the offender, and the existence of conflicts between American and foreign law.¹⁴¹

Suggestions along these lines in patent law have generally taken two forms. One is an economically based effects test: if the foreign activity affects the domestic market in some way, then U.S. law should apply. A second approach is more technologically based: if there is some aspect of the device or technology that is in the United States, without a focus on the economic impact, then U.S. law should apply.

Economically based effects tests determine whether to apply U.S. patents to foreign activities based on the economic impact on the United States.¹⁴² The impact could be things such as lost sales or decreased prices within the U.S. market as a result of the use of the patented invention anywhere. The focus is not the physical location of the acts of infringement, but instead on where the impact of that infringement is felt. If the impact is in the U.S. market, then it would be appropriate to enforce the U.S. patent against acts that may have occurred in whole or in part outside of the United States.

In a global marketplace, relying only upon the economic impact of the foreign activities would provide considerable extraterritorial reach to U.S. patent law. Many U.S. patent holders operate on a transnational level, so seemingly any activity abroad could have implications for the U.S. market. The Blackberry case¹⁴³ demonstrates the modern reality of activities crossing borders—sales of the patented system and method undeniably impacted the market in the United States. Concerns over drug reimportation plans and gray market goods highlight that all markets are quite porous, and activities outside of the U.S. market could easily impact the U.S.

141. *Steele v. Bulova Watch Co.*, 344 U.S. 280, 286-87 (1952). Different than the approaches by the courts for patents, the trademark jurisprudence does account, on a limited basis, for the potential for a conflict of laws.

142. See Chisum, *supra* note 4, at 608-09; Melissa Feeney Wasserman, Note, *Divided Infringement: Expanding the Extraterritorial Scope of Patent Law*, 82 N.Y.U. L. REV. 281, 302-03 (2007). Morris has suggested the use of “territorial impact factors” as proxies for assessing the economic impact on the United States. Morris, *supra* note 7, at 352. These factors are (1) control, (2) beneficial use, and (3) ownership. *Id.* These factors, though, are not economic. As these are not purely economic considerations (such as impact on prices or quantity of sales in the U.S. market), I view this as more akin to a “technical” effects test.

143. *NTP II*, 418 F.3d 1282 (Fed. Cir. 2005).

market itself. If sales outside of the United States result in the patent holder being forced to reduce prices in the United States, then there has been an effect on the United States. Even without imports, lower prices in other markets may create downward pressure on prices within the United States.¹⁴⁴ With global markets, sales anywhere in the world could have an effect on the United States, providing very broad extraterritorial protection.¹⁴⁵

Other proposed effects-based tests do not rely on the economic impact on the U.S. market directly but instead focus on the nature of the invention. In essence, a court is to determine the locus of the infringement based on the use or characteristics of the patented invention. Under these approaches, aspects of control and the location of components factor heavily on whether U.S. law should govern. The technological focus can act as a proxy, in some regards, from pure economic considerations. Because of the focus on the technology itself, as opposed to markets, I categorize these as “technology-based” effects tests.

In essence, the Federal Circuit’s approach in *NTP II*, by focusing on the location of control and beneficial use, is such a technology-based approach.¹⁴⁶ The focus under this approach is not necessarily where the economic impact of the use takes place but instead a

144. See, e.g., Peter J. Hammer, *Differential Pricing of Essential AIDS Drugs: Markets, Politics and Public Health*, 5 J. INT’L ECON. L. 883, 893-94 (2002) (discussing reference pricing, and noting that “even without the threat of physical arbitrage, implicitly revealing information in the very act of setting lower prices in developing countries could lead to an unraveling of high prices in developed countries” (footnote omitted)).

145. Wasserman proposes six comity-based factors to limit this potential reach, drawn from the Ninth Circuit’s trademark jurisprudence. Wasserman, *supra* note 142, at 303-04. Included in these factors is the “relative impact within the United States as compared with the impact elsewhere.” *Id.* at 304. Although commendable in her concern for comity, it is unclear whether this factor is relative to the *size* of the market in the foreign country or is an absolute factor. See *id.* at 305 (noting that “[i]n making this determination, the size of markets in America versus abroad should be considered,” suggesting that this factor would be scaled in some way to account for the differing sizes between the United States and a foreign market). For example, the impact on the Hungarian market likely would be much smaller in an absolute sense than the United States simply because the Hungarian market is so much smaller. In contrast, the impact on a per capita or some other relative basis could be much larger. If the size of the foreign market is not taken into account, this factor would be no obstacle for application of a U.S. patent extraterritorially because the impact in an absolute sense would likely be greater than the impact on these smaller markets, although the relative impact could be different.

146. See *NTP II*, 418 F.3d at 1317.

technical assessment of where and by whom the invention is being controlled and used.

One commentator has suggested a variant of a technology-based effects test that focuses on specific components of the patented invention. This approach would identify the geographic location of the “patentably distinctive” aspects of the invention.¹⁴⁷ These components would be those that distinguish the patented device from those in the prior art, and the location of these parts governs whose law applies.¹⁴⁸ If the patentably distinctive aspects are found within the United States, then infringement under a U.S. patent would be appropriate. This approach thus focuses on the technology, but allows extraterritorial enforcement of a U.S. patent.

3. The Advantages and Disadvantages of Effects-based Approaches

The effects-based tests provide considerable protection to U.S. patent holders. Because the focus is the economic impact on the U.S. markets, these approaches could protect the patent holder effectively in a global market. These approaches afford broad protection for patent holders against any activity outside of the United States that impacts the U.S. market, which does not provide much of a limit.

All of the effects tests suffer from considerable flaws, however. The proposals fail to provide a metric for discerning when the relevant effect is sufficient to trigger a U.S. patent. For example, for the economically based approaches, the courts could use either a threshold or a cost-benefit approach. Under a threshold approach, some minimum threshold level of impact must be crossed to trigger U.S. law, regardless of the countervailing economic impact on the foreign jurisdiction. Defining how much is “enough” can be difficult if the threshold must be some non-trivial level.¹⁴⁹ Alternatively,

147. See Osborne, *supra* note 7, at 611.

148. *Id.* Osborne reaches this approach by interpreting *Decca* differently than the Federal Circuit in *NTP II. Id.* at 610-11. The opinion in *Decca* never expressly articulates this test and eschews the use of any bright-line tests. See *Decca Ltd. v. United States*, 544 F.2d 1070, 1083 (Ct. Cl. 1976) (“This conclusion does not rest on any one factor but on the combination of circumstances here present”).

149. The federal circuit courts are split on this issue as it relates to trademark law. Some

courts could balance the economic impact in the United States against the economic consequences in the foreign jurisdiction. If the impact is greater in the foreign jurisdiction, the lawsuit should be brought there. Such an approach is rather difficult to assess, particularly because it requires courts to measure complex economic considerations, not merely legal questions.

The technology-based effects tests suffer from a similar problem in that they fail to provide a metric for discerning when application of a U.S. patent is appropriate. Under the Federal Circuit's "control and beneficial use" test, for example, the court failed to clarify how much control or benefit must lie within the United States.¹⁵⁰ Similar to the economically based effects test, the Federal Circuit could require a threshold approach or a balancing approach. One could view *NTP II* either as requiring *all* control and beneficial use to lie within the United States, or as an exercise in balancing the various interests of the relevant countries. The absence of any consideration of Canadian interests in the case, however, suggests that the court was focusing exclusively on acts within the United States. The court did not use a balancing test of any sort. The same problem arises for the "beneficial use" aspect of the test: whether all or merely some of the beneficial use must lie within the United States. Alternatively, courts could apply a balancing test that measures the benefit within the United States against that outside of the United States, declining to apply U.S. law when the benefit is greater outside of the United States. The Federal Circuit has provided no answers to these questions.

A hypothetical demonstrates the problems with this approach. Imagine a computer system for streaming videos in which the owner of the webpage only uploads the movies, and customers purchase the right to stream the movie. Assume that the owner of the

courts, such as the Second Circuit, require a "substantial" effect on U.S. commerce, mirroring the test used to distinguish interstate from intrastate commerce. *See, e.g.,* *Vanity Fair Mills, Inc. v. T. Eaton Co.*, 234 F.2d 633, 642 (2d Cir. 1956). The Ninth Circuit instead requires only an effect because the "substantial effect" test is irrelevant to the Foreign Commerce Clause. *Wells Fargo & Co. v. Wells Fargo Express Co.*, 556 F.2d 406, 428 (9th Cir. 1977). The First Circuit requires a substantial effect only if the accused infringer is not a U.S. citizen; because Congress can regulate the acts of U.S. citizens abroad, the substantial effect test does not apply if the infringer is a U.S. citizen. *McBee v. Delica Co.*, 417 F.3d 107, 121 (1st Cir. 2005).

150. *NTP II*, 418 F.3d at 1317.

webpage uploads from Hungary all of the videos, but U.S. users can join the service and stream the movies. If the owner of a patent that covers this system attempted to assert infringement, there could be difficulty in identifying the locus of control. The users could be viewed as exercising control, per the *NTP II* decision, because they access the system and determine which movies they will watch. Likewise, the webpage owner exercises control by providing the various movies. The users, however, cannot upload anything, so the webpage owner exercises control in a different way. Moreover, users would be spread throughout the world, so even though some of the beneficial use would be within the United States, the *NTP II* test¹⁵¹ does not address whether use outside of the United States would also be relevant. Would the “beneficial use” aspect of the test be satisfied simply because *some* of the users lie within the United States, even if a far greater number are outside of the United States, or would the court balance the foreign users against the U.S. users to assess where the beneficial use lies? The court offers no clarification as to either of these aspects of the “control and beneficial use” test.¹⁵² Moreover, the Hungarian owner of the webpage benefits economically by receiving income from his customers. It is unclear whether the benefit to the webpage owner would be “beneficial use” and how the test accounts for that dynamic. Thus, under the “control and beneficial use” test, there is no metric as to how much of the system must be in the United States to satisfy the standard articulated. Nor is it clear who must control the system and to whom the benefit must run.¹⁵³ The standard therefore remains fatally ambiguous.

Similarly, while the “patentably distinctive” test¹⁵⁴ appears to be an elegant solution to the issue of extraterritoriality, nowhere is

151. *Id.*

152. The conspicuous failure to assess interests outside of the United States again suggests that the former is all that would be required, and uses outside the United States would not be relevant in the court’s calculus.

153. See O’Leary Smith, *supra* note 7, at 458 (noting ambiguity of “beneficial use test”). O’Leary Smith nevertheless advocates for elimination of the “control” aspect of the Federal Circuit’s test, which would result in even greater extraterritorial scope to U.S. patents. She recognizes that such an expansion risks creating comity issues, but nothing in her analysis suggests when such comity concerns should, if ever, enter a court’s analysis. See *id.*

154. See Osborne, *supra* note 7, at 589.

“patentably distinctive” defined. It is not a term of art in patent law. Moreover, the author of a notable article on the test also fails to explain the contours of relevant evidence to make this determination.¹⁵⁵ Is it the aspect of the invention that provides novelty or nonobviousness? Is the patentee bound by representations made to the patent office, even if later proven false, or only to arguments proffered by the examiner? Can expert testimony be used to counter the public record? All of these open questions belie the test’s facial simplicity. Indeed, there could be multiple aspects of the invention that distinguish it from the prior art. This test provides no answer as to which law governs if those two aspects are in different countries. The genius of an invention may be the actual combination of previously known components.¹⁵⁶ For example, the creation of Post-It Notes®¹⁵⁷ involved the use of two known elements: an adhesive and paper. When the combination is key to the invention, the system as a whole would be the “patentably distinctive” aspect of the invention, and there would be no single geographic location for the patentably distinctive part. The proposed test would not provide an answer. The entire concept of a particular “patentably distinctive” aspect of an invention harkens back to the rejected concept of the “heart” or “gist” of the invention.¹⁵⁸ There need not be a singular, defining feature of an invention that is key to its patentability, which renders this test difficult, if not impossible, to apply.

More importantly, nearly all of these effects-based tests focus exclusively on the impact on U.S. markets and ignore the intellectual property policies of the relevant foreign countries.¹⁵⁹ Although

155. *See id.*

156. *See* Ruiz v. A.B. Chance Co., 357 F.3d 1270, 1275 (Fed. Cir. 2004).

157. U.S. Patent No. 5,194,299 (filed Dec. 31, 1986).

158. *See* Aro Mfg. Co. v. Convertible Top Replacement Co., 365 U.S. 336, 345 (1961) (“[T]here is no legally recognizable or protected ‘essential’ element, ‘gist’ or ‘heart’ of the invention in a combination patent.”).

159. One exception is the proposal by Wasserman, who would incorporate a variety of comity-based factors into her analysis. *See* Wasserman, *supra* note 142, at 303-06. Her proposal, however, is limited to transnational systems such as the *NTP II* case and does not provide a generalized methodology for addressing all extraterritorial issues. *See id.* at 309 (“To solve the problem of divided infringement, this Note proposes adopting a substantial effects test, constrained by comity concerns.”). Her comity factors also differ considerably from the analysis offered in this Article and do not make a conflict with foreign patent law or

TRIPS has afforded a certain level of harmonization, it still grants flexibility for countries to afford higher protection or to exclude protection for certain inventions.¹⁶⁰ Allowing the mere effect on U.S. markets to generate liability for acts that would not infringe within that country would undermine those policies and that nation's sovereignty. Accordingly, a truly economically driven effects test would extend the reach of a U.S. patent to the four corners of the globe, undermining the various policies in place in other countries and providing considerable—and inappropriate—reach to a U.S. patent.

The Federal Circuit's decision in *NTP II* demonstrates this problem. The Federal Circuit failed to consider the Canadian government's interest in the acts occurring within its territory.¹⁶¹ The Canadian government filed amicus briefs at the Federal Circuit decrying this oversight:

The reissued panel opinion lacks any acknowledgement or discussion of the effect of, or the effect upon, long-established international understandings and agreements regarding national jurisdiction over intellectual property Explicit articulation of such principles will not merely facilitate the evolution of international intellectual property law, nor simply satisfy the Supreme Court's admonition in *F. Hoffman-LaRoche, Ltd. v. Empagran, S.A.*, 542 U.S. 155, 124 S. Ct. 2359 (2004), to address such matters in statutory construction analyses when potential issues of extraterritoriality are implicated, but also avoid what otherwise could appear to some as a unilateral assertion of patent infringement jurisdiction, justified solely in

ownership determinative. *See id.* at 304 (“Nonetheless, this should not be a dispositive factor because patent law differs substantially from country to country.”). Some of these factors, such as the intent of the infringer, are subjective and difficult for either patent holders or potential competitors to assess *ex ante*.

160. *See generally* TRIPS, *supra* note 8.

161. *See id.* In this regard, the Federal Circuit's opinion is inconsistent with the precedent upon which it was based, *Decca Ltd. v. United States*, 544 F.2d 1070 (Ct. Cl. 1976). The Court of Claims recognized that part of its decision was based on the fact that there was no conflict of foreign law. *Id.* at 1074 (“Neither is there a probable conflict with the patent laws of other countries.”). The Court of Claims, therefore, at least acknowledged the potential for a conflict of laws, which the Federal Circuit ignored.

terms of national law, over the technology of a trans-national system.¹⁶²

The Canadian government therefore recognized the conspicuous absence of any thought as to the international dimension of the case. The government carefully refrained from saying that the decision was wrong, instead emphasizing that the court's failure to explicitly consider Canada's interest was methodologically infirm.

The *NTP II* decision is a Solomonic effort to apply a strict territorial rule in one regard for method claims, and a technology-based effects test in another regard for systems claims, basing infringement on the use of the system, rather than the construction of the system itself. In both instances, the opinion generally fails in its efforts by offering both an overly tortured interpretation of § 271(a)¹⁶³ and by relying on a boundless "control and beneficial use" test.

C. Neither Strict Territoriality Nor Effects-based Tests Are Satisfactory

Neither a strict territorial approach nor a broad "effects" test is satisfying. These approaches to extraterritoriality contain significant flaws. A strict territorial approach is true to the presumption against applying United States laws outside the territorial United States, thus facilitating comity and reducing the risk of an affront to the sovereignty of another country. Of course, the strict approach means that either Congress will have to act retrospectively to close a hole in the laws—which necessarily means that protection for some patents will already have slipped—or the courts will be forced to articulate strained interpretations of statutory provisions as the Federal Circuit did in *Eolas*,¹⁶⁴ *AT&T*,¹⁶⁵ and *NTP II*.¹⁶⁶ Moreover,

162. Brief for the Government of Canada as Amicus Curiae Supporting the Petition of Research in Motion, Ltd. for Rehearing En Banc, *NTP II*, 418 F.3d 1282 (Fed. Cir. Aug. 19, 2005) (No. 03-1615).

163. 35 U.S.C. § 271(a) (2000).

164. *Eolas Techs., Inc. v. Microsoft Corp.*, 399 F.3d 1325 (Fed. Cir. 2005).

165. *AT&T Corp. v. Microsoft Corp.*, 414 F.3d 1366 (Fed. Cir. 2005), *rev'd*, *Microsoft Corp. v. AT&T Corp.*, 127 S. Ct. 1746 (2007).

166. *NTP II*, 418 F.3d 1282.

the focus of the various extraterritorial statutory provisions is entirely on the United States; under a plain reading of those provisions and as interpreted by the Federal Circuit, courts give no consideration of potential countervailing interests of the countries in which the relevant activities occur. Instead, the focus is myopically on the United States only.

An effects approach allows the tailoring of patent law to protect U.S. inventors but ignores the implication of such holdings on activities in foreign countries. The U.S.-centric approach undermines the policies and sovereignty of foreign countries that may not provide protection to an inventor for a variety of legitimate reasons. There is little to no consideration of the interest or concerns of those other countries. These proposals are in sharp contrast to another area of intellectual property, trademark law, where the Supreme Court and circuit courts of appeal consider potential conflicts of law as relevant in assessing whether there is jurisdiction over the cause of action.¹⁶⁷

The failure to consider the interests of the relevant foreign countries is universal to all of the above approaches, and all the approaches suggested by commentators. Part II explores this oversight and proffers a unique, previously unarticulated approach that explicitly balances the interests of the United States with those of the country that is implicated by the infringing activity.

II. A NEW APPROACH—EXPRESSLY CONSIDERING FOREIGN PATENT LAW

The glaring flaw in all of the effects-based approaches is their failure to take into account foreign patent law. Countries can differ significantly on these issues. For example, although the United States has taken a broad view of eligible subject matter for patents, others have not been as receptive, denying patents on higher-order

167. *Steele v. Bulova Watch Co.*, 344 U.S. 280 (1952); *Wells Fargo & Co. v. Wells Fargo Express Co.*, 556 F.2d 406, 428 (9th Cir. 1977) (adopting jurisdictional rule of reason test that considers comity and conflict of laws); *Vanity Fair Mills, Inc. v. T. Eaton Co.*, 234 F.2d 633, 642-43 (2d Cir. 1956). The First Circuit treats issues of comity as pertinent only to “questions of whether a court should, in its discretion, decline to exercise subject matter jurisdiction that it already possesses.” *McBee v. Delica Co.*, 417 F.3d 107, 111 (1st Cir. 2005).

living animals,¹⁶⁸ computer software,¹⁶⁹ and business methods.¹⁷⁰ Other countries provide more rigorous protection for parties who begin to use an invention before the patent issues.¹⁷¹ An approach to extraterritoriality that ignores these substantial differences has the potential to create significant conflicts of law and potentially can undermine the sovereignty of countries whose views of patent law differ from the United States.¹⁷² In contrast, restricting patents strictly to the territorial United States is overinclusive, denying protection for a U.S. patent holder even in circumstances where there would be no conflict with foreign law. The mere *potential* for a conflict, not an actual conflict, means that the patent holder will be denied protection. This approach is also fundamentally flawed.

The time has come for a uniform approach to these territorial issues, instead of the haphazard analyses that the above cases have taken. A uniform, consistent means of addressing territorial concerns, absent from the case law or the literature, is an approach that balances the interests of the U.S. patent holder and the interests of the affected country. This novel approach could be used in lieu of further modifications for Congress or, more narrowly, as an implementation of the extraterritorial reach of § 271.¹⁷³ Indeed, it would alleviate the need for Congress to serially enact measures

168. See, e.g., *Harvard Coll. v. Canada (Comm'r of Patents)*, [2002] 4 S.C.R. 45, para. 155 (Can.) ("I am not satisfied that the definition of 'invention' ... is sufficiently broad to include higher life forms."). See generally Margo A. Bagley, *Patent First, Ask Questions Later: Morality and Biotechnology in Patent Law*, 45 WM. & MARY L. REV. 469, 528-29 (2003).

169. See European Patent Convention pt. II, ch. 1, art. 52(2)(c), Oct. 5, 1973, 1065 U.N.T.S. 272.

170. See *id.*

171. See Mark A. Lemley & Colleen V. Chien, *Are the U.S. Patent Priority Rules Really Necessary?*, 54 HASTINGS L.J. 1299, 1302 (2003). At present, the U.S. provides prior user rights for only business method patents. 35 U.S.C. § 273 (2000).

172. For an outstanding discussion of the use of foreign law to interpret domestic intellectual property laws, see Edward Lee, *The New Canon: Using or Misusing Foreign Law To Decide Domestic Intellectual Property Claims*, 46 HARV. INT'L L.J. 1 (2005). Robins's proposal would consider foreign law as well, although only at the primary level of subject matter eligibility. See Robins, *supra* note 10, at 1310-13. Her proposal, however, only considers foreign patent law as it relates to subject matter eligibility requirements as articulated under TRIPS and not a given country's application of particular patentability principles, such as inventive step (obviousness) or, importantly, potential differences in the ownership of the patent. See *id.* at 1312-13. These potential conflicts create strong reasons to decline to apply U.S. law extraterritorially.

173. 35 U.S.C. § 271 (2000).

to close perceived loopholes in the territorial nature of U.S. patent rights.

This Article's proposal would require U.S. courts to explicitly contemplate foreign patent law. The basic premise is that, for there to be infringement of a U.S. patent, the patent holder would also have to show that there would be infringement in the foreign jurisdiction. If that is the case, then the harm from extraterritorially enforcing the U.S. patent is mitigated significantly. On the other hand, if there is some reason that infringement would not be found in the foreign country, then infringement should not be found under U.S. law. By explicitly contemplating possible differences in the law, this comparative approach guards against creating such conflicts and preserving these distinctions. American courts would therefore explore the foreign country's patent law, analyzing issues of patent validity and infringement.

This approach—in essence making the enforceability of a U.S. right contingent on the availability of that right in a foreign country—is not unprecedented. A variant can be seen in the field of criminal law. A country may want to prosecute someone who committed a crime within that country but who resides elsewhere. In order to obtain jurisdiction over the person, the country will have to request extradition of the suspect from the current country of residence.¹⁷⁴ One basis for the resident country to decline the request is that the charged offense is not a crime in the resident country.¹⁷⁵ The dual criminality principle requires that the activities of the accused constitute a crime in both jurisdictions for extradition to be appropriate, even if the acts occurred only in one of the countries.¹⁷⁶ The ability to extradite a suspect is therefore contingent on substantive foreign law. This requirement is found in many extradition treaties¹⁷⁷ and serves a variety of political purposes,

174. RESTATEMENT (THIRD) OF FOREIGN RELATIONS § 475 (1986).

175. See *id.* § 476(1)(c) (“A person sought for prosecution or for enforcement of a sentence will not be extradited ... if the offense with which he is charged or of which he has been convicted is not punishable as a serious crime in both the requesting and the requested state ...”).

176. *Id.*

177. See Jonathan O. Hafen, Comment, *International Extradition: Issues Arising Under the Dual Criminality Requirement*, 1992 BYU L. REV. 191, 195; see, e.g., 18 U.S.C. § 3181(b)(1) (2000) (requiring “evidence ... presented by the foreign government that indicates that had the

such as protecting a country's residents from unfair prosecution abroad and providing reciprocity between contracting nations.¹⁷⁸ Of course, in extradition, the foreign court decides its own law, so the U.S. court would not be required to ascertain that foreign law.¹⁷⁹ But the use of foreign law as a contingency to the application of U.S. law is nevertheless not unprecedented.¹⁸⁰

Under this proposal, the extraterritorial enforcement of a patent would be permissible only when the relevant acts would also constitute infringement in the relevant foreign country or countries. If the acts would not be infringing in the foreign country, then there will be no infringement of the U.S. patent, just as there would be no extradition of the accused.¹⁸¹ This proposal differs from the duality principle in that it is substantive. The duality principle in criminal law only implicates the ability of a country to deny extradition and not the substance of the underlying crime; once extradited, the accused would be prosecuted under the law of the state that had

offenses been committed in the United States, they would constitute crimes of violence"); Extradition Treaty, U.S.-Peru, art. II, sec. 1, July 26, 2001, 2001 U.S.T. LEXIS 94 ("An offense shall be an extraditable offense if it is punishable under the laws in both Contracting States by deprivation of liberty for a maximum period of more than one year or by a more severe penalty."); *Ordinola v. Hackman*, 478 F.3d 588, 594 n.7 (4th Cir. 2007) ("The dual criminality requirement ensures that the charged conduct is considered criminal and punishable as a felony in both the country requesting the suspect and the country surrendering the suspect.").

178. See Hafen, *supra* note 177, at 194-95. The dual criminality principle also shares some of the problems of this Article's proposal, such as the ability of courts to discern foreign law and the institutional competence of the courts vis-à-vis the executive. *Compare id.* at 196-97 ("Courts began to defer to executive decisions regarding the desirability [sic] of extradition, due both to the increasing complexity of ascertaining violations of two nations' laws and judicial recognition of the executive's role in establishing foreign policy."), *with supra* notes 159-63 and accompanying text (discussing difficulties in assessing foreign patent law and institutional competency of the courts).

179. See RESTATEMENT (THIRD) OF FOREIGN RELATIONS § 476 cmt. d. (1986).

180. Another approach could be to have U.S. courts certify questions of foreign patent law to the relevant jurisdiction's highest court, similar to what occurs within the U.S. federal system. See 28 U.S.C. § 1254(2) (2000); see also 4 ME. REV. STAT. ANN. tit. 4, § 57 (2007); *Rivkin v. Century 21 Texan Realty LLC*, 494 F.3d 99 (2d Cir. 2007). While this approach would have the benefit of having a foreign court interpret its own law, such referral would require a treaty or other agreement. The proposed system could be adopted by the United States without the need to complete such a complex agreement. See Dinwoodie, *supra* note 3, at 552 (discussing "international agreements and practices, national and regional laws, developing post-national groupings, and conflicts values").

181. RESTATEMENT (THIRD) OF FOREIGN RELATIONS § 476(1)(c) (1986).

requested extradition.¹⁸² Regardless, it provides an example of where differences in national laws can have a considerable impact on the ability to enforce a given country's laws.

This solution originates in part from the literature on choice of law and conflicts of law. Generally, when activity implicates multiple states or countries, courts are confronted with the issue of which state's (in the domestic context) or country's (in the international context) law to apply.¹⁸³ These methods typically result in the selection of a particular jurisdiction's law to address the issue. Although choice of law doctrine has been criticized, courts often perform an interest analysis, applying the law of the jurisdiction that has the greatest "interest" in the litigation, however that "interest" is measured.¹⁸⁴ Consequently, the question generally is *which* law to apply. The approach articulated here is different in that it does not seek to choose a certain country's law to apply. Instead, it applies *all* of the relevant law, and if there would be an inconsistent result under any of that law, then there is no liability for infringement of the U.S. patent.

This method accords due respect to the variances that exist among nations regarding patent law. The comparative method also facilitates a greater dialogue on patent law and standards between various countries. This dialogue has the potential to lead to the development of international patent law norms; it could also serve to identify points of considerable disagreement between countries which may need to be the source of future, political negotiations. Given the generally slow process of treaty negotiations and their inability to adapt to ever-evolving technologies, use of a judicial colloquy could help establish international norms that could reduce the transaction costs for international actors.¹⁸⁵ This private law lever could act as an important and powerful supplement to the public law mechanisms.

182. *Id.* § 476 cmt. d.

183. See RESTATEMENT (SECOND) OF CONFLICT OF LAWS § 6 (1971). The term "state," as used in the Restatement, "denotes a territorial unit with a distinct general body of law." *Id.* § 3.

184. See, e.g., *In re Koreag, Controle et Revision S.A.*, 961 F.2d 341, 350 (2d Cir. 1992) ("The federal common law choice-of-law rule is to apply the law of the jurisdiction having the greatest interest in the litigation." (citing *Wells Fargo Asia Ltd. v. Citibank, N.A.*, 936 F.2d 723, 726-27 (2d Cir. 1991))).

185. Dinwoodie, *supra* note 3, at 492-93.

Of course, taken too far, a balancing approach could swallow all possible predictability in intellectual property law. One approach under the auspices of a balancing methodology would be to take into account all relevant national policies, international treaties, and other potential norms in a “totality of the circumstances” approach. A court could then articulate an outcome that balances and best effectuates these various policies. Of course, the resulting rule could be one that is not present in any given state’s patent laws. Moreover, predicting the outcome of such an approach would be difficult. The uncertainty that attends such an approach would be detrimental to the business community, which dislikes risks and prefers certainty in planning. Indeed, it would undermine the perceived benefits of providing a more concise means for these businesses to operate in a global marketplace. Finally, if confronted with such a myriad of sources, U.S. courts may be tempted to stick with the familiar—American law—and thus lawsuit outcomes may be skewed towards U.S.-driven outcomes as opposed to a careful consideration of international and foreign laws. This bias would risk undermining the benefit of the balancing approach.¹⁸⁶

As such, I eschew that variant of the comparative approach and articulate particular factors that would be relevant in assessing the application of U.S. patent law. These factors could be viewed as presumptions, in a softer version of this method, or as absolute requirements, acting a bit harshly but providing somewhat more certainty.¹⁸⁷ The approach I articulate here is the hard version—

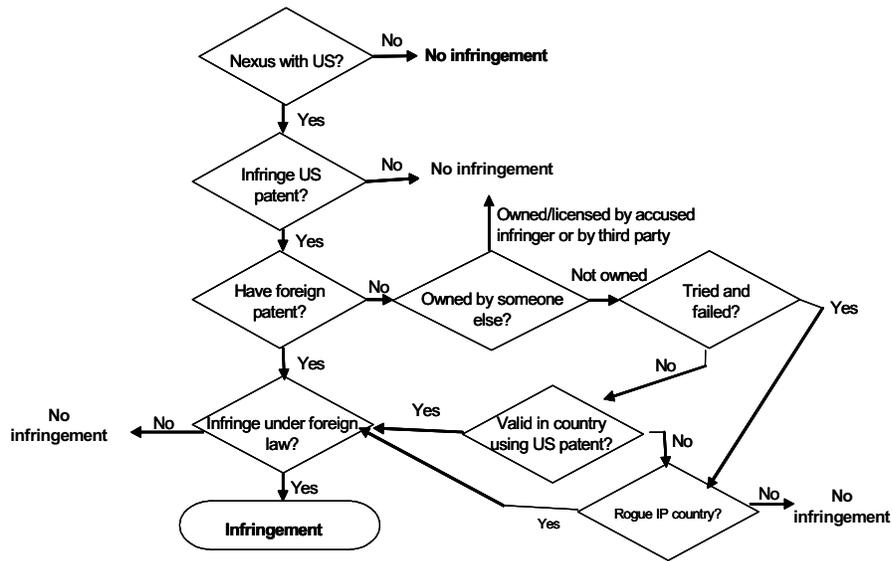
186. In the copyright context, Professor Graeme Dinwoodie has argued for this type of approach. Dinwoodie has recognized that courts, in applying this approach, ultimately could use a substantive legal rule that exists in no country at all but instead is the result of balancing a variety of concerns. *See id.* at 542-43 (“[A] court faced with an international copyright dispute would not necessarily apply the copyright law of a single state to the contested issues. Instead, it would consider whether the international dimension implicated policies of other states or the international copyright system, and develop (and apply) a substantive rule of copyright law that best effectuates this range of policies.” (footnotes omitted)). I have previously criticized this approach in relation to patent law. *See* Holbrook, *Territoriality*, *supra* note 4, at 752, 757-58. Those criticisms are equally appropriate here.

187. *See* Carolyn Shapiro, *The Limits of the Olympian Court: Common Law Judging Versus Error Correction in the Supreme Court*, 63 WASH. & LEE L. REV. 271, 325 n.215 (2006) (“And indeed, creating presumptions is another mechanism that the Court might use to provide more guidance to the lower courts in standard-governed areas of law.”); *cf.* Timothy R. Holbrook, *Substantive Versus Process-based Formalism in Claim Construction*, 9 LEWIS & CLARK L. REV. 123, 132 (2005).

that satisfaction of the various conditions is necessary for extraterritorial application of a U.S. patent.

The following analysis provides a structured methodology for courts to follow when deciding whether to apply a U.S. patent to foreign conduct. The steps in the analysis help a court determine whether application of U.S. law would be appropriate. Figure 1 shows a flowchart of these steps, demonstrating how they interrelate.

Figure 1



A. Is There Some Nexus to the United States?

First, for allegedly infringing acts to implicate a U.S. patent, necessarily there must be some sort of connection to the United States.¹⁸⁸ This requirement effects a degree of localization for the cause of action: some aspect of the act must be geographically connected to the United States. In order to assess *which* patent is implicated, there must be some nexus to a given jurisdiction. Absent a localization principle, courts would not know which patents to evaluate.¹⁸⁹

In order to evaluate whether there is a nexus to the United States, one can think of patent infringement as an attempt by the infringer to appropriate the invention, either physically or commercially.¹⁹⁰ This prong of the test would ask whether there was an attempt to appropriate the invention within the United States in some way, physically or commercially. Generally, the case law and statute already have identified acts that would qualify: importation, exportation, offers to sell in the United States where the completed sale will be outside of the United States, and uses of part of a system in the United States with part outside of the United States.¹⁹¹ Importantly, this list is not exhaustive—the courts are free to identify other situations where there is a sufficient nexus to the United States. Uses of a patented system within the United States by U.S. citizens would be sufficient to satisfy this condition, such as the hypothetical scenarios posed in criticizing the *NTP II* standard.¹⁹² If there is an arguable attempt to appropriate the invention with some connection to the United States—either commercial or physical—then this factor should be satisfied.

188. See *supra* note 17 and accompanying text (quoting 35 U.S.C. § 271(a) (2000)).

189. This need contrasts with copyright law, where the comparison is between two different works, rather than a government issued patent right. See Dinwoodie, *supra* note 3, at 534-35 (arguing against a localization principle in copyright law). Thus, in copyright, the need for localization is not as significant—courts simply compare the two works. In patent law, however, the comparison is to the patent's claims, not simply the invention.

190. See Holbrook, *Threat of a Sale*, *supra* note 26, at 805.

191. See 35 U.S.C. § 271(f)-(g) (2000); see also *Waymark Corp. v. Porta Sys. Corp.*, 245 F.3d 1364 (Fed. Cir. 2001); *Spindelfabrik Suessen-Schurr v. Schubert & Salzer Maschinenfabrik Aktiengesellschaft*, 903 F.2d 1568 (Fed. Cir. 1990).

192. See *supra* Part I.B.3.

This condition, however, is not an “effects test” by another name. The nexus must be greater than merely an impact on the market. There must be a physical or commercial attempt to appropriate the invention with a tie to the United States. Mere indirect economic impacts on price within the United States, for example, would not be sufficient. The focus is on the invention, not the market. Moreover, this factor is not alone a sufficient condition for applying U.S. law, in sharp contrast to the effects-based approaches articulated above. This factor is merely a threshold determination necessary to determine whether the court should even consider applying U.S. law.

B. Ignoring Territorial Lines, Would the U.S. Patent Be Infringed?

If there is some sort of domestic nexus, then the U.S. patent holder would have to demonstrate that, ignoring territorial limits, the accused device would infringe the U.S. patent. For example, in the *NTP II* case, the patent holder would have had to demonstrate that, ignoring the fact that part of the system was in Canada, the accused device would infringe the system and method claims of the U.S. patent. If there is no infringement of the U.S. patent in this context, then there is no reason to consider extending the rights of the patents outside of the territorial United States.

Such an approach is not at all unprecedented. Courts perform this precise analysis when applying § 271(f) and (g).¹⁹³ In both of those provisions, the patent claim must read on the accused device or process, but the accused device in both cases is outside of the United States. For § 271(f), the potential assembly of the completed device is outside of the United States, and for § 271(g), the process is being performed outside of the United States. For there to be infringement, however, these external activities must satisfy each and every limitation of the claimed invention, notwithstanding their use or existence outside of the United States.¹⁹⁴

193. See *supra* Parts I.A.1, I.A.2.b.

194. This requirement is comparable to the Copyright Act's restrictions in the importation of infringing phonorecords. Such importation is precluded if the work otherwise would violate the copyright. See 17 U.S.C. § 602 (2000).

Also contained within the analysis of whether the U.S. patent would be infringed is an analysis of whether the U.S. patent is valid and enforceable under U.S. law. If the patent is invalid or unenforceable, then the case is over—there would be no infringement. If there would be infringement of the valid and enforceable patent, however, then the court must consider the implicated foreign patents and patent law.

C. Does the U.S. Patentee Have a Patent in the Relevant Country?

Because the infringing conduct applies not only to the United States but also to a foreign country, a critical element in the analysis is whether the conduct would also be viewed as infringing in the foreign country. In order to make that assessment, however, courts need to identify who, if anyone, actually owns a patent on the invention in the relevant country or countries. The issues relevant in this approach will vary if the U.S. patent holder does or does not have a patent in that country. The existence, or lack, of a foreign patent will not preclude application of U.S. law, but it does affect the nature of the balancing to be done. In essence, this question represents a split in the analytical chain to be used here.

1. The Patentee Has Patents in All Relevant Countries

If the patentee has patents in the relevant countries that cover the accused device, then concerns about usurping the law and policy of those countries are mitigated to a great extent. Generally, if the patent has issued, there will not be large policy conflicts in the litigation. Although any individual patent may be invalid, the existence of patents reduces the risk that the country has a sweeping policy against patenting certain subject matter, such as business methods, software, or human genes.

An issue could arise under this assessment when the U.S. patent holder possesses an intellectual property right akin to a U.S. patent but which is not truly a “patent” as we think of them in the United States or under our international obligations. For example, some countries provide intellectual property rights to protect industrial

designs and for less significant technological advances.¹⁹⁵ One option would be for the court to conclude that such intellectual property protection does not count as a “patent,” and the analysis would continue as if the U.S. patent holder did not have a patent in the relevant countries. Alternatively, the court could perform a functional analysis to determine whether the rights provided in the foreign country are sufficiently similar to a patent to allow application of this methodology. If the court finds the rights are sufficiently analogous, then the court would proceed as if the U.S. patent holder has rights in the foreign country. This latter approach, however, would create some uncertainty and difficulty in comparing the nature of the rights afforded these various intellectual properties. As such, I would have the courts simply treat the presence of non-patent protection as a lack of patent protection in the relevant country. Because failure to have foreign patent protection is not fatal to an infringement suit under this proposed methodology, the U.S. patent holder may yet be granted protection, and the difficulty in assessing the relatedness of the various types of protection would be avoided.

Of course, having patents in all of the relevant countries also means that the patent owner could sue in those other countries. One advantage of the proposed approach, however, is that it mitigates the need for piecemeal litigation for patent holders.¹⁹⁶ Requiring patentees to sue in each and every country to enforce their patents is costly and incredibly difficult. Moreover, even having patents in all relevant countries may not eliminate territoriality concerns, particularly if the system crosses national boundaries. It would be possible for such divided claims to still evade the patent system of both countries if those countries generally use a strict territorial

195. See, e.g., TRIPS, *supra* note 8, arts. 25-26 (discussing industrial designs); *In re Carlson*, 983 F.2d 1032, 1036-38 (Fed. Cir. 1992) (discussing design-like protection under German Geschmacksmusters); IP Australia, The Innovation Patent, http://www.ipaustralia.gov.au/patents/what_innovation.shtml (last visited Mar. 29, 2008) (discussing Australia’s “innovation patents” for innovations not “sufficiently inventive” to meet “the inventive threshold required for standard patents”).

196. Another option for patent holders to streamline litigation would be to sue in one court for infringement of all patents, domestic and foreign. The Federal Circuit has foreclosed this option by prohibiting U.S. district courts from hearing claims of infringement of foreign patents. See *Voda v. Cordis Corp.*, 476 F.3d 887 (Fed. Cir. 2007).

approach to patent law. Thus, even owning patents in all of the countries relevant in the dispute does not guarantee that the patent owner will be able to bring suit within a given country. For example, suppose that the Blackberry system had components in both Canada and Mexico. Likely, the patent holder could not successfully sue in Canada or Mexico because the system straddles multiple jurisdictions. The infringer would be immunized from liability in any country.

If the patent holder has patents in all of the relevant countries, the courts should respect the validity of the foreign patents. While a court can obviously invalidate the U.S. patent, which would preclude any infringement at all and thus would still act as a complete defense, the courts generally should be hesitant to assess the validity of a foreign patent.¹⁹⁷ Patents, as grants from national governments, are vested with a considerable amount of sovereignty from the granting nation. A U.S. court's assessment of the validity of the patent risks undermining the authority of a different, sovereign country. In essence, a U.S. court would be telling the foreign patent office that it did not know how to apply its own law. Therefore, the U.S. court should treat the foreign patent as valid.

A variation of this proposal would allow an accused infringer to challenge the foreign patent's validity (although the effect would not be to truly invalidate the patent because U.S. courts lack that authority).¹⁹⁸ Consideration of the validity of the foreign patent under foreign law is possible under this methodology, although it does greatly complicate the litigation. Not only would the validity of the U.S. patent be in dispute but also that of the foreign patent, creating multiple invalidity issues. In order to assess the validity of the foreign patent, the court would have to know the standards for validity in the various countries and the standards for prior art, which could differ. Countries may have varying degrees of grace periods for applicants or may adhere to a strict view of first-to-file

197. *Cf. id.* at 902 (“[A] patent right to exclude only arises from the legal right granted and recognized by the sovereign within whose territory the right is located. It would be incongruent to allow the sovereign power of one to be infringed or limited by another sovereign's extension of its jurisdiction.”).

198. Such an analysis will be done under this proposal if there is no patent in the relevant country. *See infra* Part II.C.2.c.

novelty and inventive step. Allowing collateral challenges to the foreign patent would therefore increase the complexity of the domestic litigation. Although there is reason to believe that U.S. courts should not have significant difficulty in interpreting foreign law, given the general levels of harmonization on issues of validity, the resulting complexity and assault on the sovereign act of a foreign country counsel against allowing a challenge to the foreign patent.¹⁹⁹ Instead, it is preferable to have a presumption that the foreign patents are valid.

2. The Patentee Does Not Have Patents in All Relevant Countries

Possessing a patent in all the countries of interest would not be a prerequisite to applying U.S. law extraterritorially. In the circumstance that the U.S. patent holder does not have patents in every relevant country, then the analysis becomes more complicated. There are a variety of legitimate reasons for why a U.S. patentee may not have obtained patent protection in the relevant countries. For one, given that patent rights are still territorially based, obtaining a patent in every country could be prohibitively costly. Moreover, if infringers are in fact using the territorial limits of patents to arbitrage the system, they could readily choose jurisdictions where patent holders are unlikely to file because the ex ante potential for return to the patentee from that market may not justify expending the resources to obtain patent protection. Thus, this approach affords a level of fairness to the patentee in an increasingly global marketplace.

This does mean, of course, that there may be infringement for acts taking place in a “patent free zone,” but the requirement for some nexus to the United States limits the extension of U.S. law to some degree. Moreover, if there is a state-based policy reason for the “patent free zone,” as opposed to simply the failure of the patent holder to obtain patent protection in the relevant country, then that situation is afforded different treatment in an effort to respect the

199. See *Voda*, 476 F.3d at 901 (“[W]e see no reason why American courts should supplant British, Canadian, French, or German courts in interpreting and enforcing British, Canadian, European, French, or German patents.”).

policy choice of the impacted country. In particular, if the U.S. patent owner *tried* to obtain a patent in the relevant country and failed to do so, then there would be a strong suggestion that the country has some objection to this invention that must be taken into account. A necessary threshold evaluation to make, then, is *why* does the U.S. patent holder not have a patent in the relevant country?

a. U.S. Patent Holder Does Not Have Patent Because Someone Else Does

One reason the U.S. patentee may not have protection in the relevant country is that someone else already has obtained a patent there. Rules determining who is entitled to a patent vary from country to country. As a case in point, the United States's unique "first-to-invent" system could create variations in patent ownership in contrast to every other foreign system's "first-to-file" system.²⁰⁰

The patent could be owned by the actual accused infringer, or the accused infringer could be a licensee of the patent owner in the relevant country. If so, then there is a clear conflict between the patent laws of the foreign country and the United States in terms of ownership. Courts in other contexts have recognized that ownership can be a source of conflict and a reason to decline applying U.S. law.²⁰¹ The accused infringer has the right to practice the invention in that country. This situation would be even stronger than an accused infringer having a personal defense in the country, such as prior user rights. If the accused infringer is in fact the patent owner

200. *See, e.g.*, 35 U.S.C. § 102(a), (g)(2) (2000); European Patent Office, Patents Around the World, <http://www.epo.org/focus/patent-system/patents-around-the-world.html> (last visited Mar. 29, 2008) (discussing the European Patent Office, the U.S. Patent and Trademark Office, and the Japan Patent Office, as well as the key differences between the "first-to-file" and "first-to-invent" systems).

201. *See Steele v. Bulova Watch Co.*, 344 U.S. 280, 286-87 (1952) (discussing ownership conflicts in the context of registered trademarks); *cf. Wasserman*, *supra* note 142, at 304-05. I consider this factor to be determinative, whereas Wasserman would merely treat it as one factor to be balanced against several others. *See id.* at 304 ("Nonetheless, this [conflict with foreign law] should not be a dispositive factor because patent law differs substantially from country to country."). To the contrary, this variation in nations' patent laws is precisely why the factor should be dispositive—to respect those national policy preferences as reflected in a given country's patent law.

in the relevant country, then U.S. patent law should not apply extraterritorially.²⁰²

If the patent in the foreign country is owned by someone other than the infringer, then the conflict is less profound. The U.S. patent holder does not have the right to exclude others from practicing the patented invention in the relevant country. Thus, the duality principle would be violated—there would be no infringement with respect to this patent holder within the foreign country. Moreover, allowing the infringement suit to proceed in the United States would place the accused infringer in the position of potentially facing double liability—the infringer could be infringing both the foreign patent and the U.S. patent.²⁰³ Consequently, although the conflict is less, the courts should decline to enforce the U.S. patent extraterritorially if the corresponding foreign patent is owned by a third party.²⁰⁴

b. U.S. Patent Holder Tried and Failed To Procure Patent Protection in the Countries in Question

The equities of the situation differ significantly if the U.S. patentee tried and failed to obtain a patent in the countries of interest, and no one else has been successful in obtaining patent protection. A country's rejection of the patent strongly suggests that there is a policy reason to deny protection in that country. As such, it would be highly problematic as a matter of comity to allow the extraterritorial enforcement of the U.S. patent in such a circumstance, although it still may be possible if the country in question is

202. In the less stringent approach to this method, the existence of the conflict would simply be one factor that could be considered relevant in assessing whether to apply U.S. patent law extraterritorially. This would be more in line with Dinwoodie's approach and that of the Ninth Circuit in the trademark context, where a "rule of reason" approach is used. *See Wells Fargo & Co. v. Wells Fargo Express Co.*, 556 F.2d 406, 428 (9th Cir. 1977) (noting factors "to be balanced in the 'jurisdictional rule of reason' of comity and fairness"); Dinwoodie, *supra* note 3, at 545-47.

203. If the nature of the infringement was transnational, such as in the *NTP II* case, then there would not be infringement of the foreign patent and there would be no risk of being liable for infringing both. *See NTP II*, 418 F.3d 1282, 1290 (Fed. Cir. 2005).

204. Admittedly, this could allow the infringer to escape liability if the device straddles the two countries. This methodology, however, is not intended effectively to allow every patentee to close perceived loopholes created by the territorial nature of the U.S. patent right.

a rogue intellectual property nation who has intentionally created a system to undermine patent right regimes elsewhere.²⁰⁵ Thus, attempting and failing will not per se disqualify the patent holder from protection.

The situation differs slightly if the patent owner simply abandoned the application. In that case, there would be no definitive statement by a relevant government concerning the validity of the patent. One could argue that an estoppel-like approach could be used: because the patent owner abandoned the application, she should not be able to use an extraterritorial application of a U.S. patent to close the self-created gap in protection. This approach would be harsh, though, and would put the patent owner in a worse position than if she never made efforts to obtain protection in the relevant country. This proposal is not intended to create disincentives to using foreign patent offices and procedures. As such, abandonment of an application will be treated as if the patent holder simply did not have patent protection in the relevant country.²⁰⁶

c. Patent Holder Simply Does Not Have a Patent, Nor Does Anyone Else

The final situation is that there simply could be no one with a patent in the relevant country. In this context, we have nothing to guide the analysis—neither a rejection by a patent office, nor a patent owned by someone else. Moreover, the proposed method must attempt to discern what the relevant country would do if presented with a given patent.

In order to assess the validity of a patent, however, the court requires some basis of comparison. Simply asking in the abstract “Would this invention be patentable in the foreign country?” ignores the basic nature of a validity analysis—comparing the claims of the

205. See *infra* Part II.C.3.

206. The courts could inquire as to the reasons for the abandonment. A financial decision not to pursue the application, for lack of a market or for lack of adequate patent scope, would not suggest much about the validity of the patent. But the patent owner might have believed the invention was not eligible. Attempting to divine the motivation of the applicant, though, would unnecessarily increase the complexity and difficulty of this method. In the interest of keeping this approach as simple as possible, I would not recommend engaging in this analysis.

patent to the relevant prior art. The claims define the metes and bounds of the invention and, therefore, are essential in assessing the validity of a patent. Therefore, in making this assessment, a court should use the U.S. patent as a proxy for a foreign patent. Such an assumption is not a stretch. Given the coordination of patent application through the Patent Cooperation Treaty (PCT) process, patents often are very similar in form from country to country.²⁰⁷ The court would then assess whether the U.S. patent holder would have been able to obtain patent protection in the relevant country.

A threshold issue would be the appropriate date to use for assessing the validity of the patent. One reason that a country's patent office could deny protection is because the invention is not new or lacks inventive step (that is, is obvious using the U.S. standard). In this method, the priority date for the U.S. patent should be used. This may be the U.S. filing date, but it may also be a priority date based on the Paris Convention or the PCT. Given the rights of priority afforded by international treaties, the use of the U.S. priority date is not unfair or unjust in any way.

A court would then assess whether the invention claimed in the U.S. patent would be eligible for patent protection under the laws of the relevant foreign country. The basis could be any legitimate basis under the relevant laws, such as lack of novelty, inventive step, eligible subject matter, or the application of permissible exclusions from patent protection.²⁰⁸ Given that there is likely overlap between the prior art used in evaluating the validity of the U.S. patent, the court may not have to reinvent the wheel to make this determination.

207. Patent Cooperation Treaty, June 19, 1970, 28 U.S.T. 7645, available at <http://www.wipo.int/treaties/en/registration/pct/>.

208. See TRIPS, *supra* note 8, art. 27, ¶ 1 (“[P]atents shall be available for any inventions, whether products or processes, in all fields of technology, provided that they are new, involve an inventive step and are capable of industrial application.”); *id.* ¶ 2 (allowing exclusion of patent protection if “necessary to protect *ordre public* or morality, including to protect human, animal or plant life or health or to avoid serious prejudice to the environment”); *id.* ¶ 3 (allowing exclusion of patent protection for “diagnostic, therapeutic and surgical methods for the treatment of humans or animals” and “plants and animals other than micro-organisms, and essentially biological processes for the production of plants or animals other than non-biological and microbiological processes”).

One problem under this branch of the analysis is that the U.S. court would be required to apply foreign law, with which it likely is not familiar.²⁰⁹ Although this will add complexity and difficulty to the analysis, it is surmountable. Even though courts, and particularly the Federal Circuit, have questioned the competency of U.S. courts to assess foreign law, there is no reason to suspect that the courts would be unable to do so. To begin, while principles of patentability vary across the globe, many of the fundamental concepts that underlie patent protection have reached a certain level of coherence and general recognition. So the courts would have a baseline familiarity with the concepts of the law.²¹⁰ As such, the law should seem less “foreign” to the courts than other domestic issues a federal court might encounter pursuant to its supplemental jurisdiction.²¹¹ For example, TRIPS requires all inventions to be

209. See *Mars Inc. v. Kabushiki-Kaisha Nippon Conlux*, 24 F.3d 1368, 1376 (Fed. Cir. 1994) (noting that adjudicating a Japanese patent infringement claim would “require the court to resolve complex issues of Japanese procedural and substantive law, a task further complicated by ‘having to agree on the proper translation of laws, documents and other communications,’” and implicating “international comity” by exercising jurisdiction “over a matter involving a Japanese patent, Japanese law, and acts of a Japanese defendant in Japan” (quoting *Mars Inc. v. Nippon Conlux Kabushiki-Kaisha*, 825 F. Supp. 73, 76 (D. Del. 1993))); *In re Kathawala*, 9 F.3d 942, 945 (Fed. Cir. 1993) (rejecting argument that the court should look to Greek law regarding validity because it “would place an ‘unrealistic burden’ on the courts and PTO to resolve ‘esoteric legal questions which may arise under the patent laws of numerous foreign countries’” (quoting *In re Kathawala*, Patent Appeal No. 88-1921, slip. op. at 21 (B.P.A.I. July 17, 1992))); see also *Vanity Fair Mills, Inc. v. T. Eaton Co.*, 234 F.2d 633, 647 (2d Cir. 1956) (“But we do not think it the province of United States district courts to determine the validity of trade-marks which officials of foreign countries have seen fit to grant. To do so would be to welcome conflicts with the administrative and judicial officers of the Dominion of Canada.”).

210. Chisum, *supra* note 4, at 610-11 (“In fact, such difficulties [in assessing the validity of a foreign patent] will not often arise. The patentability requirements in other countries are usually more straightforward and less dependent on issues of historic fact than those in the United States.”).

211. For example, the Federal Circuit has been presented with state law claims involving contracts, unfair competition, interference with business relationships, trademark infringement, and copyright infringement. See, e.g., *State Contracting & Eng’g Corp. v. Condotte Am., Inc.*, 197 F. App’x 915, 918-19 (Fed. Cir. 2006) (determining jurisdiction on a charging lien); *Arlaine & Gina Rocky, Inc. v. Cordis Corp.*, 175 F. App’x 329, 331 (Fed. Cir. 2006) (deciding a state contract law cause of action); *Crater Corp. v. Lucent Techs., Inc.*, 423 F.3d 1260, 1267-69 (Fed. Cir. 2005) (analyzing trade secret and contract claims); *On-Line Techs., Inc. v. Bodenseewerk Perkin-Elmer*, 386 F.3d 1133, 1140-41 (Fed. Cir. 2004) (examining state law claims of trade secret violations); *Silent Drive, Inc. v. Strong Indus., Inc.*, 326 F.3d 1194, 1200, 1203, 1206 (Fed. Cir. 2003) (discussing state law claim of tortious

novel and non-obvious and contain an enabling disclosure.²¹² These basic concepts are therefore common to many countries. Although a country's particular application of those principles may vary from the United States's, the basic concepts are quite similar.

Moreover, the parties in the litigation have every incentive to educate the court as to the relevant law. The accused infringer necessarily has a presence in the relevant country and should have some familiarity with the law there. The U.S. patent holder may be at a disadvantage in this regard because there is no reason for the U.S. patent holder to be familiar with the laws of the particular country at issue. For those that believe extraterritorial application of a U.S. patent should be exceptional in nature, this pragmatic disadvantage should be of no concern. It would mean that proving an infringement case would simply be more difficult for the U.S. patent holder. The patent holder, though, would generally bring the suit and, knowing that this proposed methodology would govern the case, she would have a strong incentive to learn about the law of the relevant jurisdictions prior to bringing the suit. Admittedly, a case could arise where the patent holder is not aware of the extraterritorial or transnational nature of the case until discovery has begun,²¹³ but it would seem that those cases would be the exception. Courts as generalists are quite adept at educating themselves about new law, and the laws at issue here would at least have some sense of familiarity to courts in patent infringement cases. The Federal Circuit in particular should not fear applying foreign patent law given its expertise in the area of patent law.²¹⁴

interference).

212. TRIPS, *supra* note 8, art. 27, ¶ 1; art. 29, ¶ 1.

213. For example, the patent holder in the *NTP II* case conceivably may not have known that the relay component was in Canada until discovery surrounding the system was permitted. Similarly, a patent holder may only be aware that someone has made an offer to sell the patented invention within the United States without knowing that the ultimate sale is to take place outside of the United States. These scenarios seem rather unlikely, and the patent holder likely would be aware of the nature of the case it is about to bring and would therefore know to investigate the law of the relevant country.

214. *See, e.g.*, *Biotech. Indus. Org. v. District of Columbia*, 496 F.3d 1362 (Fed. Cir. 2007); *Voda v. Cordis Corp.*, 476 F.3d 887 (Fed. Cir. 2007); *Serio-US Indus., Inc. v. Plastic Recovery Techs. Corp.*, 459 F.3d 1311 (Fed. Cir. 2006); *Agfa Corp. v. Creo Prods. Inc.*, 451 F.3d 1366 (Fed. Cir. 2006).

3. *The Problem of Rogue Countries*

There is one significant problem with giving absolute deference to the decision of a foreign country in denying patent protection or in assessing whether the country would have granted a patent. The relevant country may have decided, contrary to international norms, to ignore the protection of intellectual property rights, becoming an infringement safe-haven.²¹⁵ Such countries would allow uses of intellectual property rights in contravention of international norms. In those circumstances, infringement under the U.S. patent would not be precluded because it would undermine even the accepted minimum levels of intellectual property protection that have been established internationally.

Discerning whether a country is such a rogue intellectual property country may be difficult, but there are various sources of evidence that may suggest that a country is failing to live up to international expectations. For example, the United States Trade Representative (USTR) performs annual reviews of the adequacy of other countries' protections of intellectual property under the Special 301 power.²¹⁶ The analysis in these reports could serve as sound evidence that a given country should be considered a rogue one.

Secondary references, such as articles in the media, could also be used to support the argument that the country is acting intentionally to free-ride on intellectual property rights. If a country is in the business of violating intellectual property rights, then it is likely that the businesses interacting with the country or encountering problems with the country will let their grievances be known publicly. Finally, a court could also review the country's patent laws

215. See, e.g., Burk, *Transborder*, *supra* note 7, at 11 (“[T]hese offshore havens could provide information services which, if offered within the borders of the United States, would violate traditional intellectual property laws.”); Dinwoodie, *supra* note 3, at 540 (“This approach of pragmatic localization may be problematic, however, because it might encourage a race to the bottom in order to attract particular business.”).

216. See Omnibus Trade and Competitiveness Act of 1988, 19 U.S.C. §§ 2901-06 (2006); see also Cynthia M. Ho, *Biopiracy and Beyond: A Consideration of Socio-Cultural Conflicts with Global Patent Policies*, 39 U. MICH. J.L. REFORM 433, 484-85 (2006). More detail on Special 301 is available at http://www.ustr.gov/Trade_Sectors/Intellectual_Property/Section_Index.html (last visited Mar. 29, 2008).

directly to determine whether a country should be viewed as a rogue.

This category of rogue intellectual property nations would not include those developing and least developing countries that have joined the World Trade Organization and have been given grace periods for implementing certain intellectual property protection.²¹⁷ If the relevant country is justified in its denial of patent protection under these phase-in provisions, then that policy should be respected and the country will not be viewed as rogue.

Another potential way of dealing with the issue of rogue countries would be to consider the intent of the accused infringer.²¹⁸ If the primary purpose for placing the various activities in the relevant country was to avoid infringement, then such bad faith would suggest there should be infringement. Consideration of the intent of the infringer might give some insight into the standards of the country in question, and thus may be relevant, though such subjective assessment by the infringer would not be terribly probative. Moreover, creating factors in this methodology that are dependent on intent makes predictability even more difficult, as the patent holder would be unable *ex ante* to assess that intent. As such, the intent of the infringer to game the system would not be necessary in this analysis.

D. Would the Infringer's Activities Infringe in the Foreign Country?

The ultimate step in this analysis—using either the procured foreign patent or the U.S. patent—would be to assess whether there would be infringement in the relevant country, ignoring territorial lines. To determine whether there is infringement, the court would

217. See World Trade Organization, Declaration on the TRIPS Agreement and Public Health, WT/MN(01)/DEC/W/2, 41 I.L.M. 755, 756 (2002); TRIPS, *supra* note 8, at art. 66, para. 1 (“We also agree that the least-developed country members will not be obliged, with respect to pharmaceutical products, to implement or apply Sections 5 and 7 of Part II of the TRIPS Agreement or to enforce rights provided for under these Sections until 1 January 2016, without prejudice to the right of least-developed country members to seek other extensions of the transition periods as provided for in Article 66.1 of the TRIPS Agreement.”).

218. *Cf.* Wasserman, *supra* note 142, at 306 (considering intent of infringer to “harm or affect American commerce”).

then look at either the relevant foreign patents (if in existence) or the U.S. patent. The court would assess whether the individual patents would be infringed, ignoring any territorial limits. For example, in the *NTP II* case²¹⁹ (assuming that there was a Canadian patent), the court would evaluate whether the accused system infringed the Canadian patent as if the entire system was in Canada. Similarly, courts would determine whether the device assembled overseas would infringe under that country's patent law (akin to § 271(f)²²⁰), or whether the method being performed would infringe under that country's patent law (akin to § 271(g)²²¹). Under current law, of course, courts do not make this assessment under either §§ 271(f) or (g), so this methodology would add a constraint to these two provisions.

Included in the infringement analysis would be personal defenses available to the infringer in the relevant country, such as prior user rights. If the personal defense would apply in the relevant foreign country, then there would be no infringement and ultimately no liability under the U.S. patent. Moreover, the United States provides greater protection than many other countries by permitting infringement under the doctrine of equivalents.²²² Many foreign jurisdictions do not have such a doctrine and require the accused device to be identical to what is claimed in the United States. Therefore, differences in the scope of protection may result in variances between U.S. and foreign law that the courts should respect and implement under this analysis.

The U.S. courts should feel free to consider a variety of evidence to facilitate its consideration of foreign law. To begin, many foreign jurisdictions are based on the civil law system, not common law. U.S. courts, therefore, should first consult the relevant statutes, which often are more elucidating than U.S. laws, in the given civil

219. *NTP II*, 418 F.3d 1282 (Fed. Cir. 2005).

220. 35 U.S.C. § 271(f) (2000).

221. § 271(g).

222. *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., Ltd.*, 535 U.S. 722, 730-33 (2002); *Warner-Johnson Co., Inc. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 24-28 (1997); *Graver Tank & Mfg. Co. v. Linde Air Prods. Co.*, 339 U.S. 605, 607-10 (1950); see Timothy R. Holbrook, *Possession in Patent Law*, 59 S.M.U. L. REV. 123, 164-65 (2006); Bernard R. Pravel, *Why the United States Should Adopt the First-to-File System for Patents*, 22 ST. MARY'S L.J. 797, 807 (1991) (noting doctrine of equivalents is "unavailable under foreign patent laws").

systems. Moreover, it may be the case that the courts in the relevant countries have already passed on similar infringement issues. Although the court would not formally recognize the foreign judgment (which would only be the case if the same parties were involved), the U.S. court is free to glean relevant information about the foreign patent law from the decision, such as the relevant country's approach to construing the claims.

The issue of rogue countries can also arise under this factor. If there is some other reason to believe that the relevant country is protecting patent rights at a level below the minimal standards expected by TRIPS for that country, then a court would have the discretion to still enforce the U.S. patent. Just as lack of patent protection in a rogue country would not preclude enforcement under this method, the failure to enforce patents within the country would allow enforcement under the U.S. patent if all other conditions are satisfied.

III. IS THE COMPARATIVE METHOD DESIRABLE? THE PROS AND CONS

The proposed methodology attempts to balance both the benefits and disadvantages of either a pure effects test or a strict territorial approach. Of course, trying to find a middle ground may simply exacerbate the negatives and eliminate the positives of the basic two approaches. This Part will evaluate the benefits and criticisms of the proposed approach.

A. The Advantages of the Proposed Methodology

1. The Comparative Approach Minimizes Conflicts of Law

The primary benefit of the comparative method proposed in this Article is that it affords greater respect to foreign countries' policies regarding patent law. The status quo completely ignores these differences, focusing only on U.S. law. Similarly, the various proposed effects tests utterly ignore the potential for conflicts with foreign law. Differences are permissible under our international treaties. Countries can act as individual laboratories, creating a variety of solutions to different innovation policy issues. One of these

countries may find the best answer, and requiring courts to consider those differences may help improve our own laws. Additionally, respecting the policies of foreign sovereigns is also of great importance. These countries should be accorded respect and deference, just as the United States would expect respect and deference to its laws if applied by a foreign tribunal.

2. Consideration of Foreign Law Can Create Dialogue and Help Develop International Norms of Patent Law

An important aspect of the proposed methodology is that it brings into formal consideration the laws of the country where some of the acts take place. This lack of consideration was Canada's primary concern with the *NTP II* case,²²³ not the ultimate conclusion of liability.²²⁴ Now, foreign law will be considered explicitly and transparently when determining whether to apply a U.S. patent to activities outside of the United States.

Moreover, this express consideration of foreign law will have the added benefit of creating dialogue between U.S. courts and foreign jurisdictions, particularly between the Federal Circuit and other specialized patent courts. By analyzing the foreign law, the judges can reach a greater understanding of the various intellectual property norms that exist in the world, and indeed may be able to identify situations where these norms have converged into an international standard.

This dialogue, however, also respects those circumstances where the laws of a foreign country may differ. Litigants and foreign countries alike will know that the U.S. courts will not disrupt the

223. See Brief of the Government of Canada as Amicus Curiae, *supra* note 162, at **4-6 (discussing the need for comity and consideration of foreign and international law); see also Sookman, *supra* note 7, at 465 ("Canada is also concerned that the potential implications of the panel's interpretation described above would negatively impact the integrity of the operation of Canadian intellectual property laws." (internal citation omitted)).

224. Brief of the Government of Canada as Amicus Curiae, *supra* note 162, at **3-4 ("The Government of Canada acknowledges that national jurisdiction over trans-border technology may be justifiable under internationally accepted theories of national jurisdiction. However, it is respectfully suggested that these principles should be applied explicitly when applicable and justified by a specific set of facts giving rise to that application of national law." (citation omitted)).

expectations of parties in relevant countries and will respect policy differences between countries, so long as that difference is not merely an effort by a country to be an intellectual property piracy haven. Our courts can only benefit from considering the varying policies of foreign countries that may lead to levels of protection that vary from those within the United States. Particularly, exploration of the differing grounds for validity in foreign systems would inform the courts' views of our own system. Indeed, foreign courts have considered U.S. law in assessing the validity of patents in their own countries,²²⁵ and such dialogue would facilitate greater understanding of the similarities and differences between the countries' patent laws.

Similarly, varying methods of assessing the scope of the right to exclude via infringement analysis could provide useful tools and approaches to U.S. courts who must wrestle with uncertainty surrounding claim construction and the application of the doctrine of equivalents. To the extent that the courts, and particularly the Federal Circuit, are implementing patent and innovation policy, these courts should inform their decisions through a comparative lens, particularly in light of the increasingly international nature of intellectual property law.

Such dialogue need not be limited to the courts. Likely decisions by the courts relying on the USTR's investigations could serve as confirmation or contradiction of the conclusions found in the Special 301 reports.²²⁶ The comparison of U.S. and foreign patent law would yield a more objective assessment of those standards, uncolored by possible trade or other interests unrelated to innovation policy. The court's reasoning therefore could complement or contradict the USTR report, facilitating greater discussion of these issues.

Congress could also benefit from these explorations of foreign law by U.S. courts. The decisions by U.S. courts may provide reasoning that would help Congress assess whether to amend the Patent Act, particularly if Congress is attempting to implement legislation in the name of harmonization. A court's reasoned analysis about the

225. *See, e.g.*, *Harvard Coll. v. Canada (Comm'r of Patents)*, [2002] S.C.R. 45, paras. 36-38 (Can.) (discussing U.S. patent law in determining eligible subject matter under Canadian law); *see also* Lee, *supra* note 172.

226. *See supra* note 216 and accompanying text.

manner in which foreign jurisdictions deal with various patent issues would be a useful source of information for legislators who are attempting to fine tune, if not completely overhaul, U.S. patent law.

B. Problems with the Comparative Approach

Of course, no proposal is perfect and all have their downsides. This section will discuss the potential negative consequences of adopting this, or similar, approaches.

1. Are Courts Institutionally Competent To Address These Issues?

This proposal assumes that courts would be the ones to apply the proposed methodology, but one could argue that institutionally they should not be put in the position of applying and interpreting foreign law. These issues could be addressed at the international level through bilateral or multilateral agreements or by international institutions who consider these issues. As Graeme Dinwoodie has persuasively argued in the copyright context, however, these institutions are incredibly slow moving and do not react timely to changes in technology.²²⁷ The transnational nature of business and technology will bring these issues to the forefront well before these international actors can react. Of course, having an international agreement that adopts the proposed methodology would be helpful in its implementation, but because the courts will likely encounter these problems in the first instance, it is reasonable to provide them with tools to address these concerns.

One could also argue that, within the United States, it is the executive branch—not the judicial branch—that should be making these determinations. The executive, particularly the USTR, has expertise in dealing not only with intellectual property but also with other trade-related international issues. My proposal is flexible enough, however, to accommodate the USTR. The proposal specifically recognizes the importance of Special 301 power and reports.

227. Dinwoodie, *supra* note 3, at 489-520.

The proposal could be altered to either permit the USTR to join a case as an intervenor or, more dramatically, to require USTR permission to allow the case to go forward. Providing the USTR such a veto would allow the executive branch to maintain control over a particular situation where there may be other issues of concern to the United States that are intertwined with a given litigation. This dynamic can presently be seen in litigation before the International Trade Commission, where government attorneys are always involved in the case given the possible political issues surrounding the importation of allegedly infringing goods.²²⁸ The interest and expertise of the executive branch could easily be accommodated by the proposed methodology.

2. *Reduction in Ex Ante Certainty and Predictability*

Another risk with the proposed methodology is a potential reduction in certainty and predictability for patentees and infringers alike.²²⁹ In contrast to a pure effects test, this seems highly unpersuasive: this approach gives clear guidelines as to what activities will and will not be subject to a U.S. patent. In contrast to a strict territorial approach, however, this criticism may have some bite.

But that bite is rather toothless. To begin, even in the instances where courts were arguably applying a strict territorial approach, they also offered tortured interpretations of the statute to accommodate changing economic circumstances, such as in *NTP II*²³⁰ and *AT&T*.²³¹ Thus, even in a strictly territorial system, there may be little predictability.

228. The International Trade Commission (ITC) is the appropriate forum for bringing an unfair competition or patent suit against one who imports into the United States articles that may be covered by a U.S. trademark or patent. See 19 U.S.C. § 1337 (2000). See generally Robert A. Caplen, *Recent Trends Underscoring International Trade Commission Review of Initial Determinations and Federal Circuit Appeals from Final Commission Determinations Under Section 337 of the Tariff Act of 1930*, 17 *FORDHAM INTELL. PROP. MEDIA & ENT. L.J.* 337 (2007).

229. See Austin, *supra* note 7, at 610-11.

230. 418 F.3d 1282, 1313-24 (Fed. Cir. 2005).

231. *AT&T Corp. v. Microsoft Corp.*, 414 F.3d 1366, 1369-72 (Fed. Cir. 2005), *rev'd*, *Microsoft Corp. v. AT&T Corp.*, 127 S. Ct. 1746 (2007).

The proposed method also provides greater certainty than a pure totality of the circumstances approach that could be used in this context, evaluating all relevant sources for assessing whether there should be infringement. Strict application of the proposed method would guide not only the courts but also patent holders and potential infringers in making the assessment of whether there may be liability for various transnational acts. Some of the factors in this analysis may be uncertain, such as whether a country is rogue or whether a given country would have issued a patent, as evaluated by a U.S. patent. But this uncertainty is not any greater than most patent law issues. By using this framework, parties should be able to make informed conclusions about the risk of liability. Moreover, over time, the courts may establish clearer interpretations of the laws in various countries, particularly if there are “repeat” countries as players in this analysis. Undeniably, there may be some greater uncertainty in this approach, but it seems a small price to pay for greater protection in the international marketplace.

3. The Loss of Legal Diversity

One potential criticism of this approach, as cogently articulated by Professor Graeme Austin, is that these approaches would rely on “substantive outcomes [that] might not resemble any that might be dictated by the domestic laws that could be applied under conventional private international law principles.”²³² Professor Austin further questions “whether this is an appropriate judicial task, and whether it is really feasible to identify intellectual property policies divorced from broader societal concerns in diverse areas such as technological development, education and literacy, agriculture, and so on.”²³³ Elsewhere, Professor Austin has emphasized the importance of maintaining diversity at the national level in our intellectual property regimes.²³⁴ There may be reasons that a national

232. See Austin, *supra* note 7, at 610.

233. *Id.* at 611 (emphasis omitted).

234. Graeme W. Austin, *Domestic Laws and Foreign Rights: Choice of Law in Transnational Copyright Infringement Litigation*, 23 COLUM.-VLA J.L. & ARTS 1, 8-11 (1999); Graeme W. Austin, *Social Policy Choices and Choice of Law for Copyright Infringement in Cyberspace*, 79 OR. L. REV. 575 (2000); Graeme W. Austin, *Valuing “Domestic Self-Determination” in International Intellectual Property Jurisprudence*, 77 CHI.-KENT L. REV.

government chooses to have a different standard for intellectual property, reflecting value choices and social concerns that may differ from the United States or other developed countries.

I agree that local variations in intellectual property regimes are good. Aside from respecting cultural values in a given country, such variety may also provide laboratories for more efficient intellectual property laws, in much the same way as the federal system works within the United States.²³⁵ Global harmonization misleadingly insists that the best approach is “one-size-fits-all,” even if that one size may not necessarily be the best size. As such, harmonization can come at an all-too-often underappreciated price.

That being said, the methodology proposed here provides a method of balancing the concerns articulated by Professor Austin. First, the courts would not be applying a substantive rule of law that is absent from the domestic law of a given country; the balancing here would require application of that country’s law, preserving the diversity within the law and affording respect to the cultural and social values that may underlie those laws. The approach espoused in this Article is an attempt to grant some extraterritorial protection to U.S. patent holders in response to an increasingly global economic environment, while at the same time affording respect and deference to competing policy and social values that may be in place in other countries. My approach is an effort to balance the concerns of Professor Austin while affording a potential remedy to patent holders against those that may play the territorial game with patent rights.

CONCLUSION

It is incontrovertible that the world is a smaller place. Globalization has made traditional territorial borders break down. With respect to intellectual property, this development was first realized in the copyright and trademark areas.²³⁶ Patents must now face the

1155 (2002).

235. *See, e.g.,* *New State Ice Co. v. Liebmann*, 285 U.S. 262, 311 (1932) (Brandeis, J., dissenting) (“It is one of the happy incidents of the federal system that a single courageous state may, if its citizens choose, serve as a laboratory”).

236. *See generally* Dinwoodie, *supra* note 3; Holbrook, *Territoriality*, *supra* note 4, at 736-

reality of the erosion of national borders. The Federal Circuit has failed to articulate a coherent, predictable approach to these problems, issuing opinions that represent a myopic focus on statutory interpretation and a failure to articulate a consistent jurisprudential viewpoint on the territoriality of patent rights.²³⁷

The consideration of foreign law is conspicuously absent from the current approaches to dealing with extraterritoriality in U.S. patent law. This short-sightedness ignores the fact that patents and patent laws necessarily reflect the social values of a given country.²³⁸ An overly broad approach to territoriality of patent laws would undermine those value choices made by a given country in the name of providing protection to a single, private patent holder. Such an unbalanced approach undermines the sovereignty of the country in which the relevant activity is taking place. The proposal in this Article presents a coherent, balanced way to address these issues that acknowledges our increasingly global world, a world where balancing the interests of other nations may also be increasingly important. U.S. patent holders deserve some level of extraterritorial protection for their inventions, but such reach must not run afoul of potential competing interests in foreign countries. This proposal can accomplish that objective.

38.

237. See *supra* notes 4-7 and accompanying text.

238. See generally Timothy R. Holbrook, *The Expressive Impact of Patents*, 84 WASH. U. L. REV. 573 (2006) (discussing the role of morality in patent protection).