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Harmonization Through Condemnation: Is New London the Key to World Patent Harmony?

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Harmonization Through Condemnation: Is New London the Key to World Patent Harmony?

*Max Stul Oppenheimer**

ABSTRACT

Since 1790, when two U.S. patent applicants have claimed the same invention, the patent has been awarded to the first inventor. Today, the United States stands alone in the industrialized world, and many argue that the United States should, in the interest of world patent harmony, change its system so as to award a contested patent to the first applicant. Of the arguments advanced to justify the change, the only ones that withstand scrutiny are that "all the other countries are doing it" and the hope that some concessions in other aspects of intellectual property or trade might be obtained in exchange. There are compelling reasons to resist the change, principally that (unless other fundamental aspects of U.S. patent law are changed as well) U.S. inventors will be disadvantaged.

Even if the arguments favoring the change are found to outweigh the arguments favoring the status quo, the power to grant U.S. patents derives from Article I, Section 8, Clause 8 (the Intellectual Property Clause) of the Constitution, which authorizes granting exclusive rights to authors and inventors. Other countries are not so constrained. An historical analysis of the Intellectual Property Clause and review of the types of evidence used by the Supreme Court in constitutional analysis lead to the conclusion that the Intellectual Property Clause does not permit granting patents to the first applicant in preference to the first inventor.

Alternate sources of Congressional power have been suggested (principally the Commerce Clause and the Treaty Power), but the Supreme Court has never found either sufficient to overcome a specific constitutional limitation of power. The

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only power which seems sufficient to accomplish the objective of harmonization within constitutional limits is eminent domain.

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I. THE PROPOSAL TO HARMONIZE PATENT LAWS

Harmonization is usually good¹ if the result is that everyone does things your way. Harmonization is more complicated if it requires conforming behavior to someone else's norms. This latter case requires two analyses: one of the costs and benefits of the proposed change, and one of whether the proposed change violates some fundamental principle that overrides an otherwise favorable cost/benefit analysis. A recurrent proposal to harmonize world patent laws presents both questions for the United States.

A. *Patent Theory and the First-to-File Movement*

Patents are limited monopolies granted by most countries to encourage innovation.² In the United States, patents are contrary to general principles favoring competition and therefore are granted only if they meet statutory requirements designed to assure that the public receives a valuable contribution in return:

The monopoly privileges that Congress may authorize are neither unlimited nor primarily designed to provide a special private benefit . . . [They are] intended to motivate the creative activity of authors and inventors . . . and to allow the public access to the products of their genius after the limited period of exclusive control has expired.³

Once such access has been achieved through one disclosure, there is no need to provide incentives for a second disclosure.⁴ Although the Constitution does not explicitly limit the grant to one patent per

1. While it is tempting to assume that harmonization is good per se, it is easy to cite cases where it is not; in 1789, harmonization might have led the Constitutional Convention to choose monarchy.

2. In the United States, the justification for granting patents (as well as copyrights) is found in Article I, Section Eight, Clause Eight of the Constitution, which provides "Congress shall have Power . . . to promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries." U.S. CONST. art. I, § 8, cl. 2.

3. *Sony Corp. v. Universal City Studios*, 464 U.S. 417, 429 (1984). While *Sony* involved alleged infringement of copyrights, the copyright and patent laws find authority in the same clause of the Constitution and the *Sony* analysis borrows heavily from patent law.

4. For example, the Uniform Trade Secrets Act defines a "trade secret" as:

[I]nformation . . . that: (i) Derives independent economic value, actual or potential, from not being generally known to, and not being readily ascertainable by proper means by, other persons who can obtain economic value from its disclosure or use; and (ii) Is the subject of efforts that are reasonable under the circumstances to maintain its secrecy.

UNIF. TRADE SECRETS ACT § 1 (1985). Publication of a patent would destroy any trade secret contained in the specification by making it generally known; allowing publication would also destroy the trade secret as a failure to make reasonable efforts to maintain its secrecy.

invention, the Supreme Court has held that a patent may not withdraw technology from the public domain.⁵ It follows that in the United States it would be unconstitutional (and even absent the constitutional constraint, undesirable) to grant more than one patent per invention.⁶

In the great majority of U.S. cases, this principle of no more than one patent per invention is applied in the context of deciding patentability. If the claimed invention already appears in the prior art,⁷ or is an obvious extension of the prior art,⁸ there is no need to grant the patent because the public already has access to the

5. *Bonito Boats, Inc. v. Thunder Craft Boats*, 489 U.S. 141 (1989), held that Congress cannot remove information from the public domain because removal would thwart the constitutional mandate to promote the progress of science and the useful arts.

There is no public domain clause in the Copyright Clause, and absent the requirement that patents “promote the Progress of . . . useful Arts,” there is no textual reason why Congress today could not grant a patent to an Inventor for his “Discovery” just because that discovery has already passed into the public domain Yet as this Court has held, in light of the “limitations” built into the clause, “monopolies” are not permitted under the Copyright Clause when there is no “concomitant advance in the ‘Progress of Science and useful Arts.’”

Br. for Pet’r at 21, *Eldred v. Reno*, 537 U.S. 186 (2003) (quoting *Bonito Boats*, 489 U.S. at 146).

6. There are circumstances in which no patent would be available for an invention such as if the invention were not patentable subject matter under 35 U.S.C. § 101 (2006); if the invention were already in the public domain but unpatented (prohibited in the U.S. by 35 U.S.C. §§ 101–03); or if the applicant violated a rule (35 U.S.C. §§ 101–03). In the United States, examples of violating a rule would include creating a statutory bar by publishing an enabling description or offering an embodiment of the invention for sale more than a year prior to filing an application (35 U.S.C. §§ 102(b), 103); failing to respond to an office action within the permitted time (35 U.S.C. § 133); or failing to disclose relevant information during prosecution of the application (*Kingsland v. Dorsey*, 338 U.S. 318 (1949)).

7. “Prior art” refers to information which is relevant to a determination of patentability. If the technology claimed in a patent application is already in the prior art, the application would fail under both 35 U.S.C. § 101 (“Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter . . . may obtain a patent therefor”) and 35 U.S.C. § 102 (“A person shall be entitled to a patent unless—(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for patent, or (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of the application for patent in the United States. . . .”).

8.

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 . . . if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.

35 U.S.C. 103(a).

information. Occasionally, however, there are circumstances in which the claimed invention is not in the prior art, but there are multiple claimants to the patent.⁹ For example, if the prior art is interpreted to include only the domestic technology base, then a traveler who observes someone else's invention in a foreign country and is the first to bring news of the invention back home would be adding to the technology base. If several travelers each brought the same technology home, it would be logical and fair to award a patent to the first to file an application.¹⁰ In this case, the contribution to the public is not the invention of the technology but its local dissemination. If the actual (foreign) inventor were then to travel to the domestic country and file a patent application, a different problem would arise: there would be a conflict between the first filer and the true inventor. Early patent systems and cases must be viewed in the context of the communications and transportation systems of the times, and care must be taken in applying them to modern day circumstances.¹¹

Derivation is another circumstance in which there might be multiple claimants. The true inventor might choose not to file a patent application.¹² Another individual might learn of the invention from the actual inventor and file a patent application. If the true

9. The most recent available U.S. Patent Office statistics (for 2001) indicate that less than 0.05% of patent applications involve multiple claimants to the same invention. See U.S. Pat. & Trademark Off., Patent Statistics Report, http://www.uspto.gov/go/taf/reports_stco.htm (last visited Feb. 15, 2007).

In that year there were 345,732 applications and about 136 interferences were declared between applications claiming the same invention. *Id.* Interferences are reported on a fiscal year basis: there were 136 in fiscal 2000 and 124 in fiscal 2001. *Id.* It may be objected that it takes time for an interference to be declared, so the comparison should be between 2001 interferences and an earlier year's applications. Even going back to 1998, the incidence would still be only slightly above 0.05% (260,889 applications). *Id.*

10. A patent granted to one who observes the technology abroad but is the first to introduce it domestically is referred to as a patent of importation. While recognized in seventeenth century England, they were rejected in early U.S. decisions. See, e.g., *Reutgen v. Kanowrs*, 20 F. Cas. 555 (C.C.D. Pa. 1804); *Woodcock v. Parker*, 30 F. Cas. 491 (C.C.D. Mass. 1813).

11. For good reason, most eighteenth century systems followed the rule of considering only the domestic technology base. Before rapid communications, the internet, and common international travel, it was likely that technology from other countries would elude the domestic technology base. There may well be advanced technology on other planets, but it is not considered prior art under U.S. (or any other) patent law. If, in the future, it becomes common to communicate with or travel to extraterrestrial civilizations, their technology would become part of the prior art under current statutes as written.

12. There are many reasons an inventor might make this choice, including ignorance of the patent system, lack of funds, failure to appreciate the true value of the invention, or a conscious decision to forego patent protection (which only lasts a maximum of twenty years) to maintain trade secret protection (which in theory could last forever).

inventor then filed a patent application, a conflict similar to the "patent of importation" scenario arises. However, here the result might logically depend on the motives of the "true" inventor. Sound policy might deny a government-sanctioned monopoly to a true inventor who had no intention of placing the technology in the public domain until after someone else had done so.¹³

The final scenario in which there might be multiple claimants to a patent on the same invention is multiple independent invention by individuals who, unaware of the others' work, independently make the same invention. Here, each might be considered an "inventor" in the sense that the technological advance was made in ignorance of its previous discovery by another "inventor." To maintain the principle that only one patent may be granted for each invention, a choice must be made between individuals, each of whom is acting in good faith and following exactly the path the patent system wants: filing a patent application and surrendering a trade secret.

It is this last scenario that poses the problem for those who seek international harmonization of patent laws. Two systems would logically further the goal of granting only one patent per invention: a first-to-invent system of awarding patents to the first inventor, thereby rewarding innovation, or a first-to-file system awarding patents to the first person to disclose the invention to the government by filing a patent application, thereby rewarding promptly putting the invention in the domain of public knowledge.¹⁴ In the vast majority of cases, the choice of system does not matter; it is rare for a subsequent applicant to challenge the right of the first applicant to the patent.¹⁵ The United States has always had a first-to-invent

13. The U.S. patent system has two checks on the inventor who does not file a patent application promptly: the statutory bars (see discussion *infra* note 120) and the requirement that an inventor not have "suppressed or concealed" the invention (see discussion *infra* note 87).

14. There are other theoretical solutions which are not under consideration for the international standard. One would be to deny a patent to anyone if there were multiple claimants. There is one case in the United States presenting the rare case in which two applicants claimed the same invention and both had the identical filing date and the identical date of constructive reduction to practice; the Board of Patent Appeals denied priority to both applicants. *Lassman v. Brossi Gerecke & Kyburz*, 159 U.S.P.Q. 182 (Pat. Off. Bd. of Pat. Interferences 1967). Another theoretical possibility would be a system of multiple patents for the same invention, although this would complicate licensing and reduce the value of patents. An intriguing option is the Japanese model: If there are two or more claimants, they jointly decide who is to receive the patent, but if they fail to agree, no one gets the patent. Tokkyohō [Patent Law], Law No. 121 of 1959, art. 39(2), amended by Law No. 30 of 1990, available at http://www.wipo.int/clea/docs_new/en/jp/jp006en.html.

15. Published PTO statistics indicate that this is a rare event. See U.S. Pat. & Trademark Off., Patent Statistics Reports Available for Viewing, <http://www.uspto.gov/web/offices/ac/ido/oeip/taf/reports.htm> (last visited Feb. 5, 2007).

system.¹⁶ When two applications claim the same invention, the right to the patent¹⁷ is resolved by determining the first inventor in a proceeding in the U.S. Patent and Trademark Office (PTO or Patent Office), known as an “interference.”¹⁸ The first patent statute conferred jurisdiction on the district courts to resolve competing claims of inventorship.¹⁹ The modern administrative interference system was created in 1836, when the revised patent statute²⁰ shifted the responsibility for resolving interfering claims to the Commissioner of Patents.²¹

Two consequences flow from the decision to adopt a first-to-invent system: (1) if two parties claim the same invention, the patent is awarded to the first to reduce the invention to practice (not the first to reach the patent office with news of the event); and (2) even if there is only one claimant, a defendant in an infringement action may

16. See Patent Act of 1790 §§ 1, 5, 1 Stat. 109, 109–110, 111; Patent Act of 1793 §§ 3, 6, 1 Stat. 318, 321–22.; Patent Act of 1836 § 9, 5 Stat. 117, 121 discussed in detail *infra* notes 21–22 and accompanying text. Under current law:

In determining priority of invention under this subsection, there shall be considered not only the respective dates of conception and reduction to practice of the invention, but also the reasonable diligence of one who was first to conceive and last to reduce to practice, from a time prior to conception by the other.

35 U.S.C. § 102 (2006). The U.S. Patent Statute contains a process, governed by 35 U.S.C. § 135(a), for determining first inventorship through an “interference” proceeding in cases of dispute. See *infra* notes 69–70 (discussing the “interference” process). An early article on harmonization argued that, in fact, the United States had a hybrid system, pointing to statutory provisions giving advantages to domestic inventors, so that patents could be denied to the first worldwide inventor. George E. Frost, *The 1967 Patent Law Debate: First-to-Invent vs. First-to-File*, 1967 DUKE L. J. 923 (1967). Under the 1967 law, such a result could occur if the first invention was made outside the United States. The patent statute has since been amended to expand the areas in which inventive activity “counts” toward U.S. priority, putting inventors in any country belonging to the World Trade Organization on an equal footing with domestic inventors.

17. 35 U.S.C. §§ 101, 102(g). The first inventor must, of course, still comply with the requirements of the patent statute. Of particular importance to the first-to-file debate, the first inventor must file an application within a year of the first public use, offer for sale, or publication describing the invention. 35 U.S.C. § 102(b) (2006).

18. See *infra* notes 68–69 and accompanying text.

19. Patent Act of 1790 § 5, 1 Stat. at 109.

20. Patent Act of 1836 ch. 357, § 6, 5 Stat. at 117, 119.

21. *Id.* § 8 at 120–21.

(W)henever an application shall be made for a patent which, in the opinion of the Commissioner, would interfere with any other patent for which an application may be pending, or with any unexpired patent which shall have been granted, it shall be the duty of the Commissioner to give notice thereof to such applicants, or patentees, as the case may be; and if either shall be dissatisfied with the decision of the Commissioner on the question of priority of right or invention, on a hearing thereof, he may appeal from such decision.

Id.

invalidate the patent by showing that the patentee was not the first inventor.²² It is possible for this to occur because the true first inventor may simply have chosen not to seek patent protection. In this case, no interference arises, and the patent will (unless the examiner finds a statutory bar) issue to the subsequent inventor.

Other countries have first-to-file systems, awarding patents to the first applicant for a patent,²³ even if there is a prior inventor who also files an application for a patent. In the past, patents were awarded to individuals who, while not inventors, were the first to bring an invention within national borders and even to individuals who simply were in favor with the government.²⁴ Some countries began as first-to-invent countries but switched to first-to-file countries.²⁵ It should be noted, however, that the patent systems differ by country in significant respects, which make direct comparison of first-to-invent and first-to-file difficult. For example, the disclosure required in most first-to-file countries is less stringent than what is required in the United States to obtain a valid priority filing date.²⁶ In addition, one of the requirements of the U.S. system is the disclosure of what the inventor believes to be the "best mode" of

22. The Patent Act of 1790 provided for repeal of a patent if it could be shown that the patentee was not the first and true inventor. Patent Act of 1790, ch. 7, 1 Stat. 109, § 5. The affirmative defense of lack of invention was first explicitly codified by the 1793 Patent Act. Patent Act of 1793, ch. 11, 1 Stat. 318 (repealed 1836). The defense continued to exist in every subsequent revision of the statute. See 35 U.S.C. § 102(g).

23. In the 1967 Senate hearings, Acting Undersecretary of Commerce Hollomon reported that only the United States and the Philippines were first-to-invent countries. Patent Law Revision: Hearings on S. 2, S.1042, S.1377 and S.1691 Before the Subcommittee on Patents, Trademarks and Copyrights of the Senate Committee on the Judiciary, 90th Cong., 1st Sess. 118 (1967). The Philippines has since amended its law to award patents to the first to file an application. The Law on Patents, Rep. Act No. 8293, § 29 (Phil.); Phil. Rules & Reg. on Inventions, Rule 304 (amended 1998) available at http://www.jpo.go.jp/shiryuu_e/s_sonota_e/fips_e/pdf/philippines_e/e_tizai_kisoku.pdf. It would seem that for some reason the undersecretary excluded Canada, which was a first-to-invent country in 1967, but Canada has since become a first-to-file country. Patent Act, R.S.C., ch. P-4 (1988).

24. See discussion *supra* note 10.

25. Such countries include the Philippines and Canada. See *supra* note 23 and accompanying text. Neither country had a constitutional provision restricting the change.

26. Frost, *supra* note 16; Samson Helfgott, "Differences Between U.S. and Japanese Patent Applications, 1 U. BAL. INTELL. PROP. L. J. 1, 3 (1992).

[T]he major part of a Japanese application contains marketing and sales promotion aspects of an invention. The actual detailed description of the invention itself is typically done in a very general manner [and] . . . the detail of black boxes is generally left undescribed even though the specific contents may not be readily available on the market.

Including "black boxes" in an application would be unacceptable under U.S. practice (see 35 U.S.C. § 112) and obviously an application can be prepared much more quickly if it is not necessary to provide details.

carrying out the invention at the time the application is filed.²⁷ There is no duty to update this disclosure during prosecution of the application.²⁸ Allowing an inventor additional time to perfect the invention should result in better disclosures and therefore greater contributions to the public domain. Finally, while the United States only grants patents when the claimed invention is novel²⁹ and non-obvious,³⁰ not all countries examine patent applications carefully to make such determinations prior to issuing patents;³¹ instead they often rely on pre-grant publication for opposition or post-grant litigation to resolve such issues.³²

The modern drive to harmonize international patent law began with the International Convention for the Protection of Industrial Property.³³ The principal agency of harmonization in the intellectual property field is the World Intellectual Property Organization (WIPO), an agency of the United Nations.³⁴

There is no doubt that areas of the international intellectual property system are in desperate need of harmonization. U.S. patent holders are unable to obtain adequate protection in many countries. The main areas of concern are outdated limits on the definition of patentable subject matter and respect for the private property rights created by a patent. In the United States, patents are broadly available for "anything made by man;"³⁵ patentability in other

27. The patent application must "set forth the best mode contemplated by the inventor of carrying out his invention." 35 U.S.C. § 112.

28. *Chemcast Corp. v. Arco Indus. Corp.*, 913 F.2d 923, 927-28 (Fed. Cir. 1990).

29. 35 U.S.C. § 102.

30. 35 U.S.C. § 103.

31. In 1964, a U.S. Government Printing Office publication reported that France was only then starting to introduce pre-grant patentability searches and that Latin America and many other countries still had not done so. *Invention and the Patent System*, Joint Committee Print, 88th Cong. 2nd Sess., U.S. GPO 1964 at 13.

32. *Id.*

33. Paris Convention for the Protection of Industrial Property, Mar. 20, 1883, 25 Stat. 1372, 828 U.N.T.S. 30, revised by International Union for the Protection of Industrial Property, Dec. 14, 1900, 32 Stat. 1936, 189 Consol. T.S. 134; International Union for the Protection of Industrial Property, June 2, 1911, 38 Stat. 1645, 213 Consol. T.S. 405; International Union for the Protection of Industrial Property, Nov. 6, 1925, 100 Stat. 1789; International Union for the Protection of Industrial Property, June 6, 1934, 53 Stat. 1748, 828 U.N.T.S. 10; International Union for the Protection of Industrial Property, Oct. 31, 1958, 13 U.S.T. 1; International Union for the Protection of Industrial Property, July 14, 1967, 21 U.S.T. 1583, 828 U.N.T.S. 305.

34. WIPO was established July 14, 1967 as a "specialized agency" of the United Nations designed "(i) to promote the protection of intellectual property throughout the world through cooperation among States and, where appropriate, in collaboration with any other international organization, (ii) to ensure administrative cooperation among the Unions." Convention Establishing the World Intellectual Property Organization art. 3, July 14, 1967, 21 U.S.T. 1749, 828 U.N.T.S. 3 (amended Oct. 2 1979).

35. *Diamond v. Chakrabarty*, 447 U.S. 303, 309 (1980). Recent examples of patentable subject matter have included biotech inventions and business methods. See U.S. PAT. & TRADEMARK OFF., U.S. DEPT OF COMMERCE, MANUAL OF PATENT

countries is limited or unavailable in many areas, including technologies in such important industries as software³⁶ and biotechnology.³⁷ As a result, competitors in these arenas may establish operations in many foreign countries and compete with U.S. innovators without cost.

In the United States, a patent owner's rights are protected, even against the government.³⁸ In many other countries, patent rights are, as a practical matter, unenforceable or subject to routine threats of nationalization.³⁹ A patentee in the United States may (within the

EXAMINING PROCEDURE (MPEP) § 2105 (8th ed., 2nd rev. 2004); *State Street Bank & Trust v. Signature Financial Group*, 149 F.3d 1368, 1373 (Fed Cir. 1998), cert. den. 525 U.S. 1093 (1999); Notification of Required and Optional Search Criteria for Computer Implemented Business Method Patent Applications in Class 705, 66 Fed. Reg. 30, 167 (June 5, 2001).

36. Software is not patentable under the European Patent Convention. Article 52(2) of the European Patent Convention provides: "The following . . . shall not be regarded as inventions . . . c) schemes, rules, and methods for performing mental acts, playing games or doing business, and programs for computers . . ." European Patent Convention art. 52(2), Oct. 5, 1973, 1065 U.N.T.S. 199; *see also* European Patent Convention art. 53, quoted *infra* note 37; Hungarian Law on the Protection of Inventions by Patents, art. 1, 2(a), available at <http://www.hpo.hu/English/jogforras/shlaw.html?9533:1pC> (last visited Feb. 15, 2007) (noting that "discoveries, scientific theories, and mathematical methods" are not patentable); United Kingdom Patent Office, Requirements for Patent Protections, <http://www.patent.gov.uk/patent/p-applying/p-should/p-should-requirements.htm> (last visited Feb. 15, 2007) (noting that discoveries are not patentable); Phil. Rules and Regs. on Inventions 202(b) (methods of doing business are not patentable).

37. European Patent Convention Article 53 provides: "European patents shall not be granted in respect of . . . (b) plant or animal varieties or essentially biological processes for the production of plants or animals; this provision does not apply to microbiological processes or the products thereof." European Patent Convention art. 52(2), Oct. 5, 1973, 1065 U.N.T.S. 199. The famed transgenic "Harvard oncomouse," patented in the United States in 1988 (U.S. Pat. 4,736,866), was found unpatentable in Canada. *Harvard College v. Canada (Comm'r of Patents)*, [2002] S.C.C. 76 (Can.). *See generally* Carlos M. Correa, *Internationalization of the Patent System and New Technologies*, 20 WIS. INT'L L.J. 523, 528 (2002); Donna M. Gitter, *International Conflicts over Patenting Human DNA*, 76 N.Y.U. L. REV. 1623, 1648-49 (2001); Michael Guntersdorfer, *Software Patent Law: United States and Europe Compared*, 2003 DUKE L. & TECH. REV. 6; Ikechi Mgbeoji, *Patents And Traditional Knowledge Of The Uses Of Plants: Is A Communal Patent Regime Part Of The Solution To The Scourge Of Bio Piracy?*, 9 IND. J. GLOBAL LEGAL STUD. 163, 181 n.74 (2001).

38. While injunctions are not available against the federal government, a patent owner is entitled to compensation for government use of patented technology. *See infra* notes 245-46 and accompanying text. The federal government also has the power to take patents, as it does any other property, provided the taking is for a public use and it pays adequate compensation as required by the Fifth Amendment. *Id.* To date, the most common reason for exercising this power is to preserve the secrecy of the contents of the patent for national security reasons. The procedure for preventing issuance of such a patent and determining compensation is set forth in 35 U.S.C. §§ 181-83 (2006) and in 37 C.F.R. 5.3-5.5 (2006).

39. For example, Brazil routinely threatens to nationalize pharmaceutical patents: Hoffman-LaRoche's viracept in 2001, Merck's nelfinavir in 2003, Abbot's Kaletra in 2005. *International Pharmaceutical Industry Weighs Issues of Patent Rights, Public Access*, THE FOOD & DRUG LETTER, Nov. 21, 2003, § 688; Doug Bandow,

limits set by antitrust laws)⁴⁰ choose whether and to whom to license patented technology;⁴¹ the marketplace sets the price. In many foreign countries, a patent holder is required to “work” the patent to maintain it, is required to grant licenses to competitors, or is subject to nationalization of the patent without adequate compensation.⁴²

The area of harmonization on the top of the WIPO list, however, is not agreement on patentable subject matter or the enforceability of patent rights or compensation for patent owners when a government feels that a compelling national interest requires termination of the patent. The area of harmonization on the top of the list is agreement on whether the party entitled to a patent should be the inventor or the first party to file an application with a signatory patent office.⁴³ Some U.S. interests favor using negotiation of this issue as a bargaining chip for harmonizing the important areas of scope of patent protection and protection from nationalization without just compensation by U.S. standards.⁴⁴

Proposals for change go back at least to 1966, when the President’s Commission on the Patent System, appointed by President Lyndon Johnson, recommended that the United States switch from its historical first-to-invent system to a first-to-file system.⁴⁵ Implementing legislation was submitted in 1967⁴⁶ but failed.

Ploys from Brazil: South American Country Flouts U.S. Patent Laws, COPLEY NEWS SERV., June 28, 2005.

40. See generally Joseph P. Bauer, *Refusals to Deal with Competitors by Owners of Patents and Copyrights: Reflections on the Image Technical and Xerox Decisions*, 55 DEPAUL L. REV. 1211, 1234–43 (2006). While substantially weakened by *Ill. Tool Works Inc. v. Indep. Ink*, 547 U.S. 28 (2006), patent misuse may be the basis for antitrust violations under *Int’l Salt Co. v. U.S.*, 332 U.S. 392 (1947).

41. *Cont’l Paper Bag v. E. Paper Bag*, 210 U.S. 405, 405 (1908) (holding that it was not a defense to infringement that the patent was “a mere paper proposition which the complainant has never put into effect or use”). The current patent statute explicitly provides that the patentee’s failure to grant a license is not a defense to infringement unless the patentee has market power in the relevant market. 35 U.S.C. § 271(d).

42. See articles cited *supra* note 39.

43. Statistics indicate that in the United States, the issue arises in about 0.05% of the applications filed. Patent Statistics Report, *supra* note 9. About 51% of those cases would be decided differently under first-to-file. Ian A. Calvert & Michael Sofocleous, *Interference Statistics for Fiscal Years 1983 to 1985*, 68 J. PAT. & TRADEMARK OFF. SOC’Y 385, 390 (1986) (noting that priority was awarded to the junior party in whole or in part 48.8% of the time during fiscal years 1983–1985 when testimony was taken).

44. Daniel Pruzin, *Lead Report: PTO Chief Says U.S. Willing to Be Flexible On U.S. Rules to Secure Global Patent Treaty*, PATENT, TRADEMARK & COPYRIGHT LAW DAILY, Mar. 27, 2002.

45. PRESIDENT’S COMMISSION ON THE PATENT SYSTEM, “TO PROMOTE THE PROGRESS OF . . . USEFUL ARTS” IN AN AGE OF EXPLODING TECHNOLOGY 5 (1966). The report lists as its first recommendation that “when two or more persons separately apply for a patent on the same invention, the patent would issue to the one who is first

In 1987, the Clinton Administration indicated that it might be willing to change from first-to-invent to first-to-file in return for certain concessions from other countries,⁴⁷ but it ultimately rejected the conversion.⁴⁸ In 1990, the WIPO Committee of Experts on the Harmonization of Certain Provisions in Laws for the Protection of Inventions proposed a treaty requiring that signatories' laws provide that the patent for an "invention shall belong to the applicant with the earliest priority date."⁴⁹ When the treaty was debated, the *Patent, Trademark and Copyright Journal* reported:

At the June 1990 meeting of the Committee of Experts, the delegation of the United States stated that for the United States to adopt the first-to-file system involved a fundamental change. There was no consensus in the United States that this change should be made. None of the interested associations had taken a position in favor of this change, and there were powerful, vocal elements which actively opposed it.⁵⁰

On January 24, 1994, the Commerce Department issued a press release stating that the United States would not seek to resume negotiations of a treaty harmonizing the world's patent laws at that time.⁵¹ In 2002, then-Patent Office Director Rogan indicated that a shift to first-to-invent was still open for discussion.⁵² The drive to move the United States from first-to-invent to first-to-file is again

to file." *Id.* The commission concluded that the change would encourage prompt disclosure, eliminate interference proceedings, and harmonize U.S. practice with almost all other industrial nations. *Id.* at 6.

46. Patent Reform Act of 1967, S.1042, 90th Cong. (1967); Patent Reform Act of 1967, H.R. 5924, 90th Cong. (1967).

47. Statement of Donald J. Quigg, Assistant Sec'y & Comm'r of Patents & Trademarks (Mar. 16, 1987), available at <http://www.uspto.gov/go/og/conf/files/cons123.htm>.

48. William A. Beltz et. al., *U.S. Says "Not Now" on First-to-File and Agrees with Japan on Patent Term*, 47 PAT. TRADEMARK & COPYRIGHT J. 285, 285 (1994).

49. WIPO Draft Treaty for Patent Harmonization, art. 9, § 2, Oct. 2, 2000, available at www.wipo.org/edocs/scp/en/scp_4/scp_4_3.pdf. The current draft of the treaty provides that the patent should be issued "where two or more applications are filed in respect of that invention, to the applicant whose application has the earliest filing date or, where priority is claimed, the earliest priority date . . ." The priority date is the date when a patent application is first filed in a country signatory to the treaty. *Id.* at art. 2(ii).

50. Edward G. Fiorito, *WIPO Experts Make Progress on Patent Harmonization Draft*, 41 PAT. TRADEMARK & COPYRIGHT J. 231, 232-33 (1991).

51. Beltz et. al., *supra* note 48, at 285.

52. Pruzin, *supra* note 44.

Speaking to reporters in Geneva, Under Secretary of Commerce for Intellectual Property and PTO director James Rogan declared that "everything ought to be on the table for discussion," including the controversy over the U.S. "first to invent" system versus the "first to file" system used elsewhere in the world which has stymied past efforts to draft a global patent treaty.

Id.

underway.⁵³ In analyzing the wisdom of this move, many commentators start with the proposition that “[t]he United States’ first-to-invent system . . . prevents true harmonization with the rest of the world.”⁵⁴ While it is correct that the U.S. system is inconsistent with the rest of the world’s, it would be equally correct to say that the rest of the world’s first-to-file system prevents harmonization. The debate is not advanced by arguments over which of two inconsistent systems is “the inconsistent one,” nor is there any principle of constitutional law which permits Congress to exceed its authority because “all the other countries are doing it.”

B. *Early History and Overview of Current U.S. Patent Priority Law*

Patents are a special exception to the general prohibition of monopolies inherited from England. Early English patents were often political grants, unrelated to invention; “the most important ones were nothing but monopolies on well-known trades, granted to secure favors to some courtiers, to procure money for the Crown, or to assert a national economic policy against some local privileges.”⁵⁵ The English Statute of Monopolies restricted the grant of monopolies but allowed them to be granted to the first and true inventor of new manufactures for a term of fourteen years.⁵⁶

In the United States, the Constitution gave Congress the power to grant exclusive rights to authors and inventors for limited times,⁵⁷ and the first Congress responded, in its second session, with the first U.S. patent statute.⁵⁸ It gave the Secretary of State, the Secretary of War, and the Attorney General (the “Commissioners for the

53. On August 3, 2006, Senators Hatch and Leahy introduced the Patent Reform Act of 2006 which includes a shift to first-to-file. S.8831, 109th Cong. (2006); see also H.R. 2795, 109th Cong. (2006).

54. 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, 6 (2004).

55. Giulio Mandich, *Venetian Patents (1450–1550)*, 30 J. PAT. OFF. SOC’Y 166, 168 (1948).

56. The Statute of Monopolies, 1624, 21 Jac. 1, c. 3, § VI, prohibited the grant of monopolies with the following exception:

any declaration before mentioned shall not extend to any letters-patent and grants of privilege, for the term of fourteen years or under hereafter to be made, of the sole working or making of any manner of new manufactures, within the realm, to be the *true* and *first* inventor and inventors of such manufactures, which others, at the time of making such letters-patents and grant, shall not use, so as also they be not contrary to the law, nor mischievous to the state . . . (emphasis added).

Id.

57. U.S. CONST. art. I, § 8, cl. 8.

58. Patent Act of 1790, ch. 7, 1 Stat. 109-12 (repealed 1793).

Promotion of Useful Arts”)⁵⁹ the power to grant a patent for fourteen years to anyone who “hath . . . invented or discovered any useful art, manufacture . . . or device, or any improvement therein not before known or used,” and also provided for repeal of patent grants if it could be shown that “the patentee was not the first and true inventor.”⁶⁰

The second patent statute, enacted in 1793, gave the Secretary of State the power to grant patents to any U.S. citizen who “invented any new and useful art, machine, manufacture or composition of matter, or any new and useful improvement . . . not known or used before the application . . .”⁶¹

Although the 1790 statute provided for repeal of issued patents and defenses to infringement if the patentee was not the first inventor, the 1793 statute made the first statutory provision for administrative resolution of multiple claims to the same invention: A three person board was appointed (one member by the Secretary of State and one member by each of the claimants) to decide entitlement to the patent.⁶² The basis for the board’s decision was a determination of the true and first invention.⁶³ While the argument might be made that the lack of specific authority in the original statute to resolve multiple claims is inconsistent with a belief that the patent constitutionally belonged to the first inventor, it is more likely that, having established the principle, there was no perceived need to spend legislative time on an elaborate process, as only three patents were issued in 1790.⁶⁴ The patent statute enacted in 1836 created the formal examination bureaucracy and an administrative procedure for determining the right to a patent among competing claimants.⁶⁵

The current patent law remains a first-to-invent system: Only the first inventor may receive the patent for any given invention.⁶⁶ If

59. *Graham v. John Deere*, 383 U.S. 1, 6–7 (1966).

60. Patent Act of 1790; *see supra* note 22; *infra* notes 170–71.

61. Patent Act of 1793, ch. 11, §1, 1 Stat. 318, 318–23 (repealed 1832); *see infra* notes 172–75.

62. Patent Act of 1793 § 9.

63. WILLIAM C. ROBINSON, *THE LAW OF PATENTS AND USEFUL INVENTION* 211 n.2 (1890).

64. Thirty-three patents were issued in 1791, eleven in 1792, twenty in 1793, and twenty-two in 1794. The first year in which more than 100 patents were issued was 1808. In 2005 (the last year for which data is available), 143,806 patents were issued. U.S. PAT. & TRADEMARK OFF., U.S. PATENT ACTIVITY CALENDAR YEARS 1790 TO THE PRESENT, available at http://www.uspto.gov/go/oeip/taf/h_counts.pdf (last visited Feb. 28, 2007) [hereinafter PATENT ACTIVITY CALENDAR].

65. *See infra* note 179.

66. 35 U.S.C. §§ 101–02 (2006). Others may apply for a patent under special circumstances, such as when the inventor is unavailable or refuses to honor a contractual commitment to sign the application. 35 U.S.C. § 118. Patents are personal property and therefore may be assigned. 35 U.S.C. § 261. Inventions made by corporate employees are frequently issued to the employer pursuant to an assignment

two or more applicants claim the same invention and are not precluded by a statutory bar,⁶⁷ the U.S. Patent Office will determine which of the claimants is the first and true inventor through an interference.⁶⁸ Although the process may be expensive and time consuming,⁶⁹ the rules are simple: To be eligible for the patent, a claimant must have conceived of the invention and reduced it to practice,⁷⁰ either by making a working embodiment of the invention or by filing a patent application.⁷¹ The successful claimant is the one who was the first person to conceive⁷² of the invention unless that person is not diligent in reducing the invention to practice.⁷³ If the first conceiver was not diligent in reducing the invention to practice, that applicant forfeits the right to the patent, and the process

under 35 U.S.C. § 152. Robert P. Merges, *The Law and Economics of Employee Inventions*, 13 HARV. J.L. & TECH. 1, 7 (1999).

67. See discussion *infra* note 122.

68. The interference process is provided for in 35 U.S.C. § 102(g), and the administrative rules are set out in Chapter 2300 of the Manual of Patent Examining Procedure (MPEP). U.S. PAT. & TRADEMARK OFF., MPEP (2006), available at <http://www.uspto.gov/web/offices/pac/mpep/mpep.htm> (last visited Jan. 26, 2007) [hereinafter MPEP].

69. An extreme example, U.S. Pat. 2,705,484 (Mechanism for Controlling the Starting and Operation of Internal Combustion Engines), was filed in 1932 and not issued until 1955. An interference was declared in 1935 and decided in 1939, followed by additional interferences declared in 1939 and 1944 and a suit to compel the Commissioner of Patents to issue the patent. *Jorgensen v. Kingsland*, 83 F. Supp. 319 (D.D.C. 1949). Such extreme delays are not, however, unique to first-to-invent countries. It took Texas Instruments nearly thirty years to obtain the Japanese patent on the integrated circuit. Texas Instruments applied for the patent on February 6, 1960, and received conditional approval in 1986, but Japanese companies filed objections which delayed issue until 1989. John Burgess, *Japan Gives U.S. Firm Circuit Patent*, THE WASHINGTON POST, Nov. 22, 1989, at E2.

After almost 30 years of consideration, Japan has granted Texas Instruments a patent on the integrated circuit, the basic invention of miniaturized circuitry that has made the computer age possible. Some American and Japanese analysts have contended that Japan delayed the patent for so long so it could nurture its own electronics industry

The same article reports that a 1987 report of the U.S. Trade Representative alleged that patent applications generally took twice as long as in the United States. *Id.*

70. *Bedford v. Hunt*, 3 Fed. Cas. 37 (C.C. Mass. 1817).

71. If a patent application is enabling, it is a constructive reduction to practice, so the date of invention is the date of filing at the latest. *Alexander Milburn v. Davis-Bournonville*, 270 U.S. 390, 392 (1925); *Innovative Scuba Concepts, Inc. v. Feder Indus., Inc.*, 819 F. Supp. 1487, 1505 (D. Colo. 1993), rev'd on other grounds, 26 F.3d 1112 (Fed. Cir. 1994).

72. Conception is the "formation, in the mind of the inventor, of a definite and permanent idea of the complete and operative invention, as it is hereafter to be applied in practice." ROBINSON, *supra* note 63, at 532.

73. 35 U.S.C. § 102(g) (2006).

continues until only one applicant remains.⁷⁴ The earliest applicant (referred to as the “senior party” to the interference) is presumed to be the first inventor, and subsequent applicants (referred to as “junior parties”) must establish their earlier date of invention.⁷⁵

C. Overview of Non-U.S. Patent Priority Law

Although the United States rejected the approach, early European statutes rewarded the first person to bring a new technology into the country.⁷⁶ The first example of modern patent law is attributed to a statute of the Republic of Venice, enacted March 19, 1474:

[E]very person who shall build any new and ingenious device in this City, not previously made in our Commonwealth, shall give notice of it to the office of our General Welfare Board when it has been reduced to perfection so that it can be used and operated. It being forbidden to every other person in our territories and towns to make any further device conforming with and similar to said one, without the consent and licence of the author, for a term of 10 years.⁷⁷

This approach allows so-called “patents of importation,” which do not require the applicant to be an inventor at all. Patents of importation are granted to anyone who brings new technology into the jurisdiction. Such an approach made more sense in a time when methods of communication were not advanced.⁷⁸ It has been rejected by modern industrial patent systems.⁷⁹

74. The required diligence need not begin until immediately prior to the conception by the second claimant. *Scott v. Satoshi Koyama*, 281 F.3d 1243, 1244–46 (Fed. Cir. 2002).

75. The first applicant enjoys a presumption that the claimed invention was completed as of the filing date and therefore has no need to prove an earlier date unless challenged. If the first applicant needs to prove a date of invention earlier than the filing date, the proof must be by clear and convincing, independent, third party, corroborating evidence. The inventor’s testimony alone cannot meet the burden of proof. *Maxwell v. K Mart Corp.*, 880 F. Supp. 1323, 1329 (D. Minn. 1995). If the junior application is filed more than three months after the senior application, the junior party faces additional evidentiary requirements. See 37 C.F.R. § 1.608(b); MPEP, supra note 68, § 2308.01. If the effective filing date of the applicant is more than three months after the effective filing date of the patent, 37 C.F.R. 1.608(b) requires that the applicant must file (1) evidence, such as patents, publications and other documents, and one or more affidavits or declarations which demonstrate that applicant is *prima facie* entitled to a judgment relative to the patentee, and (2) an explanation stating with particularity the basis upon which the applicant is *prima facie* entitled to judgment. 37 C.F.R. § 1.608(b).

76. See *infra* note 79 and accompanying text.

77. JOINT ECON. COMM., 88TH CONG., INVENTION AND THE PATENT SYSTEM 11 (Comm. Print 1964).

78. Patents of importation were allowed in seventeenth century England. See *Edgebury v. Stephens*, 17 Webst. Pat. Cases 35 (1691).

[I]f the invention be new in England, a patent may be granted though the thing was practiced beyond sea before; for the statute speaks of new manufactures

The European Patent Convention⁸⁰ is representative of modern first-to-file systems. Under Article 54:

1. An invention shall be considered to be new if it does not form part of the state of the art.
2. The state of the art shall be held to comprise everything made available to the public by means of a written or oral description, by use, or in any other way, before the date of filing of the European patent application.⁸¹

And under Article 60(2), “if two or more persons have made an invention independently of each other, the right to the European patent shall belong to the person whose European patent application has the earliest date of filing”⁸²

Similarly, Japan’s Patent Act provides, in Article 39:

1. Where two or more patent applications relating to the same invention are filed on different dates, only the first applicant may obtain a patent for the invention.
2. Where two or more patent applications are filed on the same date, only one such applicant, agreed upon after mutual consultation among all the applicants, may obtain a patent for the invention. If no agreement is reached . . . none of the applicants shall obtain a patent⁸³

As noted above, the United States is the only country in which the date of invention rather than the date of filing drives the determination of priority among claimants. If harmonization is desirable, and if the direction of harmonization should be determined by a head count of countries in each camp, then the norm is clearly first-to-file.

within this realm; so that if it is new here, it is within the statute; for the act intended to encourage new devices useful to the kingdom, and whether learned by travel or by study it is the same thing.

Id.

79. Patents of importation were also rejected by the first Congress, although they still existed in England at the time:

There is nothing whatever to indicate or suggest that in drafting the Clause the Framers intended it to encompass a narrower view of patentable novelty than that which existed in Great Britain. Yet the first Congress assumed this to be the case and refused to authorize patents of importation on the grounds that such were constitutionally precluded.

Edward C. Walterscheid, *To Promote the Progress of Science and Useful Arts: the Anatomy of a Congressional Power*, 43 IDEA 1, 49 (2002).

80. European Pat. Off., Convention on the Grant of European Patents (European Patent Convention), Oct. 5 1973, available at <http://www.european-patent-office.org/legal/epc/e/ma1.html> [hereinafter European Patent Convention].

81. *Id.* at art. 54, §§ (1)–(2).

82. European Patent Convention, *supra* note 80, at art. 60, § (2).

83. Tokkyohō [Patent Law], Law No. 121 of 1959, art. 39.

D. *The Economic and Political Arguments Regarding First-to-File*

While the number of applicants affected may be small, each time a switch to first-to-file has been proposed, the debate has been vigorous.⁸⁴ Proponents focus on the first-to-file system's incentive for early filing, efficiency, and potential concessions that might be gained in return for the change,⁸⁵ and opponents focus on the fairness and successful track record of the current system.⁸⁶ The political wisdom of a switch to first-to-file is beyond the scope of this Article, but it will be helpful to place the discussion in context by summarizing the policy arguments that have been advanced by others in support of each system.

84. Each proposal has generated considerable scholarly debate over the wisdom and constitutionality of the proposed change. See, e.g., Donald W. Banner, *Patent Law Harmonization*, 1 U. BALT. INTELL. PROP. L. J. 9 (1992) (former Patent Commissioner concluding that "harmonization would be an act of incalculable harm to the future of our nation"); Ned L. Conley, *First-To-Invent: A Superior System For the United States*, 22 ST. MARY'S L.J. 779 (1991) (arguing that the United States should stay with its current first-to-invent system); Donald R. Dunner, *First to File: Should Our Interference System be Abolished?*, 68 J. PAT. & TRADEMARK OFF. SOC'Y 561, 566 (1986) (concluding that the United States should join the rest of world in adopting first-to-file system); Charles R.B. Macedo, *First-To-File: Is American Adoption of the International Standard in Patent Law Worth the Price?*, 18 AM. INTELL. PROP. L. ASS'N Q.J. 193, 234 (1990) (concluding that United States should consider adopting the first-to-file system if favorable harmonization treaty is reached); Bernarr R. Pravel, *Why the United States Should Adopt the First-To-File System For Patents*, 22 ST. MARY'S L.J. 797 (1991) (arguing that United States should adopt the first-to-file system); Gregory J. Wrenn, *What Should Be our Priority—Protection for the First to File or the First to Invent?*, 72 J. PAT. & TRADEMARK OFF. SOC'Y 872, 891 (1990) (concluding that the United States stands to gain by adopting first-to-file, and "[a]rguments that the Constitution forbids such a change are tenable, but ultimately are not persuasive and should not prevent action by Congress").

85. See ABA Section of Patent, Trademark & Copyright Law, Proposed Resolution 102-07 (2005); *Joint Hearing on S.2605 and H.R. 4978 Before the Subcomm. on Pat., Copyrights & Trademarks of the S. Comm. on the Judiciary & the Subcomm. on Intell. Prop. & Judicial Admin. of the H. Comm. on the Judiciary*, 102nd Cong. (1992) (statement of American Intellectual Property Law Association that adoption of the first-to-file system would eliminate the need for interference proceedings); Pruzin, *supra* note 44.

86. The Chief Judge of the Federal Circuit stated that "[m]any giant corporations have no need of a patent system. . . . [and] would be glad to compete on size, nationwide service, high volume, strong finance, and prompt delivery. They can kill off smaller competitors on any of those bases, unless the small competitor has a patent" Howard T. Markey, *Some Patent Problems: Philosophical, Philological and Procedural*, 80 F.R.D. 203, 210 (1978-79). Former Commissioner of Patents Banner likewise questions the motives and wisdom of the first-to-file system: "A strong attempt is being made to abandon the equitable U.S. patent system that has served us so well and replace it with a foreign type system which would aid the multinational corporations but mortally injure the individual inventor and small companies." Banner, *supra* note 84, at 12. "The proposed sacrifice of the individual inventor on the altar of international patent harmonization would be an act of incalculable harm to the future of our nation." *Id.* at 16.

1. Arguments for Change

Proponents of the proposed first-to-file system suggest a number of advantages. In 1990, the American Bar Association Section of Patent, Trademark, and Copyright Law favored the adoption of a first-to-file system, if only by a slight majority, noting that it would encourage prompt filing, reduce costs, speed the grant of patents by eliminating interferences, and promote harmonization.⁸⁷ The committee dismissed constitutional arguments, noting that existing law already denied patents to first inventors who had suppressed, abandoned, or concealed their invention.⁸⁸

The strongest theoretical⁸⁹ argument in favor of shifting to first-to-file is that it is perceived as promoting early disclosure.⁹⁰ Because an inventor has no way of knowing whether others are working on the same invention, the only safe course of action under first-to-file is to file a patent application as quickly as possible. The sooner an application is filed, the sooner it will become public and further the policy of encouraging dissemination of knowledge.⁹¹

The strongest political argument in favor of shifting is harmonization with most other countries,⁹² leading to improved

87. ABA Section of Patent, Trademark & Copyright Law, *supra* note 85.

88. The constitutional arguments are discussed at *infra* Part III.A-C. There is a distinction to be made between withdrawing one's entitlement to a patent for deliberately violating a policy and denying entitlement to one who complied with the policy. Where an inventor has suppressed the invention, there is not only forfeiture of the right to the patent but also no addition to the prior art; thus, a subsequent inventor who does make the required contribution to the public domain should not be barred by the suppressed invention. On the other hand, where there is no suppression and, in fact, the first inventor is in the process of placing the invention in the public domain, there is no policy justification for forfeiture to a second inventor.

89. Theoretical arguments involve furthering a constitutional, as opposed to political, purpose. Article I, Section Eight can be read as favoring early disclosure as a means of furthering the progress of the useful arts by disseminating information. The current first-to-invent system provides incentives for early filing: The first inventor can lose the right to a patent if there has been a publication describing the invention anywhere in the world, in any language, more than a year before the application is filed. 35 U.S.C. § 102(a)-(b) (2006). Since there is no way of knowing when such a publication might occur, the safest course, even under a first to invent system, is to file as promptly as possible.

90. See Gregory J. Wrenn, *What Should Be Our Priority: Protection for the First to File or the First to Invent?*, 72 J. PAT. & TRADEMARK OFF. SOC'Y 872, 885 (1990) (remarking that the first to file system is consistent with, though not necessary to implement, an early disclosure policy).

91. Proponents of the first-to-invent system raise the concern that first-to-file will dramatically increase the number of applications, overwhelm the Patent Office, and lead to delays in issuing patents. This would not, however, delay disseminating the information since applications are generally published approximately eighteen months after filing, even if the application is still pending. 35 U.S.C. § 122(b).

92. Vito J. DeBari, *International Harmonization of Patent Law: a Proposed Solution to the United States' First-to-file Debate*, 16 FORDHAM INT'L L.J. 687, 702 (1993) ("Proponents of first-to-file argue that it should be adopted because it is a much

predictability⁹³ and, it is hoped, producing efficiency, lower costs of obtaining international protection,⁹⁴ and concessions on other issues of concern to U.S. interests.⁹⁵ Sean T. Carnathan notes the aspiration that, "by bringing the U.S. system into harmonization with the rest of the world, the United States would also garner concessions from the World Intellectual Property Organization (WIPO) when negotiating other aspects of international intellectual property law The ultimate goal, the first-to-filers suggest, is a single world-wide patent application."⁹⁶ The principal efficiency in the short run would be reduction of the time and expense spent in interferences⁹⁷ and, some argue, reduced recordkeeping costs, even

more efficient system and will enable the United States to participate in and benefit from the proposed patent law harmonization treaty."); *see also* Kim Taylor, *Patent Harmonization Treaty Negotiations on Hold: The "First To File" Debate Continues*, 20 J. CONTEMP. L. 521, 534 (1994) (remarking that "the goal of harmonizing patent laws worldwide would be more closely met if the United States aligned itself with the first-to-file procedure").

93. Macedo, *supra* note 84, at 216; Robert W. Pritchard, *The Future Is Now—The Case for Patent Harmonization*, 20 N.C.J. INT'L L. & COM. REG. 291, 298 (1995) (arguing that evaluation of inventorship under the current system is uncertain because the "precise dates of conception and reduction to practice may be difficult to ascertain, even with detailed records"; the "quality of diligence each party exercised in reducing their conceived invention to practice is a subjective determination that lies with the trier of fact"; and the "amount of abandonment, suppression, or concealment sufficient to penalize an inventor is also subjective and is not defined in the statute"); Taylor, *supra* note 92, at 533. There is one important respect in which shifting to first-to-file might actually weaken patent protection. Currently, an alleged infringer can defend by showing that the claimed invention was known by others prior to the patentee's date of invention. *See supra* note 7 and accompanying text. In a first-to-file system, the analogous defense would be a showing that the claimed invention was known by others prior to the patentee's *date of filing*. Since by definition filing cannot precede invention, the result is weaker patent protection, greater uncertainty, and more litigation.

94. DeBari, *supra* note 92, at 710 ("Additional advantages associated with the adoption of a harmonization treaty include the reduction of costs in obtaining patent protection internationally, reduction of costs associated with defending a patent, better enforcement of patent protection worldwide, and the simplification of international patent law"); *see also* Wrenn, *supra* note 90, at 879 (asserting that "harmony in the international patent practice would avoid cost involved with the dual patent anomaly that can occur in today's world").

95. Pruzin, *supra* note 44.

96. Sean T. Carnathan, *Patent Priority Disputes—A Proposed Re-Definition of "First-to-Invent,"* 49 ALA. L. REV. 755, 794 (1998).

97. Taylor believes the interference system can be eliminated by adopting first-to-file. Taylor, *supra* note 92, at 532–33. This seems unlikely. Macedo observes that these cost savings would be limited, because:

much of the procedural simplicity and cost savings to the applicants offered by a first-to-file system would be eliminated due to the two limitations currently being considered by WIPO, *e.g.*, the derivation right, and the prior user right [A]n interference system would be necessary to determine if the applicant for a prior user right had commercially used the invention before the filing date of the patent which had been awarded. Therefore, in the end the

with respect to purely domestic applications.⁹⁸ In the 1992 attempt to shift to first-to-file, the president of the American Intellectual Property Law Association (AIPLA) testified that adoption of a first-to-file system would eliminate the need for interference proceedings.⁹⁹ This underestimates the ingenuity of skilled lawyers representing well-funded clients in high stakes contests.¹⁰⁰ Except in the highly theoretical case of two applicants submitting identically worded specifications, including identically worded claims, there will always be the possibility of testing, for example, whether the first filer has claimed the same invention and has enabled the invention.¹⁰¹ Even in that highly theoretical case, there will also be the possibility of testing whether the first filer has complied with the requirements to receive a filing date and has not violated some public policy, such as suppression of the invention or inequitable conduct.¹⁰²

The argument has also been made that harmonization to first-to-file would reduce the likelihood that U.S. inventors would

treaty is unlikely to provide any significant cost savings to applicants resulting from adoption of a first-to-file system.

Charles R.B. Macedo, *First-to-File: Is American Adoption of the International Standard in Patent Law Worth the Price?*, 1988 COLUM. BUS. L. REV. 543, 571 (1988). Furthermore, as Carnathan points out, "even if the nation switched to a first-to-file system, the dates of conception and reduction to practice would remain relevant, absent further amendment to the system, in disputes over whether an invention was disclosed prior to the patent applicant's date of invention." Carnathan, *supra* note 96, at n.191; *see also* Wrenn, *supra* note 90, at 885. More conservative commentators assert that at least the change to first-to-file will reduce the cost and complexity of interferences. *See, e.g.*, DeBari, *supra* note 92, at 709.

98. Both Pritchard and Carnathan note that U.S. inventors are required to keep accurate records of all acts of invention in the event that a patent is involved in an interference proceeding and the inventor is required to prove conception, reduction to practice, and diligence. Pritchard, *supra* note 93, at 313; Carnathan, *supra* note 96, at 768. Most companies probably keep records for other reasons in addition to anticipation of interference proceedings. For example, such records might be kept in general to demonstrate independent discovery as a defense to possible trade secret misappropriation. If independent invention remains a defense to patent infringement, or if prior user rights are adopted, prudent companies will still keep detailed, time-verified records of their activities. Companies in regulated industries, such as pharmaceuticals, have independent record-keeping requirements. It is thus unlikely that companies will abandon keeping careful records of their experiments simply because the patent system is changed to first-to-file.

99. *Joint Hearing on S. 2605 and H.R. 4978*, *supra* note 85, at 93 ("If the United States adopts first-to-file, the question of right to a patent between interfering parties would be satisfied by a quick examination of filing dates, thus eliminating the need for interference proceedings.")

100. *See* Macedo, *supra* note 97, at 572 ("The most likely result of adoption of the WIPO system would be a replacement of the current hypertechnicality with a new hypertechnicality.")

101. *See, e.g.*, *Amgen v. Chugai Pharm.*, 927 F.2d 1200 (Fed. Cir. 1991) (deciding validity of competing patents regarding DNA sequences for encoding Erythropoietin (EPO)).

102. 35 U.S.C. § 102(g) (2006).

inadvertently forfeit foreign patent rights by misunderstanding grace periods.¹⁰³ Under current law, a U.S. applicant has a year from public disclosure within which to file an application,¹⁰⁴ while that same delay would defeat patentability in most of the rest of the world.¹⁰⁵ To the extent that inadvertent loss of foreign rights by mistakenly believing that the rest of the world has the same grace period as the United States is a problem, the solution would seem to be harmonization of the grace period rather than harmonization of priority, a solution which would not present the serious constitutional doubts raised by the first-to-file proposal.

Proponents also argue that few will be affected by the change.¹⁰⁶ "More than 99.9% of the patent applications that are currently filed in the United States raise no dispute as to the identity of the inventor [and] these statistics clearly indicate that there would be no significant difference in result between a first-to-file system and a first-to-invent system."¹⁰⁷ At least with respect to international corporations, the argument has been made that they already need to conform to the rest of the world's first-to-file system and so would not change their procedures in response to a U.S. shift to first-to-file.¹⁰⁸

Optimistic proponents hope that switching to a first-to-file system will only be the first step toward a completely harmonized international patent system.¹⁰⁹ While procedural harmonization is at least conceivable, the prospect of a single filing resulting in a

103. Wrenn, *supra* note 90, at 885.

104. 35 U.S.C. § 102(d).

105. See, e.g., European Patent Convention, *supra* note 80, art. 52 available at <http://www.european-patent-office.org/legal/epc/e/ar52.html> ("(1) European patents shall be granted for any inventions which are susceptible of industrial application, which are new and which involve an inventive step."), *Id.* art. 54, available at <http://www.european-patent-office.org/legal/epc/e/ar54.html> ("(1) An invention shall be considered to be new if it does not form part of the state of the art. (2) The state of the art shall be held to comprise everything made available to the public by means of a written or oral description, by use, or in any other way, before the date of filing of the European patent application.").

106. See, e.g., Macedo, *supra* note 97, at 568-69 (stating that "few of the people who file for patents actually declare interferences").

107. DeBari, *supra* note 92, at 707. These statistics only reflect declared interferences. Inventors are not required to supply their date of invention unless an interference is declared and contested.

108. Pritchard, *supra* note 93, at 313.

109. Macedo, *supra* note 97, at 581-82 (summarizing the advantages of harmonization, including reduced transaction costs of obtaining a patent, on the assumption that "[i]f the substantive and procedural rules were the same everywhere, only one set of arguments would need to be developed"; reduced costs of enforcing patents, on the assumption that "[i]f patent laws were harmonized, a judgment of validity in one country might be given either *res judicata* or collateral estoppel effect in other countries . . . [or] at least a strong presumption of validity"; and simpler international protection of patents resulting from fewer substantive and procedural rules); see also Carnathan, *supra* note 96, at 794 (remarking that the ultimate goal of first-to-filers is a single world-wide patent application).

universally enforceable patent is beyond reason. Countries differ on fundamentals other than procedure, such as patentable subject matter and standards of patentability.

One commentator argues that the existence of the U.S. first-to-invent system alongside first-to-file systems leads to the possibility that a licensee might need to license two patents to practice the same invention: the U.S. patent and the foreign patents.¹¹⁰ This, however, is a result not of the first-to-invent system, but of the existence of two systems. In fact, the problem would be resolved more completely if the world harmonized on a first-to-invent system (since there could only be one first inventor); in a first-to-file system, it would still be possible to have multiple patents on the same invention.¹¹¹

Two negatives of shifting to a first-to-file system should be noted. It would not be surprising to see a "race to the bottom," with applications being filed in those countries which make it easiest to get a filing date¹¹² and at least some countries competing for the business by accommodating minimal filings. Presumably, the United States would still require a filing to be enabling,¹¹³ so it would not be surprising to see a dramatic increase in challenges along those lines, placing an increased burden on the Patent Office or the courts. Moreover, if the United States retained the requirement that a filing must be enabling, it would place U.S. inventors at a great disadvantage with respect to their foreign competitors. Under U.S. law, a U.S. inventor must not file a patent application abroad without either obtaining a license to do so (a time consuming process) or first filing the application in the United States and waiting six months.¹¹⁴ Thus, U.S. citizens will be unable to take advantage of more relaxed filing requirements abroad, and the contest between two otherwise equal claimants will always go to the foreign applicant. The other

110. Wrenn, *supra* note 90, at 872–73, 877.

111. Consider the situation in which Inventor A files only in Country A, Inventor B files only in Country B, and so forth. In each country where the mere filing of an application abroad does not destroy novelty, a separate patent will be issued for the same invention and will be enforceable within the associated borders. Thus, one seeking to market the invention worldwide will require multiple licenses. If the patent were only available to the first inventor, there would at most be only one patentee worldwide.

112. Current U.S. law requires U.S. inventors to file in the United States first, or to obtain a foreign filing license. 35 U.S.C. § 184 (2006). It is likely that there will be enormous pressure to relax this requirement to avoid placing U.S. inventors at a disadvantage with respect to inventors from other countries. One of the purposes of the requirement, though, is to give the government the opportunity to review technology for national security concerns and prevent filing abroad if doing so would jeopardize national security. Relaxing the requirement will therefore pose complicated tradeoffs between competitiveness and national security.

113. In the United States, a patent application must be sufficiently detailed to enable one skilled in the art to make and use the claimed invention. 35 U.S.C. § 112.

114. 35 U.S.C. § 184.

less quantifiable negative is the message such a move would send, incentivizing filing rather than invention.

2. Arguments for the Status Quo

The strongest theoretical argument in favor of the current first-to-invent system is that fairness (and the U.S. Constitution) demand that the patent be awarded to the inventor, meaning the first to invent not the first to reach the patent office.¹¹⁵ As discussed in detail at Part II *infra*, there are strong arguments that Article I, Section Eight requires that any patents be issued to the first inventor who complies with statutory application requirements and therefore prevents switching to a first-to-file system. Proponents also argue that a patent system should reward invention, not paperwork.¹¹⁶

The strongest practical argument in favor of the status quo is that it conserves Patent Office resources compared to a first-to-file system, all other things being equal. Even if the quality of applications does not decline, a first-to-file system is expected to result in a significant increase in the number of applications which the PTO must examine.¹¹⁷ Unless other things change (for example, a return to the registration system of 1793), the available evidence indicates that quality will in fact decline and therefore make examination more difficult.¹¹⁸ It is argued that under the current

115. Banner, *supra* note 84, at 12 (“[A]ward to the first inventor is both logical and fair.”); DeBari, *supra* note 92, at 702 (“Commentators and practitioners opposed to adopting a first-to-file system maintain that first-to-invent is an inherently fairer system because it rewards the original inventor and has served the United States well for over 150 years.”); Macedo, *supra* note 97, at 576 (“The Anglo-American patent tradition, from the Cases on Monopolies to the present-day patent law, strongly suggests that it is the first inventor who is the more deserving.”). Although Macedo notes that since the purpose of granting patents is to encourage the “Progress of Science and the Useful Arts” by granting limited monopolies in exchange for disclosure, “it may be just as reasonable to grant a patent to the first person to disclose an invention, as it would be to grant a patent to the first inventor . . .” *Id.* at 577.

116. Taylor, *supra* note 92, at 536 (stating the first-to-file system elevates “paperwork over true invention”).

117. See Wrenn, *supra* note 90, at 885; Taylor, *supra* note 92, at 536. The theory is that inventors will respond by filing applications when the invention is first conceived in order to secure the earliest possible priority date, and they will continue to file additional applications as the invention is developed, rather than wait for a complete formulation of the preferred embodiment of the invention before filing.

118. Macedo predicts that under a first-to-file system, the number of applications filed at the Patent Office would increase in quantity and decrease in quality, noting that over five times as many applications are filed in Japan (a first-to-file country) than in the United States and that many of the 600,000 Japanese applications are scraps of papers written by the inventors and submitted for a priority date. Macedo, *supra* note 97, at 573; see also Helfgott, *supra* note 26, at 3. Critics of first-to-file also argue that such a system would foster premature and sketchy disclosures in hastily-filed patent applications, resulting in a decline in the quality of applications. This argument is based on the premise that to establish an early priority

system applicants may take the time necessary to prepare a complete, well-drafted application, without fear that by taking the time to do so they jeopardize ownership of the patent.¹¹⁹ This argument is asserted to be of particular importance to less wealthy inventors, such as independent inventors and small companies. Under a first-to-file system, those less wealthy inventors would be disadvantaged by the need to file multiple patent applications as their research proceeds,¹²⁰ but under a first-to-invent system, they have the ability to delay the expense of patent application filing for a limited time¹²¹

date, inventors will rush to file applications on the basis of bare concepts before the inventions are fully developed. Critics of the first-to-file system also contend that the Patent Office will be burdened with an increased volume of patent applications filed for defensive purposes, many of which will contain unpatentable and inoperable inventions. DeBari, *supra* note 92, at 704.

119. DeBari, *supra* note 92, at 702-03.

One of the leading arguments advanced by those opposed to adopting a first-to-file priority system is that small entities would be placed at a disadvantage in the race to the Patent Office. This result would occur because of the limited resources available to small entities for preparing and filing patent applications. Under the first-to-invent system, once inventors conceive an invention, they can proceed diligently to reduce the invention to practice without rushing to file a patent application. Even if someone else files a patent application first, the first inventor will be entitled to the patent on the invention.

Id.; see also Wrenn, *supra* note 90, at 885 (stating that "there are significant risks that result from over-encouraging early filing").

120. See MAURICE H. KLITZMANN, PATENT INTERFERENCE LAW AND PRAC. XXIV (1984) (noting that first-to-file would encourage a race to the patent office with "hasty application drafting with limited experimental exemplification or support"); Banner, *supra* note 84, at 9; Carnathan, *supra* note 96, at 796 (remarking that applicants may be "forced to file continuation-in-part applications in increased numbers" under a first-to-file system); Wrenn, *supra* note 90, at 885 (noting a "comparative disadvantage for smaller organizations not as proficient at identifying and prosecuting patentable inventions"). But see 1987 Comm. Rep. A.B.A. Sec. Pat. Trademark & Copyright L. 62 (Aug. 6-12, 1987), noting:

Supposedly, first-to-invent practice allows the small inventor to reduce an invention to practice in a diligent, but measured fashion, consistent with limited resources, and maintain entitlement to a patent over an earlier-filed patent application of a more resourceful, subsequent inventor. This consideration, while theoretically and historically interesting, has little significance in almost every practical setting.

This consideration has little practical significance because generally only well-financed corporate parties have the resources to engage in interferences. See also Macedo, *supra* note 97, at 578 (noting that advocates of the first-to-file system claim that very few small inventors benefit from the first-to-invent system due to the high cost of interferences).

121. Inventors cannot wait indefinitely without risk because of other provisions of the patent statute, known as "statutory bars." Pursuant to 35 U.S.C. §§ 102 and 103 (2006), even a first inventor can lose the right to a patent if anyone, even including the inventor, publishes an enabling description of the invention more than one year prior to the inventor's application. Pursuant to 35 U.S.C. § 103(g), even a first inventor can

while perfecting their inventions. Therefore, unless the U.S. Patent Office hires significantly more examiners, the examination process (already longer than the Patent Office's own targets) must become longer or less reliable. A first-to-invent system also reduces the need for pre-filing secrecy, a problem of particular concern to academia, where the historical model has favored publication of scientific advances. Finally, defenders of first-to-invent argue that the current first-to-invent system has fueled economic competitiveness.¹²²

After reviewing the arguments for and against the first-to-invent and first-to-file systems, Macedo concludes "a comparison of the current patent system with the proposed WIPO model shows that neither system is so much better than its rival as to justify and outweigh the transaction costs of a change of systems."¹²³ While the arguments in favor of switching are optimistic in their estimate of advantages of the first-to-file system and appear to overlook potential disadvantages, it cannot be said that it would be irrational to make the switch. The question remains: How? Must the Constitution be amended to accomplish the change, or is it possible to accommodate a first-to-file system under the current Constitution?

II. THE CONSTITUTIONAL PROBLEM

A. Article I, Section Eight: History and Interpretation

Article I, Section Eight, Clause Eight of the Constitution, in what is variously referred to as the Copyright Clause, the Patent Clause, and the Intellectual Property Clause, confers on Congress the power "[t]o promote the Progress of . . . useful Arts, by securing for limited Times to . . . Inventors the exclusive Right to their . . . Discoveries."¹²⁴

Especially given the "broad strokes" approach of the framers,¹²⁵ it is curious that specific power relating to intellectual property made

lose the right to a patent by suppressing or concealing the invention. There are other, more complicated forfeiture provisions, for example forfeiture for unlicensed filing of an application abroad before filing in the United States. 35 U.S.C. § 184.

122. Taylor, *supra* note 92, at 528.

123. Macedo, *supra* note 97, at 566.

124. U.S. CONST. art. I, § 8, cl. 8.

125.

In the draught of a fundamental constitution, two things deserve attention: 1. To insert essential principles only, lest the operations of government should be clogged by rendering those provisions permanent and unalterable, which ought to be accommodated to times and events. 2. To use simple and precise language, and general propositions.

RECORDS OF THE FEDERAL CONVENTION 137 (Max Farrand ed., rev. ed. 1966) (quoting Edmund Randolph). See also *Wright v. United States*, 302 U.S. 583, 588 (1938)

it into the Constitution. Little is known about the genesis of the Intellectual Property Clause. James Madison commented that the "utility of this power will scarcely be questioned. The copyright of authors has been solemnly adjudged in Great Britain, to be a right at common law. The right to useful inventions seems with equal reason to belong to the inventors."¹²⁶ A contemporary essay indicates that the motivation may have been to encourage inventors and authors without tapping the meager resources of the new federal government.¹²⁷ Beyond that, most is speculation.¹²⁸ Some have speculated that the clause was included solely for the purpose of imposing limits on the power;¹²⁹ others have attributed its inclusion to enlightenment interest in philosophy and natural rights.¹³⁰ Written evidence of motivation and even of parentage is simply lacking. What little contemporary writing is available regarding the Intellectual Property Clause is summarized in Part II(A) below.

Whether the clause sets the inner or outer limits of federal power with respect to patents is critical to harmonization. Two questions of interpretation arise: Does the Intellectual Property Clause authorize first-to-file, and if not, does it forbid first-to-file? If it authorizes first-to-file, no further analysis is required; if it neither authorizes nor forbids it, the analysis must proceed to a search for another source of power.¹³¹ If the Intellectual Property Clause forbids first-to-file, then either a coequal source of power must be found¹³² or the Constitution must be amended.

(asserting that while interpreting the Constitution, it is presumed "that no word was unnecessarily used, or needlessly added").

126. THE FEDERALIST NO. 43, at 279 (James Madison).

127. *Remarks on the Amendments to the Federal Constitution*, 6 AMERICAN MUSEUM OR REPOSITORY OF ANCIENT AND MODERN FUGITIVE PIECES 303 (1789) ("As to those monopolies, which, by way of premiums, are granted for certain years to ingenious discoveries in countries, and more necessary in this, as the government has no resources to reward extraordinary merit.").

128. See generally Edward C. Walterscheid, *To Promote the Progress of Science and Useful Arts: The Background and Origin of the Intellectual Property Clause of the United States Constitution*, 2 J. INTELL. PROP. L. 1, 31-34 (1994).

129. *Id.* at 32-33.

The unusual fact that this particular detail exists in the Intellectual Property Clause in and of itself suggests a key to why such a clause was included. The Clause was intended not so much as an express authority to promote the progress of science and the useful arts, but rather as a means of ensuring authority to do so in a particular way.

Id.

130. See, e.g., LYMAN RAY PATTERSON, *COPYRIGHT IN HISTORICAL PERSPECTIVE* 186 (1968).

131. The Commerce Clause has been suggested as this alternate source. See *infra* note 195.

132. The Treaty Power has been suggested as coequal with, and able to overcome, restrictions on legislative power. See *infra* notes 205-08.

Heald and Sherry¹³³ identify six categories of historical evidence which the Supreme Court has used in constitutional analysis: pre-constitutional history,¹³⁴ drafting debates,¹³⁵ ratification debates,¹³⁶ public reactions,¹³⁷ early judicial precedent,¹³⁸ and early congressional precedent.¹³⁹

1. Pre-Constitutional History

One of the sources of pre-constitutional authority is the common law of England at the time of the American Revolution. The English approach to monopolies was exemplified by the case of *Darcy v. Allein*¹⁴⁰ and the Statute of Monopolies.¹⁴¹ In *Darcy*, the court invalidated a monopoly granted by Queen Elizabeth I on playing cards, holding monopolies generally illegal and detrimental because they raised prices, reduced the availability of goods, and reduced

133. 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, 1141 (2000).

134. According to Heald and Sherry, this includes English legal history, colonial practices, and state practices under the Articles of Confederation. *Id.* at 1130–31 (citing *Alden v. Maine*, 527 U.S. 706 (1999); *Ry. Labor Executives' Ass'n v. Gibbons*, 455 U.S. 457 (1982)).

135. Heald and Sherry again cite *Alden* and *Railway Labor Executives'*. Although, as Heald and Sherry note,

[c]onsistent with the most sophisticated literature on original intent, however, the Court tends not to emphasize the drafters' debates. According to originalist theory, the legitimacy of judicial review depends on the Constitution's status as a popularly ratified document. Thus, the intent of particular drafters—mere proponents of ideas rather than enactors . . . is not as important as how the words were popularly understood at the time. Remarks made by the drafters can illuminate this meaning but are not necessarily dispositive.

Id. at 1132. But, the Court occasionally uses not only the debates of the drafters but also in one case a private letter James Madison wrote some 40 years later. See *West Lynn Creamery, Inc. v. Healy*, 512 U.S. 186, 193 n.9 (1994) (citing an 1829 James Madison letter in support of the Dormant Commerce Clause). *Id.* at n.101.

136. *Alden*, 527 U.S. 706; *Seminole Tribe v. Fla.*, 517 U.S. 44 (1996); *Monaco v. Miss.*, 292 U.S. 313 (1934); *Plaut v. Spendthrift Farm, Inc.*, 514 U.S. 211(1995); Heald & Sherry, *supra* note 133, at 1134–35 (citing *Hans v. Louisiana*, 134 U.S. 1 (1890)).

137. *Id.* at 1135–36 (citing *Chisholm v. Georgia*, 2 U.S. (2 Dall.) 419 (1793)).

138. *Id.* at 1136 (citing *Plaut*, 514 U.S. 211).

139. Early congressional precedents include the absence of congressional action as evidence that it believed it lacked constitutional authority to act. *Id.* at 1137 (citing *Printz v. U.S.*, 521 U.S. 898, 905 (1997) (“[I]f . . . earlier Congresses avoided use of this highly attractive power, we would have reason to believe that the power was thought not to exist.”)). *Printz* refers to the power to require state officials to assist in the implementation of federal laws. The case addressed the Brady Bill's requirement that local officials conduct background checks in the sale of firearms.

140. *Kewanee Oil Co. v. Bicron Corp.*, 478 F.2d 1074, 1083 (1973) (mentioning *The Case of Monopolies (Darcy v. Allein)*, 11 Co. Rep. 84 b., 77 Eng. Rep. 1260 (K.B. 1602)).

141. Statute of Monopolies of 1623, 21 Jac. 1, c. 3, § 6 (Eng.).

competition, although recognizing that one who “by his own charge and industry, or by his own wit or invention doth bring any new trade into the realm whether by a truly new invention or by bringing to England a new trade or industry known elsewhere—might usefully receive a monopoly.”¹⁴² In 1623, Parliament enacted the Statute of Monopolies, which codified the general common law prohibition on monopolies expressed in *Darcy* but also recognized the value of inventions and provided that the general prohibition:

[n]ot extend to any letters patent and grants of privilege for the term of one and twenty years or under, heretofore made, of the sole working or making of any manner of new manufacture within this realm, to the first and true inventor and inventors of such manufactures, which others at the time of making such letter patent and grants did not use, so they be not contrary to the law, nor mischievous to the state.¹⁴³

Another source of pre-constitutional authority would be the laws of the colonies. Colonial patents appear to have been rarely granted¹⁴⁴ and enforced even less frequently.¹⁴⁵ While most colonial patents were granted by special act of the legislature, at least one state, South Carolina, had a general patent statute.¹⁴⁶

2. The Drafting Debates, Ratification Debates, and Early Public Reactions

The Intellectual Property Clause was adopted without debate and with little historical record.¹⁴⁷ The patent language in particular appears to have been added in committee with no record of who made the addition or why.¹⁴⁸ A number of explanations have been offered:

142. The Case of Monopolies (*Darcy v. Allein*), 11 Co. Rep. 84 b., 77 Eng. Rep. 1260 (K.B. 1602).

143. Statute of Monopolies of 1623. Note that the proposal to shift from a first-to-invent system to a first-to-file system does nothing to reduce the “mischief” of monopolies; it merely shifts it from one monopolist to another. In fact, if the data are to be believed, the shift may well result in shifting the patent to a more powerful monopolist.

144. Patents were, however, granted by the colonies and states prior to 1787. See *Goldstein v. California*, 412 U.S. 546, 557 n.13 (1973) (listing five such patents).

145. See Edward C. Walterscheid, *The Early Evolution of the United States Patent Law: Antecedents (5 Part I)*, 78 J. PAT. & TRADEMARK OFF. SOC'Y 615, 623–31 (1994).

146. “[T]he Inventors of useful machines shall have a like exclusive privilege of making or vending their machines for the like term of fourteen years, under the same privileges and restrictions hereby granted to, and imposed on, the authors of books.” An Act for the Encouragement of Arts and Sciences, S.C. Public Laws 333–34 (1784).

147. “No delegate to the Constitutional Convention has left any record concerning the interpretation or meaning placed on the intellectual property clause by the delegates themselves.” Edward C. Walterscheid, *Inherent or Created Rights: Early Views on the Intellectual Property Clause*, 19 HAMLIN L. REV. 81, 92 (1995).

148. Walterscheid, *supra* note 128, at 51 (“There is no record to indicate how the intellectual property proposals submitted by Madison and Pinckney were transformed

- (1) Support for the grant of patents and copyrights was so strong and universal that neither debate nor analysis was required.¹⁴⁹
- (2) Patents and copyrights were so unimportant that no one cared enough to debate or analyze the proposal.¹⁵⁰
- (3) Patents and copyrights were non-controversial and the Convention had more important issues to resolve.¹⁵¹

The Intellectual Property Clause first appeared at the Constitutional Convention¹⁵² on August 18, 1787, when it was proposed to grant the federal government the power "To secure to literary authors their copy rights for a limited time; To encourage, by proper premiums and provisions, the advancement of useful knowledge and discoveries; To grant patents for useful inventions; To secure to authors exclusive rights for a certain time . . ."¹⁵³ The proposal was referred to the Committee of Detail.¹⁵⁴ On August 31, 1787, the proposal had not been acted on and was referred, along with other as yet unresolved

into this clause. Madison, as a member of the responsible committee, must have known but never explained it. Nor did any other member of the Committee."

149. Sidney A. Diamond, *Our Patent System . . . The Past is Prologue*, 62 J. PAT. OFF. SOC'Y 437, 440 (1980) (noting "[t]he delegates clearly believed firmly that it was in the public interest to establish a patent and copyright system . . . Unfortunately, this lack of controversy and legislative history has provided later scholars with little guidance as to the framers' original intent.").

150. Walterscheid, *supra* note 128, at 16 ("One indication of the relatively low value attached to patents is the fact that no record has been found of any litigation involving colonial patents of monopoly for invention in any colonial or English court.").

151. *Id.* at 26 ("It may well have been that the delegates were tired, wanted to go home, and simply did not perceive this particular grant of power to the Congress to warrant any further debate."). Furthermore,

The absence of debate over the patent provision . . . has been taken as proof of their firm belief in patents as the best way to encourage socially beneficial innovation. However, it is more likely that the authors of the Constitution [acted] without paying much attention to the subject, since they were also faced with the larger problems of how to structure the government, solve its fiscal difficulties, and defend the new nation.

Id. at 27 n.89 (quoting Morgan Sherwood, *The Origins and Development of the American Patent System*, 71 AM. SCI. 500, 500 (1983)).

152. See *id.* at 43–50, for a detailed chronology of the development of the Intellectual Property Clause and the available historical record. Walterscheid notes inconsistent records of who proposed the clause, even among different accounts in Madison's notes.

153. RECORDS OF THE FEDERAL CONVENTION, *supra* note 125, at 321–22; see also Kevin D. Galbraith, *Forever on the Installment Plan? An Examination of the Constitutional History of the Copyright Clause and Whether the Copyright Term Extension Act of 1998 Squares with the Founders' Intent*, 12 FORDHAM INTELL. PROP. MEDIA & ENT. L.J. 1119, 1140 (2002).

154. BRUCE W. BUGBEE, GENESIS OF AMERICAN PATENT AND COPYRIGHT LAW 192–93 n.7 (1967).

proposals, to the so-called Committee of Eleven.¹⁵⁵ On September 5, 1787, the Committee presented the Intellectual Property Clause in its current form,¹⁵⁶ and it was approved unanimously and without debate.¹⁵⁷ There does not appear to be any record of the transformation of the language in the interim.

It has been asked why it was necessary to include an intellectual property clause at all¹⁵⁸ when the philosophy of the Constitution was “to insert essential principles only, lest the operations of government should be clogged by rendering those provisions permanent and unalterable, which ought to be accommodated to times and events.”¹⁵⁹ The power to protect intellectual property rights would appear, to modern eyes, inherent (e.g., necessary and proper under the Commerce Clause). One answer may be that it was not only not viewed as inherent in 1789, but it may have been thought to be a power denied the central government, in light of the Articles of Confederation’s implicit reservation of the right to grant patents to the states and the lack of state laws protecting inventors.¹⁶⁰ It has, however, been argued that the purpose of including the clause and its unusual preamble was “not so much as an express authority to promote the progress of science and the useful arts, but rather as a

155. RECORDS OF THE FEDERAL CONVENTION, *supra* note 125, at 473 (quoting Madison’s journal entry of August 31, 1787). The Committee of Eleven comprised one member from each state except Rhode Island and New York, which did not have delegates present at the time.

156. Galbraith, *supra* note 153, at 1140 (“On September 5, 1787 . . . the Committee of Eleven reported back with the following language: To promote the progress of Science and useful arts by securing for limited times to authors & inventors the exclusive right to their respective writings and discoveries.”).

157. *Id.* at 1140–41.

On September 12, the Committee of Stile and Arrangement reported to the full Convention the entire Constitution, which contained the Copyright Clause with the language unchanged from the September 5 version. On September 17, the Constitution was adopted and signed by the delegates, and there was no recorded debate of the Copyright Clause.

See also Walterscheid, *supra* note 128, at 26.

158. Walterscheid, *supra* note 128, at 26.

159. RECORDS OF THE FEDERAL CONVENTION, *supra* note 125, at 137. Early on the Supreme Court held that “[i]t cannot be presumed that any clause in the constitution is intended to be without effect” *Marbury v. Madison*, 5 U.S. (1 Cranch) 137, 174 (1803).

160. Article II of the Articles of Confederation specifically reserved to the states all rights not expressly granted to the United States. No right to grant patents or copyrights was included in Article IX. Some state constitutions explicitly prohibited the grant of monopolies. *See, e.g.*, MD. CONST. OF 1776, Declaration of Rights § 39 (1867) (“That monopolies are odious, contrary to the spirit of a free government, and the principles of commerce; and ought not to be suffered.”); N.C. CONST. OF 1776, A Declaration of Rights, art. XXIII (1868) (“That perpetuities and monopolies are contrary to the genius of a free State, and ought not to be allowed.”).

means of ensuring authority to do so in a particular way, namely, by securing exclusive rights for limited times.”¹⁶¹

Walterscheid’s exhaustive history of the Intellectual Property Clause identifies only one instance of discussion of the Intellectual Property Clause during ratification: “As to those monopolies, which, by way of premiums, are granted for certain years to ingenious discoveries in medicine, machines, and useful arts; they are common in all countries, and more necessary in this, as the government has no resources to reward extraordinary merit.”¹⁶²

In the absence of any discussion or debate at the Constitutional Convention, it is logical to assume that the term inventor was intended to be interpreted in its ordinary, contemporary sense. The standard dictionary of the day would have been the contemporary Johnson’s Dictionary of the English Language, which defined inventor as “a finder of something new.”¹⁶³

3. Early Judicial Precedent

The construction of the Constitution by the first act of 1790 and the act of 1802, by the men who were contemporary with its formation, many of whom were members of the convention which framed it, is of itself entitled to very great weight, and when it is remembered that the rights thus established have not been disputed during a period of nearly a century, it is almost conclusive.¹⁶⁴

With regard to the first-to-invent system of patent law, the period without dispute is, of course, now more than two centuries.

Carnathan¹⁶⁵ argues, however, that the Constitution does not mandate the first-to-invent system, because

[a]t the time of the framing, the term “first and true inventor” was unquestionably not understood to mean only the creator of the invention. On the contrary, “first and true inventor” as understood under the English Statute of Monopolies included a person who introduced to England an invention previously used in another country.¹⁶⁶

161. Walterscheid, *supra* note 128, at 33.

162. *Id.* at n.188 (citing *Remarks on the Amendments to the Federal Constitution*, *supra* note 127, at 303).

163. A DICTIONARY OF THE ENGLISH LANGUAGE (1967). The definition is unchanged from the first edition (1755) through the fourth edition (1773), although the later edition deletes one example of usage from the first edition (“Th’ invention all admir’d, and each how he To be the inventor miss’d. Milton.”).

164. *Burrow-Giles Lithographic Co. v. Sarony*, 111 U.S. 53, 57 (1884) (construing copyright); *see also* *Myers v. United States*, 272 U.S. 52 (1926) (early congressional indication that the president has sole power to remove executive officers supports the conclusion that the Constitution gives the president that power).

165. Carnathan, *supra* note 96, at 772.

166. *Id.* at 773.

Many members of the 1790 Congress had been delegates to the Constitutional Convention¹⁶⁷ and had rejected the English first-to-introduce approach (as does the current U.K. statute).¹⁶⁸ This view also finds support in early cases.¹⁶⁹

4. Early Congressional Precedent

The first patent statute was enacted in the second session of the first Congress.¹⁷⁰ Section 1 authorized granting patents to anyone having “invented or discovered any useful art . . . not before known or used . . .” and Section 5 provided for repeal of patents granted to anyone other than the first and true inventor.¹⁷¹

The second patent statute,¹⁷² enacted in 1793, provided,

when any person . . . being a citizen . . . of the United States, shall allege that he . . . [has] invented any new and useful art, machine, manufacture or composition of matter, or any new and useful improvement of any art, machine, manufacture or composition of matter, not known or used before the application, and shall present a petition to the Secretary of State, . . . it shall and may be lawful for the said Secretary of State, to cause letters patent to be made out . . .¹⁷³

167. See [http://memory.loc.gov/cgi-bin/query/r?ammem/hlaw:@field\(DOCID+@lit\(fr003443\)\)](http://memory.loc.gov/cgi-bin/query/r?ammem/hlaw:@field(DOCID+@lit(fr003443))) for a list of Convention delegates and <http://www.senate.gov/artandhistory/history/resources/pdf/chronlist.pdf> for a list of Senators.

168. The Patents Act of 1977 (as amended), 2007, 37 (Eng.), available at <http://www.ipo.gov.uk/patentsact1977.pdf>.

169. The Pennsylvania Circuit Court rejected patents of importation in *Reutgen v. Kanows*, 20 F. Cas. 555, 556 (C.C.D. Pennsylvania 1804) (No. 11,710), charging a jury that “if the invention was brought over [from Europe], that is, if it appears that the plaintiff was not the original inventor, in reference to other parts of the world as well as America, he is not entitled to a patent.” Justice Story also rejected the English model in several cases. See *Reed v. Cutter*, 20 F. Cas. 435 (C.C.D. Mass. 1841) (No. 11,645); *Bedford v. Hunt*, 3 F. Cas. 37 (C.C.D. Mass. 1817) (No. 1,217); *Woodcock v. Parker*, 30 F. Cas. 491, 491 (C.C.D. Mass 1813) (No. 17,971) (stating “a subsequent inventor cannot, by obtaining a patent therefor, oust the first inventor of his right . . . notwithstanding he may have been a subsequent inventor, without any knowledge of the prior existence of the machine . . .”).

It is sufficient, that he is the first inventor, to entitle him to a patent; and no subsequent inventor has a right to deprive him of the right to use his own prior invention. . . . [I]ndeed, this has been the habitual, if not invariably, interpretation of all our patent acts from the origin of the government.

Reed v. Cutter, 20 F. Cas at 437.

170. Patent Act of 1790, ch. 7, 1 Stat. 109 (1790).

171. *Id.* §§ 5, 7. Section 5 authorized an action for repeal of patent, and “if it shall appear that the patentee was not the first and true inventor . . . judgment shall be rendered . . . for the repeal of such patent. . . .”

172. Patent Act of 1793, ch. 11, 1 Stat. 318 (1793).

173. *Id.* § 1.

It also required that the applicant “swear or affirm that he does verily believe, that he is the true inventor or discoverer of the art, machine, or improvement, for which he solicits a patent.”¹⁷⁴

The 1793 statute made the first statutory provision for administratively resolving multiple claims to the same invention. A three person board comprised of one member appointed by the Secretary of State and one member appointed by each of the claimants decided entitlement to the patent.¹⁷⁵ The board’s decision was based on a determination of the true and first inventor.¹⁷⁶ While the argument might be made that the lack of specific authority in the original statute to resolve multiple claims is inconsistent with a belief that the patent constitutionally belonged to the first inventor, it is more likely that, having established the principle, there was no perceived need to spend legislative time on an elaborate process: Only three patents were issued in 1790.¹⁷⁷ The patent statute enacted in 1836 created the formal examination bureaucracy and an administrative procedure for determining the right to a patent among competing claimants.¹⁷⁸ The current patent law likewise provides for an examination of applications and award of patents only to the first inventor for any given invention.¹⁷⁹

With this background, we turn to the questions: Does the Intellectual Property Clause constrain patent enactments? Does it authorize first-to-file? If not, does it prohibit first-to-file?

174. *Id.* § 3.

175. *Id.* § 1.

176. ROBINSON, *supra* note 63, at 211 n.2.

177. PATENT ACTIVITY CALENDAR, *supra* note 64. Thirty-three patents were issued in 1791, eleven in 1792, twenty in 1793 and twenty-two in 1794. *Id.* The first year in which more than 100 patents were issued was 1808. *Id.* In 2004, the last year for which data is available, 164,293 patents were issued. *Id.*

178. Patent Act of 1836 ch. 357, §§ 7-8, 5 Stat. at 117, 119.

[W]henver an application shall be made for a patent which, in the opinion of the Commissioner, would interfere with any other patent for which an application may be pending, or with any unexpired patent which shall have been granted, it shall be the duty of the Commissioner to give notice thereof to such applicants, or patentees . . . and if either shall be dissatisfied with the decision of the Commissioner on the question of priority of right or invention, on a hearing thereof, he may appeal from such decision.

Id. § 8.

179. See *supra* notes 70–76 and accompanying text for The U.S. Patent Office’s process for resolving multiple claims to the patent on the invention, known as interference.

B. *Does Article I, Section 8 Constrain Patent Enactments?*

1. Is the Preamble a Limitation?

Much has been made of the role of the preamble of the Intellectual Property Clause, specifically whether it limits Congress's power or whether it is simply eighteenth century "PR." In *Graham v. John Deere*,¹⁸⁰ the Court held that:

At the outset it must be remembered that the federal patent power stems from a specific constitutional provision which authorizes the Congress "To promote the Progress of . . . useful Arts, by securing for limited Times to . . . Inventors the exclusive Right to their . . . Discoveries." Art. I, § 8, cl. 8. The clause is both a grant of power and a limitation. This qualified authority, unlike the power often exercised in the sixteenth and seventeenth centuries by the English Crown, is limited to the promotion of advances in the "useful arts." It was written against the backdrop of the practices—eventually curtailed by the Statute of Monopolies—of the Crown in granting monopolies to court favorites in goods or businesses which had long before been enjoyed by the public The Congress in the exercise of the patent power may not overreach the restraints imposed by the stated constitutional purpose.¹⁸¹

Likewise, in *Bonito Boats v. Thunder Craft Boats*,¹⁸² the Supreme Court viewed the preamble as a limitation on congressional power, holding that Congress cannot remove technology from the public domain, because doing so would thwart the constitutional mandate to promote the progress of science and the useful arts.¹⁸³ Holbrook concludes that the preamble is limiting, although he characterizes the limitation as "slight."¹⁸⁴

180. *Graham v. John Deere Co. of Kan. City*, 383 U.S. 1 (1966).

181. *Id.* at 5–6.

182. 489 U.S. 141 (1989).

183. "[A]s this Court has held, in light of the limitations built into the clause, monopolies are not permitted under the Copyright Clause when there is no concomitant advance in the 'Progress of Science and useful Arts.'" *Id.* at 146.

184. In summary, the preamble of the Patent and Copyright Clause does provide limitations on the power of Congress to act. The limitation, however, is slight and Congress has significant discretion in enacting laws to affect [sic] the goal of promoting progress of the sciences and useful arts. The other limitations of the clause, such as the limited times provisions and the requirement that Congress not remove anything from the public domain, contain significant restrictions on Congress' power.

Holbrook, *supra* note 54, at 21.

2. Does Article I Limit Patents to the First-to-Invent?

The specific question of the role of the preamble is, in fact, irrelevant to the issue of harmonization; first-to-file, first-to-invent, or patents of importation are all ways to further progress. Of greater consequence is the question of whether the Intellectual Property Clause limits patents to the first and true inventor.

Although focusing on the question of whether a harmonization treaty might circumvent any constitutional limits on patent legislation, Holbrook suggests that absent a lawful treaty, inventorship is a limitation on Congress's power that would prevent conversion to a first-to-file system.¹⁸⁵ Citing the Court's observation in *McClurg v. Kingsland*¹⁸⁶ that Congress's power to legislate with respect to patents is plenary, Macedo concludes that "[i]n view of the Supreme Court's broad interpretation of Congress' powers to enact patent and copyright legislation, it appears that a first-to-file system with a derivation provision would likely survive a constitutional challenge by a disappointed patent applicant."¹⁸⁷

Congress's power, even if plenary, is of course still limited by the Constitution. In both *Graham v. John Deere* and *Bonito Boats*, the Supreme Court recognized such a limitation in general.¹⁸⁸ The Supreme Court has not addressed the first inventor limitation issue directly, but at least one circuit court case, decided after the Macedo article, recognizes this limitation explicitly with respect to the first inventor requirement.¹⁸⁹

Thus, every factor identified by Heald and Sherry argues against the constitutionality of a first-to-file system under the Intellectual Property Clause. The pre-constitutional authority is sparse, but what

185. Holbrook questions whether Congress could "under the auspices of a treaty, pass an intellectual property law that contravenes the limitations of the Patent Clause, such as affording a patent of infinite duration" but concludes that "[g]iven that historically the inventor has been viewed as first to create, then such tradition may suggest a constitutionally rooted requirement that would preclude a first to file system and thus thwart harmonization efforts." *Id.* at 1, 8.

186. *McClurg v. Kingsland*, 42 U.S. 202 (1843). "[T]he powers of Congress to legislate upon the subject of patents is plenary by the terms of the Constitution, and as there are no restraints on its exercise, there can be no limitation of their right to modify them at their pleasure." *Id.* at 206.

187. Macedo, *supra* note 97, at 566.

188. *Bonito Boats*, 489 U.S. at 141; *Graham v. John Deere Co. of Kan. City*, 383 U.S. 1 (1966).

189. *See Iowa State Univ. Research Found., Inc. v. Sperry Rand Corp.*, 444 F.2d 406, 408 (4th Cir. 1971) (involving the consequence of failing to name all joint inventors, rather than a contest between competing claimants). The Fourth Circuit held that "Because Article I, § 8 of the Constitution authorizes an exclusive right in discoveries to inventors and none other, the law has been strictly construed to grant patents only to the true inventors." *Id.* at 408.

authority there is speaks of the rights of the first inventor.¹⁹⁰ In the absence of any indication to the contrary, there is no basis to assume that the words used meant anything other than their ordinary meanings, and the contemporary dictionary definition of inventor was "a finder of something new."¹⁹¹ The records of the constitutional drafting debates, the ratification debates, and public reaction are sparse.¹⁹² Certainly the Framers were aware of the concepts of patents of importation and monopolies as favors and chose instead to seek approval for the power to grant exclusive rights to authors and inventors, not importers or people who had pleased the administration. Early judicial precedent, while interpreting statutes rather than deciding challenges to their constitutionality, rejected patent rights of claimants who were shown not to have been the first and true inventors.¹⁹³ Early statutes (and in fact every patent statute since the first Congress) granted patents only to the first-to-invent.¹⁹⁴ In short, there is no previously recognized constitutional basis for interpreting Article I, Section Eight, Clause Eight as enabling a first-to-file patent system in the United States.

In other contexts, it might be argued that Congress should have the benefit of the constitutional doubt, since the Framers did not specifically say "and patents may not be granted to anyone else," or that the terms of the Intellectual Property Clause should be viewed in evolutionary terms and allowed to grow to match the demands of the international community. Here, however, the question is whether Congress should have the power to grant monopolies condemned in England by *Darcy v. Allein* and the Statute of Monopolies, odious under Maryland colonial law, contrary to the genius of a free state under South Carolina colonial law, and a power denied to the central government entirely under the Articles of Confederation. The evolution of the last 200 years has not improved the standing of monopolies.

C. *Can Congress Overcome Section Eight Limitations Through Other Clauses?*

Two solutions for avoiding Clause Eight have been suggested: action under the Commerce Clause and under the treaty power. The thrust of both approaches is that, even if the Intellectual Property Clause falls short of granting Congress the power to award patents

190. For a discussion of The English Statute of Monopolies and the state statutes, see *supra* notes 55-65 and accompanying text.

191. See *supra* notes 162-69 and accompanying text.

192. See *supra* notes 147-57 and accompanying text.

193. See *supra* notes 169-74 and accompanying text.

194. See *supra* notes 175-79 and accompanying text.

under a first-to-file system, it likewise falls short of forbidding it. The challenge, then, is to find an alternate source of the necessary power.

1. Can the Commerce Clause Overcome Section Eight Limitations?

Wrenn suggests the Commerce Clause as an alternate source of power to establish a first-to-file patent system, although only as a backup to the “unlikely event that the Patent Clause is held to limit ‘Inventors’ to those who are the first to invent.”¹⁹⁵ The Trademark Cases held that the Intellectual Property Clause was not broad enough to provide Congress with the power to establish a federal trademark system since trademarks were neither inventions nor works of authorship.¹⁹⁶ The argument that the requisite power was supplied by the Commerce Clause failed for two reasons. First, the Court found no expression of intent to act pursuant to Commerce Clause powers in the legislative history, and second, the legislation went beyond regulation of federal commerce (as the concept was understood at the time).¹⁹⁷ Subsequently, Congress crafted a constitutional federal trademark registration system under the Commerce Clause, limited to federal commerce.¹⁹⁸ Thus, it is logical to look to the Commerce Clause to find power to create a patent system that is not authorized by the Intellectual Property Clause.

Two main difficulties immediately emerge, one practical and one theoretical. Practically, the Commerce Clause only supplies the power to regulate federal commerce. For that reason, the Lanham Act only regulates interstate trademarks, leaving in place fifty intrastate trademark systems.¹⁹⁹ Using this power would leave open the possibility of state patents. Given the concerns raised as to the possibility of two patentees (one first-to-invent, one first-to-file),²⁰⁰ the possibility of fifty-one patentees (one first-to-file plus one in each of the fifty states) would be horrifying.

The theoretical problem is that, by holding the Intellectual Property Clause inapplicable to trademarks, the Court not only invalidated the 1879 federal trademark law, but also eliminated the question of whether the Intellectual Property Clause placed any limits on trademark enactments. The clause simply did not apply,

195. Wrenn, *supra* note 90, at 890. “A modern analysis . . . suggests that the U.S., on balance, stands to gain by embracing [first-to-file]. Arguments that the Constitution forbids such a change are tenable, but ultimately are not persuasive and should not prevent action by Congress.” *Id.* at 891.

196. Trade-Mark Cases, 100 U.S. 82, 93–94 (1879).

197. *Id.* at 97–98.

198. Trademark Act of 1946, 60 Stat. 427 (1946) (the Lanham Trademark Act). The current federal trademark law is codified at 15 U.S.C. §§ 1051–72, 1091–96, 1111–29, 1141 (2006).

199. See Trademark Act of 1946, *supra* note 198.

200. See *supra* notes 16–31 and accompanying text.

and therefore could not limit Congress's power in the area. The Intellectual Property Clause does apply to patents, and therefore whatever restrictions it places on Congress's power must also apply.

The clause is both a grant of power and a limitation The Congress in the exercise of the patent power may not overreach the restraints imposed by the stated constitutional purpose. Nor may it enlarge the patent monopoly without regard to the innovation, advancement or social benefit gained thereby. Moreover, Congress may not authorize the issuance of patents whose effects are to remove existent knowledge from the public domain, or to restrict free access to materials already available.²⁰¹

Given the Court's interpretation of the Intellectual Property Clause as a limitation on congressional authority (rather than a mere lack of sufficient authority),²⁰² the Commerce Clause cannot remove the limitation.

2. Can the Treaty Power Overcome Section Eight Limitations?

In 1879, the Supreme Court indirectly suggested using the treaty power to overcome Article I limitations, when in the Trademark Cases²⁰³ it left "untouched the whole question of the treaty-making power over trade-marks, and of the duty of Congress to pass any laws necessary to carry treaties into effect."²⁰⁴

In the specific context of the first-to-file debate, Holbrook suggests that Congress, under the auspices of a treaty, might have power to enact an intellectual property law that contravenes the limitations of the Intellectual Property Clause, "such as affording a patent of infinite duration,"²⁰⁵ but concludes that, "under the current regime of nationally-based patent rights, the Patent Clause does limit the authority of Congress to harmonize U.S. law with international standards."²⁰⁶ More recently, Nguyen argues that the treaty power can be used to harmonize copyright laws beyond what would be permitted by the Intellectual Property Clause.²⁰⁷ In her view, while the clause is "both a grant of power and a limitation," the limitations should be interpreted as "the outer limits of Congress' enumerated power" and thus "do not rise to the level of affirmative

201. *Graham v. John Deere Co. of Kan. City*, 383 U.S. 1 (1966).

202. *See supra* notes 182-87 and accompanying text.

203. *The Trademark Cases*, 100 U.S. at 82.

204. *Id.* at 99. The Court, however, had explicitly held that trademarks were not covered by the Intellectual Property Clause and therefore not subject to its limitations either. *Id.* at 93-94.

205. Holbrook, *supra* note 54, at 3.

206. *Id.* at 4.

207. *See* Caroline T. Nguyen, Note, *Expansive Copyright Protection for All Time? Avoiding Article I Horizontal Limitations Through the Treaty Power*, 106 COL. L. REV 1079 (2005).

prohibitions.”²⁰⁸ While distinctions might be argued between the nature of limitations with respect to copyrights and patents, early patent cases are consistent in their holdings that the Intellectual Property Clause limits congressional power and that the limitation of first inventorship prohibits contrary legislation.²⁰⁹

The appeal of the treaty power solution is great as a practical matter. Finding a treaty unconstitutional is a statistically uphill battle: In 1952, Professor Sutherland could report “the Supreme Court has never actually held either a treaty or an executive agreement invalid.”²¹⁰ The situation had not changed as of 1996, when Henkin reported, “No provision in any treaty has been held unconstitutional by the Supreme Court,”²¹¹ and in 2001, when Bennison could still report that “in over one hundred years of ruling on the constitutionality of treaties the Supreme Court has maintained . . . silence as to the proper scope of the treaty power.”²¹²

Article II, Section Two of the Constitution grants the President the “Power, by and with the Advice and Consent of the Senate, to make Treaties, provided two thirds of the Senators present concur.”²¹³ Article VI of the Constitution provides: “This Constitution, and the Laws of the United States which shall be made in Pursuance thereof; and all Treaties made, or which shall be made, under the Authority of the United States, shall be the supreme Law of the Land.”²¹⁴ The critical question is whether the Constitution, the laws, and the treaties are equally supreme or whether there is a hierarchy of supremacy and, specifically, whether the Constitution is “more supreme” than treaties. Although it would seem fundamental that, like a statute, a treaty must be constitutional,²¹⁵ surprisingly there is at least one Supreme Court case that has been read as placing treaties on an equal footing with the Constitution.²¹⁶ Nowak and Rotunda observe: “Justice Holmes suggested once [in *Missouri v. Holland*] that this clause meant that treaties were equal to the Constitution, even if they were not made in pursuance of it. As a

208. *Id.* at 1114.

209. *See supra* note 169 and accompanying text. While these cases involve statutory, rather than constitutional, interpretation, they are indicative of the intent of the Founders. *See id.*

210. Arthur E. Sutherland, Jr., *Restricting the Treaty Power*, 65 HARV. L. REV. 1305, 1319 (1952).

211. LOUIS HENKIN, *FOREIGN AFFAIRS AND THE U.S. CONSTITUTION* 185 (Oxford Univ. Press, 2d ed. 1996).

212. Audrey I. Benison, *International Criminal Tribunals: Is There a Substantive Limitation on the Treaty Power?*, 37 STAN J. INT’L L. 75, 75 (2001).

213. U.S. CONST. art. II, § 2.

214. U.S. CONST. art. VI, cl. 2.

215. As early as 1870, the Supreme Court held that a treaty could not “change the Constitution, or be held valid if it be in violation of that instrument.” *Cherokee Tobacco*, 78 U.S. 616, 620 (1870).

216. *Mo. v. Holland*, 252 U.S. 416 (1920).

consequence the theory developed that treaties were not subject to any constitutional limitations” but conclude that “[t]his view is incorrect. As Justice Field stated, in often quoted dictum in *De Geofroy v. Riggs*, the treaty power, like all other powers that the Constitution grants, is subject to constitutional limitations.”²¹⁷

Missouri v. Holland, where Justice Holmes’s suggestion appears, clearly establishes that a treaty may provide an independent source of congressional authority not explicitly granted by the Constitution.²¹⁸ In 1913, Congress sought to protect migratory birds from U.S. hunters by enacting federal legislation.²¹⁹ In *U.S. v. Shauver*, the legislation was held unconstitutional.²²⁰ The United States and Great Britain then negotiated a treaty²²¹ to the same effect, and Congress enacted the Migratory Bird Treaty Act of 1918 in furtherance of the treaty. In *Missouri v. Holland*,²²² the Supreme Court upheld the constitutionality of the Act, noting that “acts of Congress are the supreme law of the land only when made in pursuance of the Constitution, while treaties are declared to be so when made under the authority of the United States,”²²³ and “[i]f the treaty is valid, there can be no dispute about the validity of the [implementing] statute . . . as a necessary and proper means to execute the power of the government.”²²⁴ The case, however, involved a treaty provision that was not prohibited by another clause of the Constitution, and therefore the issue whether the treaty was “valid” in a supremacy clause sense did not arise.

Clearly, the Court could not have meant that treaties could sweep aside the Constitution. As Golove points out, “[t]he Constitution does provide some guarantees to the states that could not be withdrawn by a treaty.”²²⁵ It is unimaginable that the president and two thirds of the Senate could abrogate the freedom of

217. JOHN E. NOWAK & RONALD R. ROTUNDA, *CONSTITUTIONAL LAW* 242 (West Group, 6th ed., 2000) (citing *De Geofroy v. Riggs*, 133 U.S. 258 (1890) (citations omitted)).

218. *Holland*, 252 U.S. at 433–34.

219. The Appropriation Act for the Department of Agriculture, 37 Stat. 827, 842 (1913).

220. 214 F. 154 (E.D. Ark. 1914).

221. The Convention for the Protection of Migratory Birds, U.S.-Gr. Brit. Aug. 16, 1916, T.S. No. 628.

222. *Holland*, 252 U.S. at 416.

223. *Id.* at 433.

224. *Id.* at 432.

225. David M. Golove, *Treaty-Making and the Nation: The Historical Foundations of the Nationalist Conception of the Treaty Power*, 98 MICH. L. REV. 1075, 1083 (2000). “Nor could the federal government under the auspices of a treaty wipe away the guarantees of, for example the First, Thirteenth, Fourteenth, or Fifteenth Amendment.” Timothy 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, 31 n.176 (2004).

speech or religion or could repeal Article III simply by finding a treaty partner willing to lend its name to the act. The Court acknowledged that:

We do not mean to imply that there are no qualifications to the treaty-making power; but they must be ascertained in a different way. It is obvious that there may be matters of the sharpest exigency for the national well being that an act of Congress could not deal with but that a treaty followed by such an act could, and it is not lightly to be assumed that, in matters requiring national action, a power which must belong to and somewhere reside in every civilized government is not to be found.²²⁶

There is a line; the Court acknowledged its existence but left its location uncertain. The closest the Court has come to locating the line is the plurality opinion in *Reid v. Covert*,²²⁷ holding that “no agreement with a foreign nation can confer power on the Congress, or on any other branch of Government, which is free from the restraints of the Constitution.”²²⁸

Professors Heald and Sherry distinguish *Holland* from *Reid* by noting that *Reid* involved a treaty which conflicted with a constitutional provision, while *Holland* involved a treaty which went beyond what was provided for in the Constitution.²²⁹ In other words, the analysis is similar to the determination of whether an unexpressed power is “necessary and proper”: lack of enumerated authority differs from limitation of authority.

In the intellectual property area, lower courts have followed this line of analysis, although reaching conflicting results. Congress enacted an anti-bootlegging criminal statute²³⁰ pursuant to the Trade-Related Aspects of Intellectual Property Rights (TRIPS) treaty. The statute proscribed the unauthorized recording or distribution of a live musical performance for commercial advantage or private financial gain. Congress believed the law was within its Intellectual Property Clause power, but the Intellectual Property Clause is limited to “writings.” In *United States v. Moghadam*, a defendant was convicted under the statute.²³¹ The Eleventh Circuit held the statute could not be supported by the Intellectual Property Clause but, relying on the Trademark Cases, held that enacting the statute was within Congress’s authority under the Commerce Clause, because it was “not fundamentally inconsistent with the fixation

226. *Holland*, 252 U.S. at 433.

227. *Reid v. Covert*, 354 U.S. 1 (1957) (holding unconstitutional as violating rights under the Fifth and Sixth Amendments an executive agreement with Britain, which purported to give U.S. military courts exclusive jurisdiction over U.S. servicemen and their families stationed in Great Britain).

228. *Id.* at 16 (plurality opinion).

229. Heald & Sherry, *supra* note 133, at 1182.

230. 18 U.S.C. § 2319(a) (2006).

231. 175 F.3d 1269 (11th Cir. 1999), cert. den. 529 U.S. 1036 (2000).

requirement of the Copyright Clause.”²³² In its analysis of the question whether the Intellectual Property Clause imposed limitations as well as granted power, the Supreme Court noted a similar pattern in the Bankruptcy Clause. That clause had been analyzed by the Supreme Court in *Railway Labor Executives' Ass'n v. Gibbons*, with the Court holding that the Bankruptcy Clause power to “establish . . . uniform Laws on the subject of Bankruptcies” precluded enactment of non-uniform laws under the Commerce Clause.²³³ The Eleventh Circuit assumed “arguendo, without deciding, that the Commerce Clause could not be used to avoid a limitation in the Copyright Clause if the particular use of the Commerce Clause . . . were fundamentally inconsistent with the particular limitation in the Copyright Clause . . .”²³⁴ but concluded that “extending quasi-copyright protection to unfixed live musical performances is in no way inconsistent with the Copyright Clause, even if that Clause itself does not directly authorize such protection.”²³⁵

A New York district court reached the opposite conclusion on similar facts. In *U.S. v. Martignon*, the court dismissed an indictment under the same statute, holding it unconstitutional as violating two restrictions in the Intellectual Property Clause: granting protection for a work that had not been “fixed” (and was therefore not a “writing”) and avoiding the limited times requirement.²³⁶ “Congress may not sidestep the Copyright Clause’s limitations through legislating under the Commerce Clause.”²³⁷

Professor Tribe concludes that a treaty “may effectively repeal preceding congressional legislation and preempt conflicting state law.”²³⁸ This falls short of placing treaties on a par with the Constitution or empowering a treaty to preempt constitutional restrictions.

232. *Id.* at 1280.

233. *Gibbons*, 455 U.S. at 465. The Bankruptcy Clause grants Congress the power to “establish . . . uniform Laws on the subject of Bankruptcies . . .” In *Railway Labor Executives' Ass'n v. Gibbons*, the Supreme Court found unconstitutional a law directed at a particular railway, concluding that bankruptcy legislation targeted at an individual carrier conflicted with the “uniformity” requirement of the Bankruptcy Clause and therefore could not be enacted under the Commerce Clause. “If we were to hold that Congress had the power to enact non-uniform bankruptcy laws pursuant to the Commerce Clause, we would eradicate from the Constitution a limitation on the power of Congress to enact bankruptcy laws.” *Id.* at 469.

234. *Moghadam*, 175 F.3d at 1281.

235. *Id.* at 1280.

236. 346 F. Supp. 2d 413 (S.D.N.Y. 2004).

237. *Id.* at 426.

238. LAWRENCE H. TRIBE, *AMERICAN CONSTITUTIONAL LAW* § 4-4, at 645 (2000).

D. *The Exclusivity Problem*

The suggestions to use the Commerce Clause or the Treaty Power are creative approaches to the search for alternate power. What these approaches miss, however, is that in order to convert to first-to-file, not only is the power to grant patents to the first filer necessary, but the power to deny patents to the first inventor is also necessary. Even if (1) the Intellectual Property Clause does not forbid grants of patents under other clauses and (2) either the Commerce Clause or the Treaty Power provides an independent source of authority to grant patents to first filers, there is one other provision of the Intellectual Property Clause which cannot be avoided: the "exclusive rights . . . for limited times" provision. Finding an alternate source of power to grant patents, unconstrained by the inventorship requirement of the Intellectual Property Clause, only goes half way to what is needed to convert to a first-to-file system. In the absence of a way to deny the patent to the inventor, granting the patent to the first filer deprives the inventor of "the exclusive right" guaranteed by the Constitution and is therefore unconstitutional.

E. *The Constitutionality of First-to-File*

In summary, when there are two claimants to a U.S. patent on the same invention, the Constitution requires that the first inventor be granted the patent in preference to the first individual to file an application for the patent.²³⁹ Harmonization, then cannot be achieved by simply revising the patent statute to change first-to-invent to first-to-file.

III. CONSTITUTIONAL SOLUTIONS

The goal of harmonization may, however, be achieved by other means if it is deemed worth the price. A constitutional requirement that U.S. patents be issued to the first inventor does not render it impossible to harmonize international patent laws. There are at least three possible solutions which are consistent with the U.S. Constitution:

- (1) Change the rest of the world's system to conform to the U.S. first-to-invent system.
- (2) Amend the Constitution.

239. The first inventor must, of course, comply with the requirements of the Patent Statute in order to obtain a patent.

- (3) Acknowledge the constitutional rights of inventors but acquire those rights.

While arguments might be made for each of these solutions,²⁴⁰ only the third appears to have any prospect for success. The first solution is purely a question of politics and power. No provision of the U.S. Constitution precludes harmonization by adoption of the U.S. system. The second solution is purely a question of politics. Amending Article I, Section Eight would not appear to require anything more than a supermajority of Congress and the state legislatures. However strong the arguments for harmonization, it is unlikely that they are strong enough to support that step.

The third solution would retain the constitutionally required first-to-invent system but transfer the acknowledged rights of inventors where necessary for harmonization. This might be done by voluntary transfer. A patent is assignable personal property,²⁴¹ and therefore, the first inventor may assign it voluntarily. Unfortunately, this solution would require the cooperation of private individuals, and there is no reason to believe that such cooperation would be universal.

A. *Eminent Domain and its Applicability to Patents*

Patents are property,²⁴² and the classic solution to the problem of governmental need for personal property in the face of the owner's reluctance to part with the property is the exercise of eminent domain through condemnation. Eminent domain is an inherent power of government;²⁴³ the federal government's exercise of that inherent

240. The first solution might be justified on the basis of economic importance of the respective patent systems. While the United States stands alone as a first-to-invent country, its gross national product is nearly 40% of the total of all Organisation for Economic Co-operation and Development (OECD) countries. (OECD statistics for 2005 are available online at <http://stats.oecd.org/WBOS/default.aspx?DatasetCode=REFSERIES> (last visited April 9, 2007). Thus, the argument for U.S. compliance with the majority view is not overwhelming. The second solution might be justified if the importance of patent harmonization ranks with religious freedom, free speech, and due process. At this point, there does not appear to be sufficient public sentiment to suggest that such an amendment could succeed.

241. 35 U.S.C. § 152 (2006). This section permits the grant of a patent to an assignee. Thus, if condemnation were to take place during the application process (rather than after issue), the patent could be issued directly to the first filer. This would avoid some theoretical complications, such as bankruptcy of the first inventor.

242. *Consolidated Fruit-Jar Co. v. Wright*, 94 U.S. 92, 96 (1877) ("A patent for an invention is as much property as a patent for land."); *Brown v. Duchesne*, 60 U.S. 183, 197 (1857) ("For, by the laws of the United States, the rights of a party under a patent are his private property.")

243.

[I]n every political sovereign community there inheres necessarily the right and the duty of guarding its own existence, and of protecting and promoting the

power is limited by the Fifth Amendment.²⁴⁴ Therefore, if it is concluded that the purpose is sufficiently important, the federal government can simply proceed,²⁴⁵ consistent with the Fifth Amendment, to take all patents²⁴⁶ issued to first inventors who are not also first filers via eminent domain, paying the first inventors just compensation, and selling those patents to the associated first filers.²⁴⁷ As a refinement which would conserve government resources, the system might incorporate the Japanese approach²⁴⁸ (which allows the first inventor and first filer to negotiate ownership) and require government intervention through condemnation only if the parties fail to reach agreement. The result would be the same as

interests and welfare of the community at large. This power and this duty are to be exerted not only in the highest acts of sovereignty, and in the external relations of governments; they reach and comprehend likewise the interior polity and relations of social life, which should be regulated with reference to the advantage of the whole society. This power, denominated the eminent domain of the state, is, as its name imports, paramount to all private rights vested under the government, and these last are, by necessary implication, held in subordination to this power, and must yield in every instance to its proper exercise.

West River Bridge Co. v. Dix, 47 U.S. 507, 531–32 (1848). See also 1A-3 JULIUS L. SACKMAN, NICHOLS ON EMINENT DOMAIN § 3.01[1–2] (Matthew Bender & Company, Inc., 3rd ed. 2006) (1982).

Eminent domain is the power of the sovereign to take property for public use, without the owner's consent, and upon making just compensation. This authority “springs from . . . a necessity of government,” and is considered to be an essential attribute of sovereignty. Eminent domain authority is predicated upon the superior right of the state over private property. It comes into being with the establishment of the government and continues as long as the government endures. Eminent domain authority does not require recognition by constitutional provision, but exists in absolute and unlimited form. (Footnotes omitted).

244. The Fifth Amendment provides that private property shall not be taken “for public use, without just compensation.” U.S. CONST. amend XV.

245. In the constitutional sense, the mechanism of calculating compensation would involve the normal complications of establishing the value of a type of property which is, by definition, unique and speculative. If the technology is not unique, it is not patentable. 35 U.S.C. §§ 101–102.

246. There are potential benefits to taking the patent applications rather than the issued patent, principally avoiding the risk of the inventor's bankruptcy, but also potential complications. Whether to take patents or applications would be a secondary issue to be resolved.

247. To the objection that this does not benefit the first filer since, presumably, the price paid will be the actual value of the patent, the answer is that the purpose is to achieve harmonization without violating the U.S. Constitution, not to benefit the first filer; the same objection could be made to the system approved in *Kelo v. City of New London*. 545 U.S. 469 (2005).

248. See discussion *supra* note 83 and accompanying text.

if the United States had shifted to a first-to-file system and would therefore satisfy the demands of the treaty.²⁴⁹

While condemnation is most often used to acquire real property, as early as 1848 the Supreme Court was faced with the question whether eminent domain was limited to corporeal property and held that intangible property rights were also subject to condemnation.²⁵⁰ The power has since been used to take intangible property by federal²⁵¹ and state²⁵² governments alike.²⁵³

249. Viewed from inside the system, several issues would need to be resolved. Should the first filer get the patent for free or reimburse the government for its costs? The treaty requires countries to treat domestic and foreign applicants the same, but it does not prohibit charging different fees for different categories of application. The United States already does so by providing a 50% discount on certain fees for certain categories of applicants. See *infra* note 306. Should the process be mandatory or only at the first filer's request? Should the first filer play any role in the condemnation proceeding, and if not, what should the sequence be? If the government first condemns the inventor's application but the first filer is unwilling to pay the same price, the government will have spent time and money and deprived the inventor of property needlessly.

250. *West River Bridge Comp. v. Dix*, 47 U.S. 507 (1848). Vermont's taking of a private toll bridge was argued to be a disguised taking of the owner's contractual right to collect tolls (granted by its charter from the state) and therefore a violation of the Constitutional prohibition of state interference with contracts. The Court held:

[T]here can be no doubt . . . that the charter of incorporation granted to the plaintiffs in 1793, with the rights and privileges it declared or implied, formed a contract between the plaintiffs and the State of Vermont, which the latter, under the inhibition in the tenth section of the first article of the Constitution, could have no power to impair.

Id. at 530. However, the Court saw no basis for restricting the power of eminent domain to real (or tangible) property:

A distinction has been attempted, in argument, between the power of a government to appropriate for public uses property which is corporeal . . . and the like power in the government to resume or extinguish a franchise. The distinction thus attempted we regard as a refinement which has no foundation in reason We are aware of nothing peculiar to a franchise which can class it higher, or render it more sacred, than other property.

Id. at 534.

251. 28 U.S.C. § 1498(a) (2006).

252. States have, in effect, taken non-exclusive licenses under patents by the indirect route of asserting immunity from suit for patent infringement under the Eleventh Amendment. See, e.g., *Florida Prepaid Postsecondary Educ. Expense Bd. v. College Sav. Bank*, 527 U.S. 627 (1999), discussed *infra* note 263. Note that the taking of a non-exclusive license may also deprive the patent owner of the ability to grant an exclusive license in the case where the owner had not previously granted any other licenses.

253. Although *quaere* whether a state government could take a U.S. patent (rather than a non-exclusive license under the patent) through eminent domain. No such case appears to have been reported, and there are several arguments that might be made against the right of a state to condemn a federally granted, nationally effective, right: the state would be seizing property that existed beyond its borders; it would be interfering with a right granted by the federal government in furtherance of a

As early as 1881, the Supreme Court noted in dictum that patents were subject to eminent domain and that, although they were grants from the federal government, it was still necessary to pay compensation for taking a patent.²⁵⁴ By statute,²⁵⁵ the federal government is, in effect, entitled to a compulsory non-exclusive license to use any patent, subject to the patent owner's right of fair compensation.²⁵⁶ The license extends to private entities acting on behalf of (or selling the patented invention to) the government.²⁵⁷

national (not to mention constitutional) policy; and practical problems would be posed by the possibility of multiple states pursuing the same property. The issue is beyond the scope of this Article, and its resolution is not necessary to carry out the proposed solution to the patent harmonization problem.

254. *James v. Campbell*, 104 U.S. 356 (1882), 14 Otto 356 (1882) (Plaintiff sued the postmaster of New York individually, alleging infringement of a patent in furtherance of his official duties on a device for simultaneously canceling and postmarking stamps; the Court expressed concern over a suit against a public official individually but found the patent not infringed and therefore did not need to reach either the issue of jurisdiction or of taking without compensation in violation of the Fifth Amendment.).

255. 28 U.S.C. § 1498(a).

Whenever an invention described in and covered by a patent of the United States is used or manufactured by or for the United States without license of the owner thereof or lawful right to use or manufacture the same, the owner's remedy shall be by action against the United States in the United States Court of Federal Claims for the recovery of his reasonable and entire compensation for such use and manufacture.

Id. This statutory right to engage in what would otherwise be infringement of a patent has been held superior to an issued injunction against that specific act of infringement. *W.L. Gore v. Garlock*, 842 F.2d 1275 (Fed. Cir. 1988). *Garlock* had been enjoined from violating a *Gore* patent, but it petitioned for a modification of the injunction to allow it to bid on a government subcontract. The Federal Circuit noted that such a modification was unnecessary since the statute provided an exception to infringement if the activity were on behalf of the federal government; thus, use of the patented invention for government purposes would not be infringement and would not violate the injunction.

The government has graciously consented, in the same statute, to be sued in the Claims Court for reasonable and entire compensation, for what would be infringement if by a private person. . . . In the event *Garlock* becomes a sub- or sub-sub-contractor, a gracious government has also taken care of that possibility in the second paragraph of Section 1498(a) which reads: "For the purposes of this section, the use or manufacture of an invention described in and covered by a patent of the United States by a contractor, a subcontractor, or any person, firm, or corporation for the Government and with the authorization or consent of the Government, shall be construed as use or manufacture for the United States."

To sum it all up, Section 1498(a) gives *Garlock* all that it asks for in its request to order the injunction modified and modification is therefore unnecessary.

Id. at 1283.

256. *Calhoun v. U.S.*, 453 F.2d 1385 (Ct. Claims 1972).

The theory underlying a patent suit in this court pursuant to that section is that the Government, when a patented device or invention is made or used by

The government also has the power to take an entire patent by eminent domain. The classic example of a situation in which the government would choose to take a patent rather than use the compulsory license provision of 28 U.S.C. § 1498 is that of a patent, disclosure of which would threaten national security. The fundamental patent bargain involves the exchange of the inventor's agreement that a full disclosure of how to make and use the invention be made public²⁵⁸ for the government's grant of a limited monopoly of the use of the invention. Every application for patent is subjected to an initial review and, in cases where the publication of the disclosure would compromise national security, a special procedure is followed. It begins with the issuance of a secrecy order, which among other things, forbids filing the application abroad.²⁵⁹ Examination of such an application is conducted in a special section of the Patent Office,²⁶⁰ where the application is "examined for patentability as in other cases, but may not be passed to issue"; if it is determined that the claims of the application are patentable, a notice of allowability is issued,²⁶¹ but since the patent may not be published, it is not issued and therefore enforceable. Instead, the applicant's reward is a claim for compensation in the Court of Claims²⁶² in lieu of a patent. Thus, there is precedent for awarding a patent applicant money instead of a patent where a compelling national interest so requires.

States can, in effect, take non-exclusive licenses to practice patented inventions through sovereign immunity conferred by the Eleventh Amendment.²⁶³ In *Chew v. California*, the Federal Circuit

or for the United States, *ipso facto* takes by eminent domain a compulsory compensable license in the patent; the patentee obtains his Fifth Amendment just compensation for that taking through his action here under § 1498.

Id. at 1391. See also *Crozier v. Krupp*, 224 U.S. 290, 305, 307, 308 (1912).

257. Note that the statute displaces the normal federal eminent domain process and prescribes its own measure of damages. If the government initiates condemnation proceedings under 28 U.S.C. §§ 1346(a)(2), 1491, then Pub. L. 91-646, § 304, 84 Stat. 1894 authorizes reimbursement of "reasonable costs, disbursements and expenses, including reasonable attorney, appraisal and engineering fees." If, instead, the government or its contractor simply proceeds to use the patented invention without a license, the provisions of 28 U.S.C. § 1498(a) control. *Calhoun*, 453 F.2d 1385.

258. 35 U.S.C. § 212 (2006).

259. 37 C.F.R. § 5.1 (2007).

260. This special section of the Patent Office is called "TC Working Group 3640." MPEP, *supra* note 68, at 130.

261. *Id.*

262. *Hornback v. United States*, 91 F.3d 152 (9th Cir. 1996); *Farrand Optical v. United States*, 317 F.2d 875 (2nd Cir. 1962).

263. In *Florida Prepaid Postsecondary Education Expense Board v. College Savings Bank*, the Supreme Court held Congress's attempt to subject the states to liability for patent infringement unconstitutional because of a lack of evidence of a pattern of infringing conduct on the part of the States. 527 U.S. 627 (1999).

held that the Eleventh Amendment²⁶⁴ shielded states from liability for patent infringement because the patent statute, while creating broad liability for infringement, did not contain a specific statement of Congress's intent to abrogate state immunity and make states liable for infringement.²⁶⁵ Responding to a perceived risk that states would use this shield to avoid liability for patent infringement and thereby violate the Fourteenth Amendment,²⁶⁶ Congress passed the Patent and Plant Variety Protection Remedy Clarification Act (Patent Remedy Act), to "clarify that States, instrumentalities of States, and officers and employees of States acting in their official capacity, are subject to suit in Federal court by any person for infringement of patents and plant variety protections."²⁶⁷ In *Florida Prepaid Postsecondary Education Expense Board v. College Savings Bank*, the state made use of a patented process for managing funds.²⁶⁸ The Supreme Court held "it is undisputed that Florida has not expressly consented to suit" and "Congress' intent to abrogate [state immunity from patent infringement suits] could not have been any clearer,"²⁶⁹ but the statute was unconstitutional since Congress failed to use "proportionate" means²⁷⁰ in response to the perceived problem.

264. The Eleventh Amendment provides: "The Judicial Power of the United States shall not be construed to extend to any suit in law or equity, commenced or prosecuted against one of the United States by Citizens of another State, or by Citizens or Subjects of any Foreign State." U.S. CONST. amend. XI.

265. 893 F.2d 331, 334 (1989).

266. The Fourteenth Amendment provides in relevant part: "No State shall . . . deprive any person of life, liberty, or property, without due process of law. . . ." U.S. CONST. amend. XIV, § 1. Furthermore, "The Congress shall have power to enforce, by appropriate legislation, the provisions of this article." *Id.* § 5.

267. Patent and Plant Variety Protection Remedy Clarification Act, Pub. L. No. 102-560, pmb1, 106 Stat. 4230 (1992); see also H.R. REP. NO. 101-960, pt. 1, at 7, 33 (1990); S. REP. NO. 102-280, at 1, 5-6 (1992). Section 271 provides:

(a) Except as otherwise provided in this title, whoever without authority makes, uses, offers to sell, or sells any patented invention, within the United States or imports into the United States any patented invention during the term of the patent therefor, infringes the patent.

35 U.S.C. § 271(a) (2006).

Section 271(h), as amended, states: "As used in this section, the term 'whoever' includes any State, any instrumentality of a State, and any officer or employee of a State or instrumentality of a State acting in his official capacity," and Section 296(a) states:

Any State, any instrumentality of a State, and any officer or employee of a State or instrumentality of a State acting in his official capacity, shall not be immune, under the eleventh amendment of the Constitution of the United States or under any other doctrine of sovereign immunity, from suit in Federal court by any person . . . for infringement of a patent under section 271, or for any other violation under this title.

268. 527 U.S. 627, 627 (1999).

269. *Id.* at 635.

270. *Id.* at 647.

While the Florida Prepaid case involved taking a non-exclusive license, states also have the power to take intellectual property rights *in toto*. For example, in *City of Oakland v. Oakland Raiders*, the Supreme Court of California held it improper to grant summary judgment against the city's attempt to condemn a football franchise in order to prevent the team from leaving the city.²⁷¹ The court found the power of eminent domain broad enough to cover the collection of intangible rights comprising a sports franchise.²⁷²

To date, both the non-exclusive license takings and the absolute takings have involved targeted takings for use by the government, where there is an identifiable government need for a specific patent. Clearing the constitutional barrier to harmonization would require taking patents with the intent that they be transferred to third parties and with the sole government purpose being simultaneous compliance with the Constitution and the treaty.

B. *The Challenges of Public Use and Just Compensation*

Two obstacles must be overcome, both posed by the Takings Clause of the Fifth Amendment.²⁷³ The Fifth Amendment provides that private property shall not be taken "for public use, without just compensation."²⁷⁴ The first obstacle is calculation of just compensation. Although by definition²⁷⁵ patents pose difficulties in finding comparable sales on which to base value, courts routinely value other unique properties (principally land) in condemnation proceedings. The second, and more difficult, obstacle is whether the

The House Report acknowledged that "many states comply with patent law" and could provide only two examples of patent infringement suits against the States. See H. R. Rep., at 38. The Federal Circuit in its opinion identified only eight patent-infringement suits prosecuted against the States in the 110 years between 1880 and 1990. See 148 F.3d at 1353-1354. Testimony before the House Subcommittee in favor of the bill acknowledged that "states are willing and able to respect patent rights. The fact that there are so few reported cases involving patent infringement claims against states underlies the point."

Id. at 640. The flaw in the Court's analysis is that, during the 110 years between 1880 and 1990, the states were immune from liability for patent infringement. If anything, it is surprising that there were eight infringement suits prosecuted against the states.

271. 646 P.2d 835, 837 (Cal. 1982).

272. *Id.* at 840.

273. See *Brown v. Legal Found. of Wash.*, 538 U.S. 216, 231-32 (2003) (explaining that the Fifth Amendment requires that "the taking must be for a public use and just compensation must be paid to the owner"); *Thompson v. Consol. Gas Util.*, 300 U.S. 55, 80 (1937) ("[O]ne person's property may not be taken for the benefit of another private person without a justifying public purpose, even though compensation be paid.").

274. U.S. CONST. amend V.

275. A patent will not be issued unless the claimed invention is novel and non-obvious. 35 U.S.C. §§ 102-03 (2006).

proposed system is “for public use,” benefiting, as it will, private entities. The development of condemnation law, primarily with respect to takings of real estate for redevelopment purposes, indicates that the proposal would comfortably pass constitutional muster, particularly in light of the decision in *Kelo v. New London*.²⁷⁶

Purely private takings, even if compensated, are prohibited by the Takings Clause. “[I]t has long been accepted that the sovereign may not take the property of A for the sole purpose of transferring it to another private party B, even though A is paid just compensation.”²⁷⁷ Early cases questioned whether it would be proper to condemn property to turn it over to another private party under any circumstances. Justice McLean, concurring in *West River Bridge Company v. Dix*,²⁷⁸ opined that the government could not take the property of one individual to transfer it to another since eminent domain required a public purpose.²⁷⁹ Modern cases, principally in the area of urban redevelopment, view the public purpose requirement of eminent domain broadly and permit the use of condemnation proceedings to acquire property to be transferred to a private party in furtherance of a governmental purpose. It is permissible to take property from one individual (paying, of course, just compensation) with the intention of transferring the property to another known

276. 545 U.S. 469 (2005) *rehearing denied*, 545 U.S. 1158 (2005).

277. *Id.* at 478 n.5 (paraphrasing *Calder v. Bull*, 3 U.S. 386, 388 (1798)).

An act of the legislature . . . contrary to the great first principles of the social compact, cannot be considered a rightful exercise of legislative authority A few instances will suffice to explain . . . [A] law that takes property from A and gives it to B: It is against all reason and justice, for a people to entrust a Legislature with such powers

Id. *Accord*, *Haw. Housing Auth. v. Midkiff*, 467 U.S. 229, at 245 (“A purely private taking . . . would serve no legitimate purpose of government and would thus be void.”). *Mo. Pac. Ry. Co. v. Neb.*, 164 U.S. 403, 416–17 (1896) (explaining that there must be a genuine public purpose for the taking; a mere pretext is not enough).

278. 47 U.S. 507, 536 (1848) (McLean, J., concurring).

279.

It is argued, that, if the State may take this bridge, it may transfer it to other individuals, under the same or a different charter. This the State cannot do. It would in effect be taking the property from A to convey it to B. The public purpose for which the power is exerted must be real, not pretended. If in the course of time the property, by a change of circumstances, should no longer be required for public use, it may be otherwise disposed of. But this is a case not likely to occur. The legality of the act depends upon the facts and circumstances under which it was done. If the use of land taken by the public for a highway should be abandoned, it would revert to the original proprietor and owner of the fee.

Id. at 537–38.

individual, provided that the transfer is part of an overall plan which has a valid public purpose.²⁸⁰

The classic valid public purpose is economic redevelopment. *Berman v. Parker* involved condemnation of a department store located in a blighted area of Washington, D.C. as part of a plan for redevelopment of the area.²⁸¹ The store itself was not run down, and the owner refused to sell voluntarily.²⁸² The District initiated condemnation proceedings, and the owner challenged the taking.²⁸³ The Court held that redevelopment was a valid public purpose, and successful development required taking all of the properties in the area.²⁸⁴ In *Hawaii Housing v. Midkiff*, land ownership in Hawaii was highly concentrated in the hands of a few landowners who leased (rather than sold) land to occupants.²⁸⁵ “[T]he State and Federal Governments owned nearly 49% of the State’s land, [and] another 47% was in the hands of only 72 private landowners [O]n Oahu . . . , 22 landowners owned 72.5% of the fee simple titles.”²⁸⁶ Hawaii planned to reduce this concentration of land ownership by condemning land owned by large land owners and transferring it to the lessees.²⁸⁷ The stated purpose was to reduce the “social and economic evils of a land oligopoly” that “created artificial deterrents to the normal functioning of the State’s residential land market.”²⁸⁸ The Ninth Circuit held the plan “a naked attempt . . . to take the property of A and transfer it to B solely for B’s private use and benefit.”²⁸⁹ The Supreme Court unanimously reversed, holding that it is “only the taking’s purpose, and not its mechanics” that matter; the acquisition of the property was in furtherance of a valid public

280. Justice Kennedy’s concurring opinion places some limits on this power: “The determination that a rational-basis standard of review is appropriate does not . . . alter the fact that transfers intended to confer benefits on particular, favored private entities, and with only incidental or pretextual public benefits, are forbidden by the Public Use Clause.” *Kelo*, 545 U.S. at 490. Justice Kennedy was satisfied with the trial court’s evaluation and stated that “[t]he trial court concluded . . . that benefiting Pfizer was not the ‘primary motivation or effect of this development plan; instead, the primary motivation . . . was to take advantage of Pfizer’s presence.’” *Id.* at 492. He cautioned, however, that “[a] court confronted with a plausible accusation of impermissible favoritism to private parties should treat the objection as a serious one and review the record to see if it has merit, though with the presumption that the government’s actions were reasonable and intended to serve a public purpose.” *Id.* at 491.

281. 348 U.S. 26, 31 (1954).

282. *Id.*

283. *Id.* at 28.

284. *Id.* at 33, 36.

285. 467 U.S. 229 (1984).

286. *Id.* at 232.

287. *Id.* at 233.

288. *Id.* at 241–42.

289. *Midkiff v. Tom*, 702 F.2d 788, 798 (9th Cir. 1983), *rev’d*, 467 U.S. 229 (1984).

purpose, and a subsequent transfer to private parties does not violate the Constitution.²⁹⁰ It is of particular interest that the land taken by Hawaii was placed into private hands and presumably used for the same purpose after the taking as before it was taken from the lessor and given to the lessee.

In *Kelo v. New London*, the Supreme Court again reviewed a taking of an individual's property for the purpose of transferring it to another individual and found the practice constitutional as a public use within the Takings Clause.²⁹¹ *Kelo* involved the efforts of the City Council of New London, Connecticut, to revitalize its Fort Trumbull area. The clearest factual summary is in Justice O'Connor's dissent:

Petitioners are . . . owners of 15 homes in the Fort Trumbull neighborhood of New London, Connecticut . . . Pfizer . . . announced that it would build a global research facility near the Fort Trumbull neighborhood. Two months later, New London's city council gave approval for the New London Development Corporation . . . to prepare the development plan at issue. . . . [T]he NLDC generated an ambitious plan for redeveloping 90 acres of Fort Trumbull in order to "complement the facility that Pfizer was planning to build, create jobs, increase tax and other revenues, encourage public access to and use of the city's waterfront and eventually 'build momentum' for the revitalization of the rest of the city."²⁹²

While a portion of the area was slated for public uses, at least some parts of the condemned land were not planned to be opened to the general public.²⁹³ The record before the Court contained "no allegation that any of these properties is blighted or otherwise in poor condition; rather, they were condemned only because they happen to be located in the development area."²⁹⁴ The city planned to transfer the condemned land to a private developer, but at the time it initiated condemnation, it had not chosen a particular private developer.²⁹⁵ As

290. 467 U.S. at 244.

291. 545 U.S. 469 (2005). Technically, *Kelo* involved the constitutionality of state action and therefore was analyzed under the Fourteenth Amendment, the Fifth Amendment having been held inapplicable to the states directly in *Barron ex. Rel. Tiernan v. Mayor of Balt.*, 32 U.S. 243 (1833). The transfer of patent rights from one individual to another would need to pass constitutional muster under the Fifth Amendment since patent rights are purely federal and the taking would be by the federal government. However, the analysis would be precisely the same: The taking involved in *Kelo* is tested using Fifth Amendment principles as applied to the state action through the Fourteenth Amendment. See *Kelo*, 545 U.S. at 472 n.1 (citing *Chi. B. & Q. R. Co. v. Chicago*, 166 U.S. 226 (1897)).

292. *Id.* at 494–95 (O'Connor, J., dissenting) (quoting Petition for Writ of Certiorari 5).

293. *Id.* at 478 ("[T]his is not a case in which the City is planning to open the condemned land at least not in its entirety to use by the general public.").

294. *Id.* at 475.

295. *Id.* at 478 n.6. As the owner of an adjacent parcel, Pfizer was expected to benefit indirectly from the development which would result from the condemnation. The Court noted "Quite simply, the government's pursuit of a public purpose will often

viewed by the O'Connor dissent, the Kelo decision "holds that the sovereign may take private property currently put to ordinary private use, and give it over for new, ordinary private use, so long as the new use is predicted to generate some secondary benefit for the public"296 The majority held that New London's taking was part of a "carefully considered development plan."²⁹⁷ Acknowledging that the dispositive question was whether the city's plan served a "public purpose," the Court noted that "without exception, our cases have defined that concept broadly, reflecting our longstanding policy of deference to legislative judgments in this field."²⁹⁸

While most of the development of eminent domain jurisprudence has taken place in the area of economic redevelopment, the Supreme Court has decided a condemnation case involving intellectual property. *Ruckelshaus v. Monsanto Co.* involved the EPA's use of one applicant's trade secret data to evaluate a competitor's applications under the Federal Insecticide, Fungicide, and Rodenticide Act.²⁹⁹ To obtain approval to sell a pesticide regulated under the act, companies are required to submit information concerning the product to the EPA for approval.³⁰⁰ Among the information required to be submitted is confidential information about the formulation of the product.³⁰¹ The EPA used Monsanto's confidential data to evaluate the application of a competitor, although Monsanto was compensated.³⁰² The government argued that making use of the data reduced barriers to entry to the pesticide market, thus increasing competition.³⁰³ The Court found the objective sufficient to survive constitutional challenge.³⁰⁴

The application of the condemnation cases to patent harmonization is straightforward. *Kelo* allows systematic acquisition of private property with the intent that it be redistributed to other private parties (whose identities may be unknown at the time of the taking), provided it is part of a plan with public benefits. *Kelo* permits this even if that property is being used constructively and is of value to its present owner. The benefits do not need to be gained directly from the specific property that is taken, and it is not necessary that the public have access to the taken property. Great

benefit individual private parties," and cited as examples the lessees in *Midkiff* and the competitors in *Monsanto*. *Id.* at 485. In each case, the incidental private benefit was necessary to promote the government's stated public interest. *Id.* at 485-86.

296. *Id.* at 501 (O'Connor, J., dissenting)

297. *Id.* at 469 (syllabus).

298. *Id.* at 480 (majority opinion).

299. 67 U.S. 986, 990 (1984).

300. *Id.* at 990-91.

301. *Id.* at 991.

302. *Id.* at 998-1000.

303. *Id.* at 1015.

304. *Id.* at 1020.

deference is given to the legislature's judgment on this issue. There should be little doubt that patent harmonization is a valid public purpose since the Supreme Court has already held that international harmonization of intellectual property regimes is in the national interest.³⁰⁵ Therefore, should Congress decide that those few first inventors who are not also first filers have property which must be taken to provide the greater public benefit of patent harmonization, it would not appear that the Supreme Court would second guess that decision.

Details remain to be decided. Would the government absorb the cost of the takings or would it "resell" (as in *Kelo*) the taken patents to the first filers? Either approach would be consistent with *Kelo*. In the first case, it would be necessary to appropriate the necessary funds. Whether such appropriations would be wise depends on the true value of harmonization. In the second case, to avoid further Fifth Amendment complications it might be necessary to offer the first filer an option whether to "buy" the patent application or not. Such an option system should still satisfy the requirements of WIPO, since it is similar to the interference system already in use in Japan. The patent would still be available to the first filer, and there would simply be a question of whether the first filer were willing to pay the price; the treaty is silent on the question of fees. Would the government take patent applications or only issued patents? Either approach would result in the patents being owned by the first filer. Would the government initiate and administer the process as principal, or would it instead facilitate negotiations between the competing applicants? There may be cases in which the first filer would voluntarily surrender the right to the patent. Since patents are assignable personal property, it would be permissible for the first filer to obtain the patent and sell it to the first inventor. Alternatively, assuming the United States does not abandon its current grace period policy, the first filer could simply withdraw the interfering application; the result would be that the patent would be granted to the first inventor. There does not seem to be any principled reason for going through the process for its own sake when the same result could be achieved by having the first filer waive the right to the patent.

C. *Reconciling Condemnation with Harmonization*

Condemnation provides a method for placing patents in the hands of the first-to-file. What remains is to determine if it also

305. See *Eldred v. Ashcroft*, 537 U.S. 186, 195 n.2 (2003) (finding the Copyright Term Extension Act, 17 U.S.C. 302(a)-(c) (2006), constitutional).

satisfies the requirements of the proposed treaty. Several objections might be raised.

From the public's perspective, it might be objected that the condemnation solution would be expensive. This objection goes only to the question of whether harmonization is worth the cost. In a sense, it is a test of whether harmonization is good public policy: A policy which seems good when costs are externalized may not appear sound when all of the true costs are considered. From the first filer's perspective, it may be objected that forcing first filers to buy the patent is inconsistent with harmonization. Nothing in the treaty or the Constitution requires that patent applicants receive their patents for free; in fact, patent offices charge fees, and the U.S. Patent Office fees depend on the nature of the applicant.³⁰⁶ In addition, there is a close precedent in the Japanese interference system. Under Article 39(2) of the Japanese Patent Act, if there are two or more claimants to the same invention, they jointly decide who is to receive the patent. If they fail to agree, no one gets the patent.³⁰⁷ Presumably, the parties make an economic evaluation, and the patentee compensates the other claimants. Thus, charging a premium for a first filer who is a later inventor could be justified. A final first filer's objection might be that the solution treats first filers differently than first inventors. In addition to the different treatment of different types of inventors, the patent statute already treats different types of inventions differently. There are, for example, different terms for utility and plant patents (which last from the date of issue until twenty years after the date of filing)³⁰⁸ and design patents (which last for fourteen years from date of issue).³⁰⁹

The first inventor might object that the proposal reduces the incentive to invent. Under the proposed condemnation system, the first inventor would still receive the constitutionally required incentive, although it would be the cash equivalent of the estimated value of the invention. The first inventor might further object that this is not equivalent to the constitutionally required exclusive right. The Constitution requires an exclusive right for a "limited term." In *Eldred v. Ashcroft*, the Supreme Court held that Congress has extremely wide latitude in setting the term.³¹⁰ If necessary, the first

306. Small businesses, non-profit organizations, and individual inventors receive a 50% discount on many of the fees they pay. 35 U.S.C. 41(h) (2006); 37 C.F.R. § 1.27 (2007); U.S. PAT. & TRADEMARK OFF. FY 2007 FEE SCHEDULE, available at <http://www.uspto.gov/go/fees/fee2007february01.htm> (last visited Feb. 15, 2007).

307. Tokkyohō [Patent Law], Law No. 121 of 1959, art. 39, no. 2.

308. 5 U.S.C. § 154 (2006).

309. *Id.* § 173.

310. 537 U.S. 186, 194, 256–57 (2003) (holding constitutional an extension of a copyright term, which Justice Breyer demonstrated in dissent, was nearly unlimited from a discounted cash value perspective).

inventor could be given a short period of exclusivity, which would have little economic impact on the ultimate patentee.

From the international perspective, condemnation may appear to offer technical harmonization without meeting the spirit of harmonization. It does, however, accomplish the stated objectives of the draft treaty, constrained as it is by the U.S. Constitution. If the draft treaty would not accommodate this system, one answer would be to rewrite the treaty, a potentially simpler task than amending the U.S. Constitution. If harmonization is of sufficient value, presumably this would be a reasonable price to request in exchange for changing 200 years of consistent history.

If the cost of the constitutionally sound solution is too high, one other route of harmonization remains: other countries could harmonize their laws to conform to the system that has produced the strongest technological engine in the world.