

EXPERT REPORT JHR¹

COMPULSORY LICENCES: HISTORY AND LEGAL PRINCIPLES

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Materials Submitted for Draft Expert Report
To South African Competition Commission

In general comparative and historical research shows that compulsory licensing of patented inventions primarily occurs, or is statutorily allowed to occur, in the following circumstances:

- to correct abuses of the patentee's exclusive rights
- to promote the public interest
- to enable government use
- to facilitate use of dependent patents (i.e., to avoid blocking patents).²

The last item is best understood as a specific type of public interest license, hence dependent patents will not be separately treated in this report. Before discussing any of these topics, however, it is useful to understand the historical evolution of the international law governing compulsory licensing of patented inventions.

² See Jerome Reichman with Catherine Hasenzahl, *Nonvoluntary Licensing of Patented Inventions: Historical Perspective, Legal Framework under TRIPS, and an Overview of the Practice in Canada and the United States of America*, UNCTAD/ICTSD Capacity Building Project on Intellectual Property Rights and Sustainable Development, (Geneva, Switz., September, 2002) [hereinafter Reichman with Hasenzahl, *Historical Perspective*] at 4-8 (citing authorities). See generally, JEAN-MARC SALAMOLARD, LA LICENCE OBLIGATOIRE EN MATIERE DE BREVETS D'INVENTION 36-50 (1978) [hereinafter J-M Salamolard].

I. Historical Perspective³

Historically, nonvoluntary licensing arose to ameliorate the patentee's risks of forfeiture that derived from numerous restrictions on the use of patented inventions in early domestic and international laws. The first major improvement of the patentee's status in this regard was the abolition of forfeiture for merely importing patented articles into countries that practiced this restriction.⁴ France, indeed, did not abolish the prohibition of imports until 1953.⁵ Once the risk of forfeiture for imports had been attenuated, the most important obligation that the laws of many countries imposed on patentees was the duty to work or exploit the invention in the countries granting patents. As Stephen Ladas portrays it, the history of the stipulations concerning this issue in the Paris Convention "is, in a sense, the history of the [Paris] Union" itself.⁶

A. Avoiding Forfeiture

Initially, and for a considerable period that lasted at least until 1925, the only breaks on forfeiture for nonworking of patents under the Paris Convention were a three-year grace period and the ability of the patentee to justify his failure to work under conditions set by local law. The 1883 text of the Paris Convention did not define what the term "working" meant, and each member country "could give it the meaning of its own law."⁷

However, forfeiture of patents as the sanction for nonworking often generated still other social costs, especially when investment or know-how was insufficient to enable competitors to produce the disclosed invention by their own means. For these and other reasons, states

³ This section is based on Reichman with Hasenzahl, *Historical Perspective*, *supra* note 1, at 4-15.

⁴ See Paris Convention for the Protection of Industrial Property, 20 March 1883, as last revised at Stockholm, 14 July 1967 [hereinafter Paris Convention], 25 Stat. 1372, 828 U.N.T.S. 305, Article 5A(1), 1883 text (embodying a provision that was first adopted at the Paris Conference of 1880); 1 Stephen P. Ladas, *Patents, Trademarks, and Related Rights National and International Protection* [hereinafter S. Ladas] 516 (1975).

⁵ See 1 S. Ladas, *supra* note 3, at 516.

⁶ *Id.* at 519-520 (citing text of Washington Conference of 1911, article 5). See also Carlos M. Correa, *Intellectual Property Rights and the Use of Compulsory Licenses: Options for Developing Countries*, South Center (1999) [hereinafter Correa, *Compulsory Licenses*], available at <http://www.southcentre.org/publication/pubindex.htm#working>; at 3 (stating that the "granting of compulsory licenses appeared as a means to mitigate the drastic measure of direct forfeiture," and tracing the first such provision to section 22 of the United Kingdom's Patent Act of 1883).

⁷ See 1 S. Ladas, *supra* note 3, at 524. Moreover, the policies behind the working requirement have always been controversial, especially with regard to foreign patentees. They could be required not only to work the patent as such, within a specified period of time, but to "work the patent locally" as well, which entailed manufacturing or organizing the industrial use of the patented invention in the country that issued the patent. See, e.g., Correa, *Compulsory Licenses*, *supra* note 5, at 3 n.7.

gradually adopted a system of compulsory licensing as the primary sanction for nonworking in lieu of forfeiture.⁸

This reform was consistent with the purposes of the Paris Union, which gave patentees priority rights in all member countries even though it was impossible for the inventor to work the patent in them all.⁹ Serious efforts to replace forfeiture for nonworking with the milder sanction of compulsory licensing were accordingly undertaken at the Conference of the Hague in 1925.¹⁰ The compromise principle adopted at this Conference was to allow states to "take the necessary legislative measures to prevent the abuses" of the patentee's exclusive rights, as exemplified by 'failure to work.'¹¹

The crux of the 1925 reform was that forfeiture as a remedy for "abuse" was not allowed unless the grant of a compulsory license had failed to prevent such abuse. In any case, neither sanction could apply for a period of at least three years from the date the patent issued or if the patentee proved the existence of "legitimate excuses."¹² The importance of this provision was, reportedly, to shift attention to abuses of the patentee's exclusive rights and away from the obligation to work patents as such.¹³

If one effect of the 1925 reforms was clearly to discredit the use of forfeiture as a remedy for abuse,¹⁴ another equally clear if unintended consequence was to legitimate the use of compulsory licenses to remedy a wide variety of abuses, including a failure to work the patent locally. As Ladas himself somewhat ruefully admits, the result of the revision of article 5 of the Paris Convention in 1925 "was to stimulate the adoption of a compulsory license system in the patent law of most countries which theretofore had no such provision."¹⁵

At the London Revision Conference of 1934, it was further provided that Paris Union members could not institute proceedings for forfeiture on grounds of abuse before the expiration of two years from the grant of the first compulsory license.¹⁶ The net result was to ensure that any demonstrable claim of abuse had first to elicit a compulsory license, while the availability of

⁸ See 1 S. Ladas, *supra* note 3, at 523-24.

⁹ See Paris Convention, *supra* note 3, art. 4A(1).

¹⁰ See 1 S. Ladas, *supra* note 3, at 526.

¹¹ Paris Convention, *supra* note 3, Hague text of 1925, art. 5 (quoted in 1 S. Ladas, *supra* note 3, at 527).

¹² See *supra* note 10.

¹³ See 1 S. Ladas, *supra* note 3, at 528.

¹⁴ See, e.g., 1 S. Ladas, *supra* note 3, at 529.

¹⁵ *Id.* at 530. Conversely, countries that did not enact legislation permitting compulsory licenses often continued to forfeit patents that had not been worked for three years. See *id.* at 530-37.

¹⁶ *Id.*

forfeiture as the ultimate sanction was further limited, in 1958, by a provision that it not be prescribed "except in cases where the grant of compulsory licenses would not have been sufficient to prevent such abuses."¹⁷

B. Compulsory Licensing in the Public Interest

As states familiarized themselves with the remedy of compulsory licensing used to limit forfeiture in cases of abuse, and especially in cases of local nonworking, another unintended consequence of the entire exercise was that they increasingly resorted to this same remedy in order to restrict the powers of the patentee even in the absence of abuse. They did this for a variety of reasons that were generally triggered by some compelling need to promote the "public interest."¹⁸ Not surprisingly, compulsory licensing was of particular interest to countries seeking to regulate patents covering medicinal products and food products.¹⁹ Still other grounds for invoking public-interest compulsory licenses were "reasonable exigencies or needs of the public," "the promotion of international trade," economic development goals, "public health," "vital needs of the state," and "national defense."²⁰

Although some observers attempted to argue that the limitations applicable to instances of "abuse" under article 5A of the Paris Convention, as amended in 1934, also applied to limit a state's ability to issue compulsory licenses on other grounds, these arguments had no basis in the text of the treaty. They were authoritatively rejected by the House of Lords in a famous decision of 1954,²¹ and more recently by the German Federal Supreme Court in 1995.²²

In preparing for the Lisbon Conference of 1958, the International Bureau administering the Paris Convention at this period duly sought to clarify the wishes of the member countries

¹⁷ Paris Convention (1967), *supra* note 3, art 5A(3); 1 S. Ladas, *supra* note 3, at 532.

¹⁸ See 1 S. Ladas, *supra* note 3, at 532-37.

¹⁹ See *id.* at 533. See generally, J. H. Reichman with Catherine Hasenzahl, Nonvoluntary Licensing of Patented Inventions: The Canadian Experience, UNCTAD/ICTSD Capacity Building Project on Intellectual Property Rights and Sustainable Development (Geneva, Switz., Oct. 2002) [hereinafter, Reichman, *Canadian Experience*].

²⁰ See, e.g., J-M. Salamolard, *supra* note 1, at 39-47 (citing authorities); see also G. H. C. BODENHAUSEN, GUIDE TO THE APPLICATION OF THE PARIS CONVENTION FOR THE PROTECTION OF INDUSTRIAL PROPERTY AS REVISED AT STOCKHOLM IN 1967, 70-71 (1968) [hereinafter, BODENHAUSEN].

²¹ See *Parke-Davis Co. v. Comptroller of Patents, Designs and Trade Marks*, [1954] 71 R.P.C. 169; 1 S. Ladas, *supra* note 3, at 533.

²² See *Case Nasser*, NJW 49,1953 (5 Dec. 1995); see also Jayashree Watal, Intellectual Property Rights in the WTO and Developing Countries 319-21 (2002) [hereinafter J. Watal] at 319.

22 1 S. Ladas, *supra* note 3, at 534-35. These countries included Belgium, Canada, Denmark, Finland, France, Germany, Israel, Japan, Norway, The Netherlands, Rhodesia, Romania, South Africa, Sweden, and Yugoslavia.

concerning the possible application of article 5A to cases where no abuse of the patent monopoly was at issue. They learned that some fifteen countries (including some ten or eleven developed countries) "reserved the right in case of public interest to grant a compulsory license at any time without awaiting the lapse of the period" set out in articles 5A(3) and (4).²³ They also learned that the Members essentially agreed that compulsory licenses should always be granted on a nonexclusive basis;²⁴ hence, a limited provision to this effect was added to article 5A(4) of the 1958 text.²⁵

The International Bureau's efforts to clarify the application of article 5A to cases in which no abuse was at issue then produced another of those unintended consequences that seem to have characterized the entire history of the provisions regulating compulsory licenses in international conventions. By the end of the Lisbon Conference to revise the Paris Convention in 1958, the delegates had decided that a member state's freedom to issue compulsory licenses on grounds of public interest without any mandatory period of delay should also extend to all cases of abuse, except that of nonworking. As a result, article 5A(4) was revised downwards so that, from 1958 on, it required a mandatory period of delay (i.e., four years from the date of filing or three years from the date the patent issues, "whichever period last expires") only for compulsory licenses made available "on the ground of failure to work or insufficient working!"²⁶

In other words, the conditions governing the issuance of compulsory licenses on general grounds of abuse were liberalized and harmonized with the more permissive rules (or lack of rules) governing compulsory licenses issued on public interest grounds. Even a patentee who worked the patent locally thus became vulnerable to the imposition of such a license at any time if, for example, he sold the patented products at "unreasonably high prices," or if, having licensed the product for local manufacture, he surfeited the market with imported (but patented) products from abroad "at a price with which the locally manufactured product cannot compete."²⁷

Subsequent efforts to stipulate and restrict conditions under which a compulsory license might be granted for reasons other than abuse were promoted at international meetings of patent attorneys during the period 1960-1966,²⁸ but none of these proposals entered the Stockholm Revision of 1967. Indeed, those who had feared that efforts to restrict such licenses to cases of "imperative" or "exceptional" requirements of public interest might tend "to encourage member countries which do not have provision for such

²⁴ See 1 S. Ladas, *supra* note 3, at 535.

²⁵ See Paris Convention (Lisbon text of 1958), *supra* note 3, art. 5A(4) (compulsory licenses granted for failure to work shall be nonexclusive), which remained unchanged in the Stockholm revision of 1967.

²⁶ 1 S. Ladas, *supra* note 3, at 535-36; see also Paris Convention (1967 text), *supra* note 3, art. 5A(4).

²⁷ 1 S. Ladas, *supra* note 3, at 536.

²⁸ See *id.* at 536-38.

measures to legislate about such restrictions" saw their worst fears realized over time.²⁹ In the European Union, for example, all member countries have provisions allowing the imposition of compulsory licenses on public interest grounds.³⁰ While these provisions reportedly "encounter few legal and economic policy reservations," interpretations of the term "public interest" varied too much in the European Union Member States to permit harmonization even by the end of the twentieth century.³¹ It was nonetheless generally understood that such licenses could be invoked to meet national defense, environmental concerns, to increase energy supplies, to enhance workers' safety, or to combat new diseases "if the patent owner does not take sufficient account of the needs of the general public."³²

From a worldwide perspective, about one hundred countries had reportedly recognized some form of nonvoluntary licensing in their domestic patent laws by the early 1990s.³³ While the grounds for imposing such licenses varied from country to country, the following rubrics had all been invoked at different times and places: refusal to deal; nonworking or inadequate supply of the market; public interest; abusive and/or anticompetitive practices; government use; dependent or "blocking" patents (on improvements to prior inventions); special product regimes, e.g., pharmaceuticals and food; licenses of right.³⁴

Against this background, tensions generated by the emphasis increasingly given to nonvoluntary licensing of patents by spokesmen for developing countries came to a head during the Conference to Revise the Paris Convention that dragged on from 1979 to 1985. In this period, the developing countries emancipated from the colonial powers were as intent on lowering the international minimum standards of patent protection as the developed countries were resolved to elevate these same standards.³⁵ Especially

²⁹ *Id.* at 536.

³⁰ See Friedrich-Karl Beier, Exclusive Rights, Statutory Licenses and Compulsory Licenses in Patent and Utility Model Law, 30 *Int'l Rev. Indus. Prop. & Copyright Law (I.I.C.)* 251 (1999) at 261.

³¹ *Id.*

³² *Id.*

³³ See Correa, Compulsory Licenses, *supra* note 5, at 4. See also Beier, *supra* note 29, at 259-260 (finding majority of patent laws in developed countries to permit compulsory licenses, but stressing that actual grants of such licenses remain rare); Michael D. Scott, Compulsory Licensing of Intellectual Property in International Transactions, 11 *E.I.P.R.* 319, 328-25 (1988).

³⁴ Correa, Compulsory Licenses, *supra* note 5, at 10-21. With specific regard to patented inventions, the United Kingdom adopted a license of right in 1977, when it expanded the duration of protection from 16 to 20 years. In the final few years of patents benefiting from this provision, nonexclusive licenses of right "became available if the patentee had been importing the bulk of the product into the United Kingdom, subject to certain restrictions." See, e.g., *id.* at 20-21.

³⁵ See generally J. H. Reichman, Intellectual Property in International Trade: Opportunities and Risks of a GATT Connection, 22 *Vand. J. Transnat'l L.* 747, 754-67 (1989) [hereinafter Reichman, GATT Connection].

controversial were proposals to strengthen the capacity of member countries to impose nonvoluntary licenses generally, and even to restrict the ability of affected patentees to remain in the market with the designated licensees.³⁶ In the end, such proposals led not only to the collapse of the Paris Revision Conference itself, but they were instrumental in the decision to remove ongoing efforts to reform international industrial property law from the jurisdiction of WIPO and to bring them within the legislative and judicial jurisdiction of the GATT and its successor institution, the WTO.

C. The TRIPS Agreement

The outcome of this initiative, undertaken within the framework of the Uruguay Round of Multilateral Trade Negotiations was, of course, the Agreement on Trade-Related Aspects of Intellectual Property Rights ("TRIPS Agreement") of 1994.³⁷ The TRIPS Agreement blocked further efforts to negotiate differential and more favorable treatment for developing countries under the patent provisions of the Paris Convention, and it greatly elevated the international minimum standards of patent protection that apply to all WTO member countries in the future.³⁸ The impact of this "revolutionary" change in international patent law³⁹ on developing and least-developed countries remains even more controversial today than at the time the TRIPS Agreement was adopted.⁴⁰

³⁶ See, e.g., Beier, *supra* note 29, at 260, 260 n.31 (citing authorities). For proposals to institute a preferential regime for developing countries within the framework of the Paris Convention that were debated but not adopted at the Conference to Revise the Paris Convention, 1979-1986, see WIPO Synoptic Tables Concerning Articles 1, 5A, and 5Quater of the Paris Convention for the Protection of Industrial Property, WIPO Doc. No. PR/DC/INF/51 (1984); see also Peter Kunz-Hallstein, The Revision of the International System of Patent Protection in the Interest of Developing Countries, 10 *Int'l Rev. Indus. Prop. & Copyright Law (I.I.C.)* 649, 658-64 (1979); Gail E. Evans, Intellectual Property as a Trade Issue The Making of the Agreement on Trade Related Aspects of Intellectual Property Rights, 1994 *World Competition L. & Econ. Rev.* 137 (Dec. 1994).

³⁷ See Marrakesh Agreement Establishing the World Trade Organization [hereinafter WTO Agreement], Annex 1C: Agreement on Trade-Related Aspects of Intellectual Property Rights, 15 April 1994 [hereinafter TRIPS Agreement], 33 *I.L.M.* 81 (1994).

³⁸ See, e.g., Joseph Straus, Implications of the TRIPS Agreement in the Field of Patent Law, in *From GATT to TRIPS: The Agreement on Trade-Related Aspects of Intellectual Property Rights* 160 (F.K. Beier & G. Schriker, eds., 1996) at 100 et seq.; J. H. Reichman, Universal Minimum Standards of Intellectual Property Protection Under the TRIPS Component of the WTO Agreement, in *Intellectual Property and International Trade: The TRIPS Agreement* 21 (Carlos M. Correa & Abdulqawi A. Yusuf eds., 1998) [hereinafter C. Correa & A. Yusuf].

³⁹ Straus, *supra* note 37.

⁴⁰ See generally Keith Maskus, *Intellectual Property Rights in the Global Economy* (2000) [hereinafter K. Maskus]; Peter Drahos, *Developing Countries and International Intellectual Property Standard-Setting*, study prepared for the United Kingdom Commission on Intellectual Property Rights, Feb. 2002 [hereinafter Drahos, *Developing Countries*].

Nevertheless, when it came to determining the rules applicable to nonvoluntary licensing of patented inventions under the TRIPS Agreement, the delegates found it no easier to reach a consensus concerning agreed limitations on this institution than it had been during the failed negotiations to revise the Paris Convention. This lack of consensus persisted notwithstanding the fact that the issue of nonvoluntary licenses engendered "some of the most intensely negotiated provisions" of the TRIPS Agreement.⁴¹

Under the TRIPS Agreement, the principal limitations on a patentee's exclusive rights are the relatively narrow set of exceptions covered by article 30⁴² and the rather broad possibilities for imposing nonvoluntary licenses under article 31.⁴³ Account must also be taken of article 27.1, which requires patents to be available "and patent rights enjoyable without discrimination as to the place of invention, the field of technology, and whether products are imported or locally produced."⁴⁴ This non-discrimination provision lies at the center of the debate regarding the continued legitimacy of the working requirements under the TRIPS Agreement.

It is not the purpose of this survey to parse the technical language implementing the compromise that the TRIPS negotiators finally embodied in article 31.⁴⁵ Rather, what follows summarily evaluates the end result in light of the questions that were raised during the failed negotiations to revise the Paris Convention.

To begin with, the continuing ability of WTO Member Countries to treat a failure to work patents locally as an abuse under article 5A of the Paris Convention remains controversial and unsettled. While article 5A has been incorporated bodily into the TRIPS Agreement,⁴⁶ that Agreement also provides, in article 27.1, that the enjoyment of the patentee's exclusive rights must be "without discrimination as to ... whether products are imported or locally produced."⁴⁷ Whether this provision and its ambiguous legislative history suffice to repeal the pre-existing right of Member States to continue to treat local

⁴¹ J. Watal, *supra* note 21, at 317.

⁴² See TRIPS Agreement, *supra* note 36, arts. 30-31. For a discussion of the limitations on the application of article 30, see Canada -- Patent Protection of Pharmaceutical Products, Report of the Panel, WT/DS114/R (17 Mar. 2000) [hereinafter Canadian Pharmaceutical Products Decision].

⁴³ See, e.g., Correa, Compulsory Licenses, *supra* note 5, at 8-9; Reichman, GATT Connection, *supra* note 34, at 34-36.

⁴⁴ TRIPS Agreement, *supra* note 36, art. 27.1.

⁴⁵ See further Carlos M. Correa, Intellectual Property Rights, the WTO and Developing Countries: The TRIPS Agreement and Policy Options (2000)[hereinafter C. Correa, TRIPS Agreement]; UNCTAD/ICTSD Project, The Resource Book, chapter 2.5.8 "Non-voluntary Uses (Compulsory Licenses, Art.31)".

⁴⁶ See TRIPS Agreement, *supra* note 36, art. 2.1.

⁴⁷ *Id.* art. 27.1

nonworking as an abuse, as some contend,⁴⁸ or whether this right survives as an option that states retain within the framework of their competition laws and regulations,⁴⁹ as others contend,⁵⁰ remains an open question at the time of writing.⁵¹ A suit filed at the WTO by the United States against Brazil challenging the latter's local working requirement was withdrawn prior to adjudication.⁵²

Apart from questions pertaining to either the grant of a compulsory license for failure to work or the grant of such a license to prevent abuses of the patentee's exclusive rights under Paris Convention articles 5A(4) and 5A(2), respectively, strenuous efforts were made to formulate some criteria that might limit the Member States' powers to grant nonvoluntary licenses on other grounds, particularly the broad and generic ground of promoting the "public interest." However, every attempt to narrow these grounds during the Uruguay Round negotiations ran afoul of the state practices of leading developed countries, including those of the United States.⁵³ Legislation in the latter country broadly authorizes the government and its contractors to make use of patented inventions without the patentee's permission and without access to injunctive relief to prevent infringement and most statutes allow private compulsory licenses on specific public interest grounds.⁵⁴

Once the United States delegation failed to persuade its negotiating partners that they could meaningfully differentiate "government use" from "compulsory licenses" on other grounds, an Indian proposal to combine both categories under a single set of conditions was ultimately accepted without any restrictions having been placed on the grounds for which states could grant licenses under either category.⁵⁵ In other words, the long-simmering controversy over compulsory licenses, which more than any other issue had been responsible for the removal of negotiations concerning international industrial property standards from WIPO to GATT in 1986, once again gave rise to an unexpected and unintended set of consequences. The final text of article 31, while recognizing such grounds as "national emergencies," "circumstances of extreme urgency," "anti-competitive practices," "public non-commercial use," and "dependent patents,"⁵⁶ otherwise "places no restrictions on the purposes for which such [a nonvoluntary

⁴⁸ See, e.g., Straus, *supra* note 37; J. Watal, *supra* note 21, at 318.

⁴⁹ See TRIPS Agreement, *supra* note 36, arts. 8.2., 40.2.

⁵⁰ See, e.g., Carlos M. Correa, Patent Rights, in C. Correa & A. Yusuf, *supra* note 37, at 203.

⁵¹ See C. Correa, TRIPS Agreement, *supra* note 44, at 90-91.

⁵² See Brazil- Measures Affecting Patent Protection, Notification of Mutually Agreed Solution, WT/DS199/4, 19 July 2001 [hereinafter Brazil Measures Affecting Patent Protection].

⁵³ See J. Watal, *supra* note 21, at 319-21.

⁵⁴ See 28 U.S.C §1498 (2002).

⁵⁵ See J. Watal, *supra* note 21, at 320-21.

⁵⁶ TRIPS Agreement, *supra* note 36, art. 31.

license] could be authorized."⁵⁷ It thus indirectly vindicated the public interest as a separate ground from the category of abuse, and constituted "quite a significant achievement for developing countries."⁵⁸

It is true, of course, that article 31 also codifies eleven conditions governing the issuance of nonvoluntary licenses,⁵⁹ and some believe these to constitute "strict safeguards."⁶⁰ These conditions require among other things, case-by-case authorizations;⁶¹ prior negotiations with rights holders (except for emergencies, government use, and anticompetitive practices);⁶² nonexclusivity, limited scope of the licenses, and adequate remuneration based in part on the economic value of the license;⁶³ judicial or administrative review;⁶⁴ and the possibility of terminating a nonvoluntary license if the circumstances justifying its initial grant "cease to exist and are unlikely to recur."⁶⁵ Article 31(f) further requires that such licenses shall be authorized "predominantly for the supply of the domestic market."⁶⁶

On the whole, Article 31 nonetheless leaves considerable leeway to policymakers and administrators in both developed and developing countries to impose nonvoluntary licensing of patented inventions for any legitimate purpose and without undue constraints.⁶⁷ In particular, any government that seeks to bring a patentee's practices into line with its own policies, especially with regard to disciplining the prices at which the patented articles are to be locally distributed, can achieve its aims within the confines of article 31. Indeed, as recent experience in both Brazil and the United States demonstrate

⁵⁷ J. Watal, *supra* note 21, at 320. J. Watal, as a negotiator for India at the time, was personally involved in bringing this result to fruition.

⁵⁸ *Id.*

⁵⁹ See TRIPS Agreement, *supra* note 36, art. 31. A twelfth clause, art. 31(l) deals with compulsory licenses issued for dependent patents, but the present survey does not deal with that subject matter in detail. See J. Watal, *supra* note 21, at 326-27.

⁶⁰ See Daniel Gervais, *The TRIPS Agreement: Drafting History and Analysis* 165 (1998).

⁶¹ See TRIPS Agreement, *supra* note 36, art. 31(a) (requiring authorization of use to "be considered on its individual merits").

⁶² See *id.* arts. 31(b), (k) (requiring efforts to obtain voluntary license "on reasonable commercial terms and conditions...within a reasonable period of time").

⁶³ See *id.* arts. 31(c), (d), (h). The license can only be assigned "with that part of the enterprise or goodwill which enjoys such use." *Id.* art. 31(e).

⁶⁴ See *id.* art. 31(i).

⁶⁵ See *id.* art. 31(g).

⁶⁶ See *id.* art. 31(f).

⁶⁷ For detailed examples, see J. Watal, *supra* note 21, at 321-29.

once again, the mere threat of a nonvoluntary license may obviate the need to issue it in practice⁶⁸ because "it usually induces the grant of contractual licenses or reasonable terms."⁶⁹ If so, it would mean that the real obstacles to the granting of nonvoluntary licenses under article 31 of the TRIPS Agreement are usually of an economic and political nature, and do not necessarily derive from the codified international minimum standards as such.⁷⁰

D. The Doha Declaration on TRIPS and Public Health

The practical ramifications of article 31 may ultimately depend on a combination of state practice at the local and regional levels and subsequent legislative or judicial action at the international level, especially with regard to controversial subject matter. The Doha Ministerial Declaration on the TRIPS Agreement and Public Health of

⁶⁸ Brazil obtained major price reductions on HIV antiretrovirals from Hoffman-La Roche after threatening to invoke its local working requirement. See Jennifer L. Rich, *Roche Reaches Accord on Drug with Brazil*, *New York Times*, 1 Sept. 2001. Brazil also obtained significant price discounts from Merck in March of 2001 after threatening to impose a compulsory license. See Miriam Jordan, *Merck Vows AIDS Help for Brazilians*, *Wall St. J.*, 30 Mar. 2001.

⁶⁹ 1 S. Ladas, *supra* note 3, at 427; see also Beier, *supra* note 29, at 260.

⁷⁰ See, e.g., Susan Sell, *Private Power, Public Law: The Globalization of Intellectual Property Rights* (forthcoming 2002) [hereinafter S. Sell, *Private Power, Public Law*]; Correa, *Compulsory Licensing*, *supra* note 5, at 1 (citing authorities). A number of cautionary observations are in order, however, primarily because the flexibility embedded in article 31 of the TRIPS Agreement is not boundless, and other provisions of that Agreement may further constrain it. For example, care must be taken to work around the requirement of nondiscrimination in article 27.1, which seems to impede the imposition of nonvoluntary licensing on unreasonably broad subject-matter categories. Thus, a government could not presumably impose compulsory licensing on medicines in general as Canada did until 1992, without some compelling justifications, but it could impose such licensing on medicines reasonably deemed to be "essential" if other requirements of article 31 were satisfied. See, e.g., Correa, *Compulsory Licensing*, *supra* note 5, at 19; Canadian Pharmaceutical Products Decision, *supra* note 41 (allowing exceptions geared to specific subject matter when reasonably justified by valid public policy considerations).

Still other limitations apply. With respect to patented semiconductor technology, for example, Member States can grant nonvoluntary licenses only for public noncommercial use or to remedy anticompetitive practices. See TRIPS Agreement, *supra* note 36, art. 31(c). Similarly, the power to grant nonvoluntary licenses may not override international standards that protect trade secrets, *see id.*, arts. 39.1, 39.2., or that restrict the rights of third parties to appropriate the data from clinical trials of patented pharmaceutical products, *see id.* art. 39.3. To a still unknown extent, finally, a state's ability to grant nonvoluntary licenses could eventually trigger allegations of nonviolation of acts of nullification or impairment of bargained-for expectations under the TRIPS Agreement as a whole, *see id.*, art. 64, if and when the latest moratorium on such claims is lifted. See Implementation-Related Issues and Concerns, Decision of 14 Nov. 2001, Ministerial Conference, Fourth Session, Doha, WT/MIN(01)/17, par. 11 [hereinafter Doha Ministerial Decision on Implementation Issues and Concerns].

November 2001 is a case in point.⁷¹ This highly political document recognizes that many developing countries are experiencing public health epidemics, and it stresses the need to reconcile the TRIPS Agreement with national and international efforts to address such crises.⁷² It also recognizes the tension between the need for legal incentives to invest in the development of new medicines and the "effects on prices" of the resulting inventions in developing countries.⁷³

The Doha Declaration on Public Health attempts to clarify the flexibility already embodied in the TRIPS provisions concerning the use of nonvoluntary licenses to address public health problems, and it may help to alleviate certain misunderstandings that previously clouded these issues.⁷⁴ For example, the drafters "reaffirm the right of WTO members to use, to the full, the provisions in the TRIPS Agreement, which provide flexibility ... to protect public health, and, in particular, to promote access to medicines for all."⁷⁵ To this end, they expressly declare that, "[e]ach Member has the right to grant compulsory licenses and the freedom to determine the grounds upon which such licenses are granted."⁷⁶ While this provision adds nothing to the substantive legal framework of article 31, it attempts to clarify prior misperceptions, and it supplies an authoritative and "unequivocal statement regarding the right of Members to grant compulsory licenses."⁷⁷

The Doha text also rectifies the misguided notion that states must proclaim a full-fledged national emergency in order to grant nonvoluntary licenses for patented pharmaceutical products under article 31 of the TRIPS Agreement. On the contrary, the Declaration expressly recognizes the right of each Member "to determine what constitutes a national emergency or other circumstances of extreme urgency."⁷⁸ This characterization, when made in good faith, triggers only the waiver of any duty to negotiate with the right holder under article 31(b) prior to the granting of compulsory

⁷¹ Declaration on the TRIPS Agreement and Public Health, Ministerial Conference, Fourth Session, Doha [Qatar], 9-14 Nov. 2001, WT/MIN(01)/DEC/2, 14 Nov. 2001 [hereinafter Doha Declaration on Public Health].

⁷² See *id.*, pars. 1-4.

⁷³ *Id.* par. 3.

⁷⁴ See generally, Correa, Compulsory Licenses, *supra* note 5; Straus, *supra* note 51; Beier, *supra* note 29. For background, detailed analysis, and posterior developments, see most recently Frederick M. Abbott, The Doha Declaration on The TRIPS Agreement and Public Health: Lighting a Dark Corner at the WTO, 5 J.I.E.L. 469 (2002) [hereinafter Abbott, Doha Declaration].

⁷⁵ Doha Declaration on Public Health, *supra* note 70, par. 4.

⁷⁶ *Id.* par. 5(b).

⁷⁷ Abbott, Doha Declaration, *supra* note 73.

⁷⁸ Doha Declaration on Public Health, *supra* note 70, par. 5(c).

licenses, but does not otherwise limit the capacity to impose the license as such.⁷⁹

Unfortunately, the Doha Declaration on Public Health does not resolve one important question concerning the right of importing states to treat products initially sold under a compulsory license in the exporting state as parallel imports covered by paragraph 5(d). If it turns out that patented pharmaceuticals distributed under a compulsory license cannot be exported as "parallel goods" within paragraph 5(d) of the Doha Declaration, then they remain subject to article 31(f) of the TRIPS Agreement, which technically limits such exports to 49.9 per cent of the total supplies distributed under the compulsory license in the local market.⁸⁰ Since only a small number of developing countries can manufacture technically advanced medicines, these legal impediments hamstringing the ability of these countries to assist other poor countries that issue compulsory licenses in order to acquire essential medicines without possessing any local manufacturing capacity in this regard.⁸¹

Can developing countries with manufacturing and export capabilities impose compulsory licenses on patented medicines for the purpose of assisting other developing countries that lack manufacturing capabilities to import essential medicines under compulsory licenses of their own, without violating the patentees' exclusive rights under the TRIPS Agreement? Unfortunately, the Doha Ministerial Declaration on Public Health gave an ambiguous answer to this critical issue. While recognizing that countries "with insufficient or no manufacturing capacities in the pharmaceutical sector could face difficulties in making effective use of compulsory licensing," it provided no clear legal machinery for resolving this dilemma and merely "instructed the Council for TRIPS to find an expeditious solution to this problem" before the end of 2002.⁸²

As a result, the Declaration did not expressly empower states capable of manufacturing generic drugs under compulsory licenses to act as the agents of states that lack such capacity. It did not authorize the former to meet the latter's needs by imposing compulsory licenses for this purpose notwithstanding the export limitations of TRIPS article 31(f), nor did it concede that the exceptions to the patentee's exclusive rights under article 30 of the TRIPS Agreement may implicitly allow the exporting state to impose compulsory licenses in order to assist other states for such purposes.⁸³ Instead, the Doha

⁷⁹ See TRIPS Agreement, *supra* note 36, art. 31(b). It is "understood that public health crises, including those relating to HIV/AIDS, tuberculosis, malaria and other epidemics, can represent a national emergency or other circumstances of extreme urgency." Doha Declaration on Public Health, *supra* note 70, par. 5(a).

⁸⁰ See TRIPS Agreement, *supra* note 36, art. 31(f).

⁸¹ See, e.g., Abbott, Doha Declaration, *supra* note 73 (stressing that art. 31(f) limits both the ability of importing countries thus to obtain generic import drugs under compulsory licenses and the ability of producer countries to obtain economies of scale in authorized exports of compulsory licensed drugs).

⁸² See Doha Declaration on Public Health, *supra* note 70, par. 6.

⁸³ See, e.g., Abbott, Doha Declaration, *supra* note 73. *But see* Canada-Protection of Pharmaceutical Products, *supra* note 64 (narrowly construing the exceptions available under TRIPS art. 30).

Declaration leaves these and other possible options, including a U.S. proposal for a moratorium on dispute settlement actions for violations of TRIPS standards incurred when states address public health crises,⁸⁴ to future action by the Council for TRIPS. The outcome of these consultations is unpredictable at the time of writing.

A more subtle political message underlying both the final Declaration and the negotiations that produced it is that WTO member countries have not surrendered their sovereign power to regulate public health matters under either the TRIPS Agreement or the WTO Agreement as a whole. Thus, the Ministers "agree that the TRIPS Agreement does not and should not prevent Members from taking measures to protect public health."⁸⁵ While maintaining their commitment to the TRIPS Agreement, the Ministers further affirm that it "can and should be interpreted and implemented in a manner supportive of WTO Members' right to protect public health and, in particular, to promote access to medicines for all."⁸⁶

These and other provisions suggest that in the event of an unavoidable conflict between the TRIPS norms and overriding needs of public health in any given member country, the WTO Appellate Body and relevant dispute-settlement panels might find themselves obliged to defer to local measures that derogated from the former in order to regulate the latter, so long as such measures appeared objectively reasonable and necessary.⁸⁷ Indeed, a prolonged failure to resolve these tensions could undermine the credibility of the WTO and convert public health into a kind of deadly "third rail" issue as even developed country negotiators come to appreciate the potential political costs at home of surrendering too much sovereignty to the WTO in this field.

⁸⁴ See Paragraph 6 of the Doha Declaration on the TRIPS Agreement and Public Health, Communication from the United States, Council for Trade-Related Aspects of Intellectual Property Rights, IP/C/W/340, 14 Mar. 2002.

⁸⁵ Doha Declaration on Public Health, *supra* note 36, par. 4.

⁸⁶ *Id.*; see also *id.* par. 5(a) (stressing the need to interpret TRIPS provisions in light of the Agreement's objectives and principles).

⁸⁷ *Cf.* WTO Agreement, *supra* note 36, Annex 1A: Multilateral Agreements on Trade in Goods [hereinafter GATT 1994], 33 I.L.M. 28 (1994), art. XX. *But see* TRIPS Agreement, *supra* note 36, art. 8.1 (allowing "measures necessary to protect public health..." that "are consistent with the provisions of this Agreement").

II. United States Law and Practice

As previously observed, foreign and international law tend to subdivide the compulsory licensing of patented inventions into four broad categories, viz., abuse, public interest, government use, and dependent patents. However, United States practice fits imperfectly within this framework.

A. Introduction

To begin with, most countries consider a patentee's anticompetitive practices as a form of abuse.⁸⁸ In the United States, however, anticompetitive practices amounting to antitrust violations (competition law violations) are treated differently from anticompetitive practices that amount only to misuse of patents "but do not rise to the level of technical violations of antitrust law."⁸⁹

In addition, all European countries, and many other countries as well, have enacted statutes authorizing compulsory licensing of patented inventions in favor of third parties when the public interest in so doing is deemed to outweigh both the private interest of the patentee and the general public interest in stimulating technical innovation.⁹⁰ It is not clear from our materials that South Africa has enacted such a

⁸⁸ See BODENHAUSEN, *supra* note 19 at 71:

Among the abuses referred to [in art. 5A of the Paris Convention for the Protection of Industrial Property (1967)], *failure to work the patented invention* – which failure, according to paragraph (4), includes *insufficient* working – is cited as an example. Other examples of abuses may exist in cases where the owner of the patent, although working the patent in the country concerned, refuses to grant licenses on reasonable terms and thereby hampers industrial development, or does not supply the national market with sufficient quantities of the patented product, or demands excessive prices for such product. The member states are free to define these and other abuses.

⁸⁹ See Reichman with Hasenzahl, *Nonvoluntary Licensing of Patented Inventions: The Law and Practice of the United States*, Draft 2003, 60-71 [hereinafter Reichman with Hasenzahl, *Law and Practice of the U.S.*].

⁹⁰ See, e.g., JEAN-MARC SALAMOLARD, *supra* note 1 at 31-39 (stressing the "exceptional nature" of such licenses in practice and the broad extent to which "each state, according to its own interests and philosophy, defends its own conception of the public interest" (at 37)); Cole M. Fauver, *Comment: Compulsory Patent Licensing in the United States: An Idea Whose Time Has Come*, 8 NORTHWESTERN J. INT'L L. & BUS. 666, 667 [hereinafter Fauver, *Comment*] (stating that a general compulsory licensing power that "enables the government granting the patent to force the patentee to license the invention" to another individual or company "if the government does not approve of the patent's use" is "common throughout the world, but virtually absent in the United States"). See also Paul Demaret, *Industrial Property Rights, Compulsory Licenses and the Free Movement of Goods Under Community Law*, 18 IIC 161, 162-165 (1987) (stressing that such licenses may be either of an individual character (when third-party must apply for it and the license is restricted to that party) or of a general character (when the national authority subjects a type or

statute. Similarly, the United States has never adopted a general purpose public-interest compulsory licensing provision. The United States has, however, adopted special purpose compulsory licensing on public interest grounds that are relevant to developing countries in general, and to South Africa in particular.⁹¹ Some United States Courts have also invoked equitable powers to impose public-interest compulsory licenses in special circumstances.⁹² These matters are discussed below.

All countries are thought to possess the inherent power to seize patents for government use either under their sovereign rights of eminent domain or under a theory of “reserved rights,” i.e., that governments issuing patents inherently reserve the power of government use.⁹³ Most English-speaking countries have statutes expressly authorizing government use of patented inventions, although South Africa may be an exception. Whether statutorily provided or not, all states have the power of eminent domain in this regard, as implicitly recognized in article 31(b) of the TRIPS Agreement.⁹⁴ Because the United States extensively invokes compulsory licenses for government use,⁹⁵ its practices are discussed below.

Finally, virtually all countries, except the United States, allow compulsory licensing of so-called “dependent patents” to ensure that a dominant patent holder cannot block progress by preventing a second comer from obtaining and marketing an important, patentable improvement on a pre-existing invention.⁹⁶ Although the United States is virtually alone in not imposing compulsory licenses for this purpose, the South African legislation expressly recognizes this ground, in conformity with article 31(l) of the TRIPS Agreement.⁹⁷ The better view characterizes “dependent patents” as a subject of public-interest compulsory licenses, and it is so treated in this report.

The rest of this report will concentrate on the rubrics discussed above, with particular reference to United States law and practice. The material is subdivided as follows:

class of patents to a regime of mandatory licensing). All E.U. member states had provisions dealing with compulsory licenses as of the late 1980s, as did the Luxemburg Patent Convention. Demaret, *supra* at 163.

⁹¹ See Reichman with Hasenzahl, *Law and Practice of the U.S.*, *supra* note 88, at 99-100.

⁹² See *id.* at 89-91.

⁹³ See e.g., Daniel R. Cahoy, Treating the Legal Side Effects of CIPRO: A Reevaluation of Compensation for Government Takings of Patent Rights, 40 AM. BUS. L. J. 125, 146-47 (2002); Reichman with Hasenzahl, *Law and Practice of the U.S.*, *supra* note 88, at 101-09.

⁹⁴ See TRIPS Agreement, *supra* note 36 art 31(b). See also Reichman with Hasenzahl, Historical Perspective, *supra* note 1 at 10-11; J. Watal, *supra* note 21, at 320.

⁹⁵ See Reichman, *Law and Practice of the U.S.*, *supra* note 88, at 104-36.

⁹⁶ See, e.g. BODENHAUSEN, *supra* note 19, at 70.

⁹⁷ See South African Patents Act of 1978 §55; TRIPS Agreement, *supra* note 36 art 31(l).

- 1) Antitrust violations
- 2) Misuse (“Abuse”)
- 3) Public-Interest Compulsory Licenses
- 4) Government Use.

B. Compulsory Licensing to Remedy Antitrust Violations

In the United States, compulsory licenses are not generally available to remedy abuses of the patentee’s exclusive rights (which are termed “misuse” in domestic law), unless the alleged misuse rises to the level of a violation of the antitrust laws. However, other remedies—especially that of non-enforcement of the patentee’s exclusive rights—are used to correct misuses of exclusive rights, and developing countries may learn much from this practice.⁹⁸ In this section, we discuss only antitrust violations (which may attract compulsory licenses), while, lesser forms of misuse (including anticompetitive behavior) are treated separately below.

1. Intersection of Antitrust and Intellectual Property Laws: General Considerations

Both intellectual property rights and antitrust law enforcement encourage innovation. As a former Chairman of the Federal Trade Commission, Robert Pitofsky, phrased it, intellectual property rights “subsidize investments in innovation” by granting powerful but time-limited exclusive rights, while antitrust enforcement “ensures that firms compete, and by competing, seek new roads to innovation. It also prevents dominant firms from harming or retarding innovation.”⁹⁹

The Antitrust Division of the Department of Justice is empowered to bring an action in either civil or criminal federal district court,¹⁰⁰ although criminal trials are usually only instituted when there is an allegation of a *per se* violation of section 1 of the

⁹⁸ See Reichman with Hasenzahl, *Law and Practice of the U.S.*, *supra* note 88, at 60-68.

⁹⁹ Robert Pitofsky [then Chairman, U.S. Federal Trade Commission], *Antitrust and Intellectual Property: Unresolved Issues at the Heart of the New Economy*, 16 BERKLEY TECH. L.J. 535 (2001) [hereinafter Pitofsky].

¹⁰⁰ See Peter D. Rosenberg, PATENT LAW FUNDAMENTALS §16.05 (1980, revised June 1998) [hereinafter P. Rosenberg] (stating that the Antitrust Division of the Department of Justice is primarily responsible for the enforcement of these acts, although the Federal Trade Commission (“FTC”) is also empowered to act with regard to antitrust violations.)

Sherman Act, especially price fixing and bid-rigging.¹⁰¹ Remedies for civil actions available to the Justice Department include seeking injunctions to prevent actual or threatened behavior from continuing in the future;¹⁰² forced divestiture of assets (including patent rights);¹⁰³ nonvoluntary licensing of patents, trademarks, trade secrets, or know-how to competitors at reasonable royalty rates or in some cases with no royalties,¹⁰⁴ or non-enforcement of the patent holder's exclusive rights.

According to Scherer and Watal, compulsory licenses “covering an estimated 40 to 50 thousand patents” had been issued in roughly one hundred antitrust cases by the end of the 1950s.¹⁰⁵ These licenses were applied to “AT&T's basic transistor concept patents, IBM's computer and tabulating card machine patents, General Electric's fluorescent and incandescent lamp patents, Du Pont's nylon patents, and Eastman Kodak's color film processing patents.”¹⁰⁶ Later decisions led to the compulsory “licensing of Xerox's plain paper copying machine patents, the tranquilizer Meprobamate, synthetic steroids, the antibiotic Griseofulvin, Cytokine biopharmaceutical patents owned by Novartis and Chiron, and the 9-AC cancer drug patent rights assembled under the merger of Pharmacia AB with Upjohn.”¹⁰⁷ Most of these compulsory licenses required the payment of reasonable royalties, which in antitrust cases tend to be low or modest, and some were royalty free.¹⁰⁸

The FTC also may institute a civil proceeding under its enabling legislation, the Federal Trade Commission Act, in which case it becomes prosecutor and tribunal.¹⁰⁹ The two agencies have “similar responsibilities, and . . . have worked out a *modus vivendi* for

¹⁰¹ See David Bender, *Interface of Intellectual Property and Competition Law: The U.S. Experience*, in PATENT LAW OF CANADA 323, at 327 [hereinafter Bender].

¹⁰² See 15 USC §§25-26 (2002).

¹⁰³ This occurs when the Department of Justice believes that the structural change will remedy the harm to competition and prevent it from occurring in the future. When the Justice Department brings a civil action, it does not seek damages, unless the government itself has been injured. In criminal actions, the Department will seek fines or imprisonment. See Bender, *supra* note 100, at 327.

¹⁰⁴ HERBERT HOVENKAMP, MARK D. JANIS & MARK A. LEMLEY, IP AND ANTITRUST, AN ANALYSIS OF ANTITRUST PRINCIPLES APPLIED TO INTELLECTUAL PROPERTY LAW [hereinafter IP AND ANTITRUST] (2002) §6.5(a) (updated 2003) (citing authorities).

¹⁰⁵ F.M. Scherer and Jayashree Watal, *Post-TRIPS Options for Access to Patented Medicines in Developing Nations*, 5 Journal of International Economic Law 913 (2002) [hereinafter Scherer & Watal], at 916-917.

¹⁰⁶ *Id.*

¹⁰⁷ *Id.*

¹⁰⁸ *Id.* at 923 (stating that in “the more typical cases, royalty rates have been modest.”).

¹⁰⁹ See *FTC v. Cement Inst.*, 333 U.S. 683 (1948) (holding that the Federal Trade Commission Act empowers the FTC to take action in antitrust matters).

determining which conduct is within the domain of each agency.”¹¹⁰ Finally, section 4 of the Clayton Act permits any person who suffered injuries of the kind that the antitrust laws were meant to prevent to file private civil actions against the perpetrators and these private plaintiffs may seek to recover three times compensatory damages (“treble damages”) in addition to injunctive or other equitable relief.¹¹¹

From a regulatory perspective, the availability of nonvoluntary licensing has increased the tendency to favor consent judgments to remedy antitrust concerns, particularly in the context of mergers and acquisitions, a tendency that became pronounced in the early 1990s.¹¹² Such judgements result from voluntary agreement among the parties, which the court enforces as equally binding on the government and private parties, provided that there is no change of circumstances.¹¹³

Approximately 75-80 per cent of all civil cases handled by the Antitrust Division of the Department of Justice (DOJ) are settled without engaging in litigation, which allows the defendant to avoid the cost of litigation and allows the government to secure

¹¹⁰ Bender, *supra* note 100 at 327.

¹¹¹ See 15 U.S.C. §26 (2002); Bender, *supra* note 100, at 327 (noting that some states also permit private actions under their local antitrust statutes). A private plaintiff, however, must show more than actual or threatened violation of the antitrust laws, which suffices for the government; he must show a direct or threatened injury to itself arising from the defendant’s conduct. See IP AND ANTITRUST, *supra* note 103, §6.4(c). A plaintiff who meets this burden may seek injunctive relief under the general principles governing the issuance of injunction by courts of equity. While these principles typically condition injunctions on a showing that damages are inadequate, plaintiffs who recover damages in these cases may also seek injunctions to remedy threatened future antitrust violations. *Id.* §§6.4(b).

¹¹² See WILBUR L. FUGATE, FOREIGN COMMERCE AND THE ANTITRUST LAWS §14.2 (1996, updated 2001) [hereinafter W. FUGATE].

¹¹³ See *id.* The Supreme Court summarized the legal effect of consent judgments in *United States v. Armour Co.*:

Consent decrees are entered into by parties to a case after careful negotiation has produced agreement on their precise terms. The parties waive their right to litigate the issues involved in the case and thus save themselves the time, expense, and inevitable risk of litigation. Naturally the agreement reached normally involves a compromise... Thus the decree itself cannot be said to have a purpose; rather the parties have purposes, generally opposed to each other, and the resultant decree embodies as much of those opposing purposes as the respective parties have the bargaining power and skill to achieve. For these reasons, the scope of a consent decree must be discerned within its four corners, and not by reference to what might satisfy the purposes of one of the parties to it.

See *U.S. v. Armour Co.*, 402 U.S. 673, 681-682 (1971).

prompt relief and to conserve resources for other matters.¹¹⁴ Many of today's most frequently granted nonvoluntary licenses are part and parcel of these consent decrees, whether they emanate from DOJ, from the Federal Trade Commission (FTC), or from the courts.¹¹⁵ On the whole, however, the authorities today may often seek to avoid a compulsory license, even in cases where a monopoly is alleged to exist, because of the supposed "adverse effects of such a regime on innovation."¹¹⁶

Apart from mergers and acquisitions, proving that any particular exercise of an intellectual property right amounts to an antitrust violation is doubly difficult. First, patents are by nature limited monopolies, while one cardinal requirement of an antitrust violation is "monopolization" or an attempt to monopolize.¹¹⁷ Clearly, patentees cannot violate the antitrust laws merely by virtue of having acquired a monopoly authorized by the state; they must use that legal monopoly in some way that independently violates the antitrust laws. Second, the legal monopolies of the patent law are granted to stimulate technical innovations that might not otherwise have come to light, and the high policy of the state to promote inventions affords patentees some additional room in which to exercise their exclusive rights without interference from the government. In other words, borderline anticompetitive conduct in the exercise of a patentee's exclusive rights – if not a per se violation of the antitrust laws – may survive challenge on the grounds that it reasonably promotes the goals of the patent law (including investment in research and development and the stimulation of economically efficient applications of scientific discoveries to industry) without unreasonably or unduly restraining trade.¹¹⁸

For these and other reasons, proving that any specific use of a patented invention or process amounts to an antitrust violation entails a high burden of proof. Even when such a violation is proved, moreover, courts and regulators may shy away from imposing compulsory licenses as a remedy, either on ideological grounds (because they believe such licenses to be inefficient) or on capability grounds (because they dislike setting the terms of the royalty). These attitudes vary with the times and tend to ignore studies that

¹¹⁴ See W. FUGATE, *supra* note 111, at §14.2. The 1974 Antitrust Procedures and Penalties Act established a public interest criteria for approval of consent decrees by the court, and it required publication of all proposed decrees in the Federal Register sixty days prior to the judgment, with the opportunity for public comment. See Act of 21 Dec. 1974, P.L. 93-528, §2, 88 Stat. 1706 (codified as amended at 15 U.S.C. §16 (2002)); see also W. FUGATE, *supra* note 111, §14.2.

¹¹⁵ See Reichman with Hasenzahl, *Law and Practice of the U.S.*, *supra* note 88, at 60-68.

¹¹⁶ IP AND ANTITRUST, *supra* note 103.

¹¹⁷ Sherman Act, Act of 2 July 1890, ch. 647, §1, 26 Stat. 209 (codified as amended at 15 U.S.C. §§1,2 (2002)).

¹¹⁸ 15 U.S.C. §2 (2002). See Bender, *supra* note 100, at 325.

detect no adverse effects from the numerous compulsory licenses used to remedy antitrust violations in the 1950s and the 1960s.¹¹⁹

From a broader perspective, the role of nonvoluntary licensing in United States patent law cannot be detached from the attitudes of policymakers towards patents in general, which have varied significantly over time. In the 1950s, for example, a pro-competitive outlook prevailed in both Congress and the federal appellate courts, and judicial hostility to patents in this period was legendary. Not surprisingly, many of the leading cases that imposed nonvoluntary licensing either to remedy misuses of the patentee's exclusive rights or to remedy exercises of those rights that constituted antitrust violations date to this period of antipathy to patents in general.¹²⁰

The pattern of relatively weak patent protection coupled with relatively strong antitrust enforcement, which lasted until the 1970s, has been replaced, especially from the 1990s on, with a regime of relatively strong patent protection and relatively weak enforcement of competition law.¹²¹ This latter pattern engenders concerns about the scope and breadth of patent protection which could discourage follow-on research, and about the practice of cross-licensing which often appears to emulate anti-competitive effects associated with patent pools in the past.¹²² Some argue that this trend towards strong patent protection stems from the creation of the Federal Circuit in 1982, which has exclusive jurisdiction of appeals from the United States Patent and Trademark Office (USPTO) and of appeals from the federal district courts in civil actions for patent infringement.¹²³ The result has been an invigoration of the patent law, as the Federal Circuit has been more likely to find a patent valid and infringed,¹²⁴ “thus enhancing the value of a patent as protection for an innovation.”¹²⁵

¹¹⁹ See, e.g., F.M. Scherer, *The Economic Effects of Compulsory Patent Licensing* (1977), reprinted in F.M. SCHERER, *COMPETITION POLICY, DOMESTIC AND INTERNATIONAL* 327-42 (2000); Scherer & Watal, *supra* note 104.

¹²⁰ See Reichman, *Law and Practices of the U.S.*, at 63-64. In one famous decision in this period, Supreme Court Justice Jackson declared that “the only patent that is a valid patent is one which this Court has not been able to get its hands on.” *Jungersen v. Ostby & Barton Co.*, 335 U.S. 560, 572 (1949) (Jackson, J., dissenting).

¹²¹ See Susan De Santi [Director of Policy Planning, Federal Trade Commission], *The Intersection of Antitrust and Intellectual Property Issues: A Report from the FTC Hearings*, remarks before the Conference on Antitrust for High-Tech Companies Business Development Associates, San Francisco, 2 Feb. 1996, available at <<http://www.ftc.gov/speeches/other/desanti1.htm>> [hereinafter Remarks of Susan De Santi]. According to Ms. De Santi, Professor John Barton “suggested that fundamental changes in the PTO’s issuance of patents and the Federal Circuit’s enforcement of patents have led to increasingly broad patents and to certain patent claims that cover basic research tools.” *Id.* (citing testimony of John Barton).

¹²² See Remarks of Susan De Santi, *supra* note 120.

¹²³ See *id.* (citing testimony of John Barton).

¹²⁴ See Remarks of Susan De Santi, *supra* note 120 (citing written comments of Cecil D. Quillen, Jr. (6 Dec. 1995)); see also Jon F. Merz & Nicholas M. Pace, *Trends in Patent Litigation: The Apparent Influence of Strengthened Patents Attributable to the Court of Appeals of the Federal Circuit*, 76 J. PATENT & TRADEMARK OFFICE SOCIETY 579 (Aug. 1994). Quillen asserted that as of 1993, “something like two thirds or more of patents which are litigated now are found to be valid and infringed,” whereas a decade

The Federal Circuit has also conveyed a marked antipathy toward the judicial doctrine of patent misuse. With the help of some ambiguous legislation enacted in 1988,¹²⁶ it has tended to blur the distinction between “misuse” as a defense to patent infringement actions and “misuse” as anticompetitive conduct.¹²⁷

On the whole, antitrust law in the United States is complex, and its application to intellectual property rights is still more complex and very controversial to boot. These complications are further magnified by changing or cyclical attitudes toward the interface between the two disciplines, which tend to oscillate from one extreme position to another over time. As former FTC Chairman Pitofsky recently observed, “[s]erious . . . problems arise when either regime - intellectual property protection or antitrust - is accorded disproportionate weight.”¹²⁸

Everyone agrees that intellectual property rights may sometimes be used “to obtain unwarranted market power or [to] interfere with competition in a variety of ways, and antitrust law properly addresses conduct of that sort.”¹²⁹ However, the history of this intersection “has been characterized by cycles of over- and under- enforcement, in which first antitrust and then intellectual property is on the ascendancy while the other recedes into the background.” This cyclical movement “has kept the two laws from settling into a healthy balance.”¹³⁰

Since 1981, the pendulum has swung back to strongly favor the rights of patent owners. In the 1980s, the Reagan Administration rejected prior restrictive rules on intellectual property licensing and drastically reduced antitrust enforcement generally. In 1988, Congress passed the Patent Misuse Reform Act, which further attempted to restrict the bases for invoking patent misuse as an actionable antitrust violation.¹³¹

Whether the pendulum will once more swing away from the primacy of intellectual property rights and towards antitrust remains to be seen. In the 1990s, both the Antitrust Division of the Department of Justice and the FTC expressed renewed

before “something like two thirds...were found invalid.” Remarks of Susan De Santi, *supra* note 120 (quoting written comments of Cecil D. Quillen, Jr.).

¹²⁵ Remarks of De Santi, *supra* note 120 (citing testimony of Max Frankel).

¹²⁶ See Patent Misuse Reform Act, *codified at* 35 U.S.C. §§271(d) (4)-(5) (1988).

¹²⁷ See Reichman with Hasenzahl, *Law and Practices of the U.S.*, at 66.

¹²⁸ Pitofsky, *supra* note 98, at 464.

¹²⁹ IP AND ANTITRUST, *supra* note 103, §1.3.

¹³⁰ *Id.*

¹³¹ 35 U.S.C. §§271(d) (4)-(5) (1988); IP AND ANTITRUST, *supra* note 103, §§1-3

interest in these issues, and new Guidelines governing the licensing of intellectual property were disseminated in 1995.¹³² A number of high profile cases in recent years suggest that, in this area, at least, “antitrust was awakening from its period of dormancy.”¹³³ All the same, the “cyclical and political nature of the IP - antitrust interface makes it difficult to know exactly what the law is,”¹³⁴ even for the most authoritative commentators, and any cited cases need to be understood in their historical context.

2. Anticompetitive Practices Involving Intellectual Property Rights

In order for certain behavior to violate the antitrust laws, it must contravene one of the fairly broad antitrust statutes that define prohibited conduct. The primary statutes are typically sections 1 and 2 of the Sherman Act¹³⁵ and section 7 of the Clayton Act.¹³⁶

a. *Types of Action*

Section 1 of the Sherman Act provides in pertinent part that every contract, combination or conspiracy in restraint of interstate or foreign commerce is unlawful.¹³⁷ Section 2 provides that every person who shall monopolize, attempt to monopolize or conspire to monopolize any part of interstate or foreign commerce commits a felony.¹³⁸ “Even today, these two sections remain the most important substantive antitrust statutes.”¹³⁹

In applying section 1 of the Sherman Act, the courts soon held that only contracts that “unreasonably” restrained trade were unlawful, and they distinguished two broad categories of unreasonable behavior for this purpose. In one category, the behavior in question was so pernicious that a court could conclusively deem it to be unreasonable.

¹³² See U.S. DEP’T OF JUSTICE & FEDERAL TRADE COMMISSION, ANTITRUST GUIDELINES FOR THE LICENSING OF INTELLECTUAL PROPERTY (1995), *reprinted in* 4 Trade Reg. Rep. (CCH) ¶13,132 [hereinafter ANTITRUST/IP GUIDELINES].

¹³³ IP AND ANTITRUST, *supra* note 103, §1.3.

¹³⁴ *Id.*

¹³⁵ 15 U.S.C. §§1,2 (2002).

¹³⁶ Clayton Act, Act of 15 Oct. 1914, ch. 323, §7, 38 Stat. 731 (codified at 15 U.S.C. §14 *et seq.* (2002)).

¹³⁷ 15 U.S.C. §1 (2002).

¹³⁸ 15 U.S.C. §2 (2002).

¹³⁹ Bender, *supra* note 100, at 327.

Such “*per se*” violations include contracts to fix prices among competitors, to engage in group boycotts, to allocate customers or territories among competitors, and until recently, to tie the sale of two products together if a certain degree of market power was established.¹⁴⁰

All conduct or contracts not deemed *per se* violations are subject to “the rule of reason.” This test requires an economic analysis of the acts or situation in question, in order to determine if the restraint was justified, especially in terms of efficiency. “If, after a balancing of interests, the contract was deemed pro-competitive or neutral, there was no antitrust violation.”¹⁴¹

Under section 2 of the Sherman Act, courts define monopolization as the willful acquisition or maintenance of monopoly power, as distinguished from the gaining of such power through business acumen or historical accident. Monopoly power, in turn, has been defined as the power to control prices or exclude competitors.¹⁴² A monopolization claim requires identification of the relevant market and proof of market power.

Crucial to any action under either section 1 or 2 of the Sherman Act is the concept of the relevant market. The alleged restraint of trade or act of monopolization must be measured in terms of the relevant market as determined only after an economic analysis of “product cross-elasticities” and other variables.¹⁴³ This analysis yields an estimate of “market share,” an important measure of economic power. The effective market share varies with a judicial estimate of the breadth of the market in question.¹⁴⁴

In addition to market share, courts may also consider such additional indicia of market power as “barriers to entry and potential competition” and “conduct consistent with monopoly power.”¹⁴⁵ If market power has been demonstrated by conduct-based indicia, the investigator must distinguish the mere absence of perfect competition that produces market power from monopoly power as such. This distinction is particularly important in markets where intellectual property rights play an important role. For

¹⁴⁰ See, e.g., Bender, *supra* note 100, at 325.

¹⁴¹ *Id.*

¹⁴² See *id.*

¹⁴³ Technically speaking, “a relevant antitrust market is the smallest group of sales for which the cross-elasticity of both demand and supply are sufficiently low that if a firm were the only seller in that group, it could profitably reduce its output below what it would sell in a competitive market and raise its price above its marginal cost.” IP AND ANTITRUST, *supra* note 103, §102(a). A market is properly defined when it includes all the goods for which there is a substantial substitution effect.

¹⁴⁴ See Bender, *supra* note 100, at 325-26. There are no bright-line rules. The Supreme Court has suggested that a 75 per cent share suffices for monopoly, while the federal appellate courts doubt that a share below 50 per cent can ever amount to market power. IP AND ANTITRUST, *supra* note 103, §102(a).

¹⁴⁵ *Id.* § 10.2(b)(2).

example, the cost advantages conferred by a patent on a patentee do not necessarily give the patentee monopoly power.¹⁴⁶

Even a demonstration of monopoly power does not yet necessarily yield an antitrust violation, because “monopoly” as such is not illegal. Rather, the actionable offense is “monopolization,” which entails “some sort of anti-competitive conduct designed either to acquire or to maintain monopoly power by means other than normal competition.”¹⁴⁷

After passage of the Sherman Act in 1896, Congress subsequently conferred a private right of action for antitrust violations under section 4 of the Clayton Act of 1914.¹⁴⁸ Section 7 of the Clayton Act also provides the basis for regulating acquisitions and mergers that tend substantially to lessen competition or to create a monopoly in any line of commerce in any section of the country.¹⁴⁹ This provision was supplemented by the Hart-Scott-Rodino Act of 1976, which provides detailed pre-merger notification and waiting schemes for specified acquisitions.¹⁵⁰ Congress then invested the Federal Trade Commission (“FTC”), a specialized federal agency, with antitrust jurisdiction (parallel to that of the Department of Justice) with specific regard to “unfair methods of competition in commerce, and unfair or deceptive acts or practices in commerce.”¹⁵¹

b. Specific Applications

In the intellectual property context, there are at least five forms of anticompetitive conduct that may render a monopolist or aspiring monopolist guilty of “monopolization,” viz:

- 1 Invoking government process
- 2 Concerted action
- 3 Predation
- 4 Leveraging
- 5 Mergers and Acquisitions¹⁵²

¹⁴⁶ See *id.* §10.2(b)(3).

¹⁴⁷ *Id.* §10.3(a).

¹⁴⁸ See 15 U.S.C. §15 (2002); Bender, *supra* note 100, at 326.

¹⁴⁹ See 15 U.S.C. §18 (2002); Bender, *supra* note 100, at 326.

¹⁵⁰ See Bender, *supra* note 100, at 526.

¹⁵¹ Federal Trade Commission Act, Act of 26 Sept. 1914, ch. 311, §5, 38 Stat. 719 (codified as amended at 15 U.S.C. §45 (2002)).

¹⁵² IP AND ANTITRUST, *supra* note 103, §10.3(b).

We believe that these rubrics are largely inapplicable to the South African case, with the possible exception of “concerted action.”

(1) Concerted Action

Under general principles of antitrust law, even a monopolist may sometimes act in concert with others to restrict competition. If this occurs between horizontal competitors who refuse to deal with a rival, then it presents the elements of an illicit cartel rather than a monopoly. More typically, concerted action occurs when a dominant firm enters into vertical relationships with customers or input suppliers that appear to restrain the ability of third parties to compete with the monopolist.¹⁵³

In the context of intellectual property rights, allegations of concerted action are usually related to other claims of misuse, such as tying and exclusive dealing arrangements, and the legality of the conduct as a whole has to be evaluated in the light of alleged monopolization by a firm with market power.¹⁵⁴ The misuse of licensing agreements as an antitrust violation is separately examined below.¹⁵⁵

Even when contractual practices related to intellectual property rights do not amount to misuse, these same practices at the hand of a monopolist can raise antitrust issues, including claims of illicit concerted action. Such claims arose, for example, in *United States v. Microsoft*,¹⁵⁶ in which the government accused Microsoft of engaging in anticompetitive contractual practices to maintain its monopoly in copyrighted (not patented) computer operating systems. While some of the challenged contracts that imposed exclusive dealing requirements fit under standard doctrines of misuse, Microsoft also imposed contractual restrictions on the ability of hardware manufacturers to modify the appearance or the operations of the Windows Operating System. Such contracts are not *per se* illegal, but the district court found that the company had used them to maintain its monopoly by making it harder for rivals in the Internet browser market to have their own software installed on new computers.¹⁵⁷

An otherwise legal contractual restriction may thus become anticompetitive conduct when it helps a monopolist acquire or maintain power by means other than competition on the merits.¹⁵⁸ On appeal, the United States Court of Appeals for the

¹⁵³ See IP AND ANTITRUST, *supra* note 103, §10.3(b)(2).

¹⁵⁴ See *id.* at §10.3(b)(2).

¹⁵⁵ See Reichman with Hasenzahl, *Law and Practice of the U.S.*, *supra* note 88, at 55-86.

¹⁵⁶ 87 F. Supp. 2d 30 (D.D.C. 2000) (conclusions); 84 F. Supp. 2d 9 (D.D.C. 1999) (findings and facts).

¹⁵⁷ *Microsoft*, 87 F. Supp. 2d at 30.

¹⁵⁸ See IP AND ANTITRUST, *supra* note 103, §10.3(b)(2).

District of Columbia Circuit found Microsoft's restrictive license provisions regarding modification, and its agreements with Internet access providers and Internet content providers giving favorable treatment of Internet Explorer, to constitute anticompetitive conduct in violation of section 2 of the Sherman Act.¹⁵⁹

In this connection, the Government's proposed settlement of the Microsoft action imposed nonvoluntary licensing on Microsoft. Among the various proposed measures, the settlement agreement thus required Microsoft to license its copyrighted operating system to key computer manufacturers on uniform terms for five years.¹⁶⁰ It also required the company to license any intellectual property to computer manufacturers and software developers that are necessary for them to exercise their rights under the proposed Final Judgement, "including for example, using the middleware protocols disclosed by Microsoft to interoperate with the operating system."¹⁶¹

To implement the nonvoluntary licensing provisions, ancillary measures required Microsoft to disclose to other software developers "the interfaces used by Microsoft's middleware to inter-operate with the operating system," so as to allow developers to create competing products that emulate the company's integrated functions.¹⁶² The Final Judgement also required disclosure of service protocols, to ensure that other non-Microsoft server software can inter-operate with Windows on a personal computer in the same way as Microsoft servers.¹⁶³ The object here is to ensure that "Microsoft cannot use its ...[Personal Computer] operating system monopoly to restrict competition among servers."¹⁶⁴

(2) *Non-Use and Refusal to Deal*

(a) *The General Rule Allowing These Practices*

Unlike the laws of many other countries, United States law does not normally oblige an intellectual property owner to exercise his rights at all, nor are there grounds for

¹⁵⁹ *United States v. Microsoft*, 253 F.3d 34 (D.C. Cir. 2001) (*en banc*) (upholding the allegation that Microsoft had unlawfully maintained its monopoly in computer-based operating systems by excluding competing software products known as middleware that posed a nascent threat to the Windows operating system).

¹⁶⁰ See Department of Justice, "Department of Justice and Microsoft Corporation Reach Effective Settlement on Antitrust Lawsuit," press release, 2 Nov. 2001 [hereinafter DOJ Press Release]; *United States v. Microsoft Corp.*, 231 F.Supp.2d 144, 189-190 (D.D.C. Nov. 12, 2002); *United States v. Microsoft Corp.*, No. 98-1232 (CKK), 2002 U.S. Dist. LEXIS 22864 (D.D.C. Nov. 12, 2002) (Final Judgement).

¹⁶¹ DOJ Press Release, *supra* note 159.

¹⁶² *Id.*

¹⁶³ *United States v. Microsoft Corp.*, No. 98-1232 (CKK), 2002 U.S. Dist. LEXIS 22864 (D.D.C. Nov. 12, 2002), at *10.

¹⁶⁴ DOJ Press Release, *supra* note 159.

claiming misuse or an antitrust violation simply for failure to use or to license patents or copyrights.¹⁶⁵ A patentee's "right" to refuse to deal authorizes him to discriminate among licensees and immunizes him from a contrary obligation.¹⁶⁶ The usual rationale is that a rule of non-discrimination would discourage exclusive licensing, "which is often the most efficient means of extracting value from an intellectual property right."¹⁶⁷

One should note that South African law treats both a refusal to deal and local non-working as potential abuses.¹⁶⁸ This is consistent with foreign and comparative law generally. For example, Bodenhausen notes that, besides failure to work, states may deem it abusive if the patent owner

"refuses to grant licenses on reasonable terms and thereby hampers industrial development, or does not supply the national market with sufficient quantities of the patented product or demands excessive prices for such product. The member states are free to determine these and other abuses."¹⁶⁹

Bodenhausen's thesis remains consistent with articles 8(2), 40, and 31(k) of the TRIPS Agreement. However, if South Africa were also to require local working of HIV-related patents, this would raise the question of whether the exclusive right to import under articles 27-28 of TRIPS had trumped the state's right to treat a failure to work the patent locally as an abuse under article 5(A)(2) of the Paris Convention. As previously observed, Brazil successfully invoked local nonworking against Merck, and the U.S. declined to pursue its objection at the WTO. The issue nonetheless remains unsettled.

(b). Exceptions to the General Rule

Even today, there are some well-established exceptions to the general rule in the United States that tolerates non-working and refusals to deal, but it must be emphasized at the outset that these exceptions presuppose proof that a given defendant *has obtained or is likely to obtain monopoly power*. As the leading treatise puts it, "[i]n the absence of monopoly power, there is no set of circumstances in which a truly unilateral refusal to

¹⁶⁵ See, e.g., *Hartford-Empire Co. v. United States*, 323 U.S. 386, 432-33 (1945); *Continental Paper Bag Co. v. Eastern Paper Bag Co.*, 210 U.S. 405, 427-30 (1908); *Orson Inc. v. Miramax Film Corp.*, 189 F.3d 377 (3d Cir. 1999).

¹⁶⁶ Cf., e.g., *Genentech, Inc. v. Eli Lilly & Co.*, 998 F.2d 931, 949 (Fed. Cir. 1993) (patentees must have the power to select exclusive licensees as they see fit).

¹⁶⁷ IP AND ANTITRUST, *supra* note 103, §13.2 ("Economic theory encourages licensing because it allows the market to transfer the intellectual property right to the most productive user of that right").

¹⁶⁸ See South African Patent Act §§ 56(2)(a), (d).

¹⁶⁹ BODENHAUSEN, *supra* note 19, at 71.

license can violate the antitrust laws.”¹⁷⁰ Given a showing of monopoly power, these exceptions include the so-called “essential facilities” doctrine; a refusal to license that facilitates monopolization; a duty to continue dealing; a refusal to deal that over-extends the scope of intellectual property rights; and conditional or concerted refusals to deal.

Under each of these rubrics, circumstances may, in principle, give rise to a duty to license. All of these exceptions ought to be of intrinsic interest to developing countries, even when these countries already subscribe to norms that tend to regard non-use or refusals to deal as *prima facie* evidences of abuse.

i. Essential Facilities Doctrine

General antitrust law recognizes that “certain monopolies inherently give rise to a duty to deal fairly with competitors, or at least a duty to continue a relationship once it has begun. Under this doctrine, *the monopoly owner of an essential facility for competition may be forced to give access to that facility to competitors on reasonable and non-discriminatory terms.*”¹⁷¹ In such cases, it is not conduct that violates the antitrust law so much as status, i.e., ownership and exercise of the facility in a way that damages competitors who rely upon it.

An example that leading commentators draw from general antitrust law is the case of a group of railroads who own a key bridge over a river and the adjacent rail yard, and who deny use of these facilities to competitors. A more recent example was the refusal of Bell Telephone System (before its breakup) to allow MCI to connect its long-distance calls to Bell’s local exchanges.¹⁷²

The “essential facilities” doctrine remains controversial, its availability is subject to numerous legal conditions,¹⁷³ and even those scholars who favor its continued validity usually want it sparingly applied in practice.¹⁷⁴ The application of this doctrine to

¹⁷⁰ IP AND ANTITRUST, *supra* note 103, §13.3(a).

¹⁷¹ IP AND ANTITRUST, *supra* note 103, §13.3(c) (emphasis supplied).

¹⁷² *See id.* (citing authorities).

¹⁷³ A four-part test has been established in some jurisdictions, viz:

- (1) control of the essential facility by a monopolist;
- (2) competitor cannot practically or reasonably duplicate the essential facility;
- (3) the competitor has been denied use of the facility;
- (4) that facility can feasibly be provided to the competitor.

MCI Comm. Corp. v. AT&T, 708 F.2d 1081 (7th Cir. 1983). Commentators suggest that a fifth factor is implicitly applied, namely, that “withholding an essential facility is illegal only if it has the effect of foreclosing competition in the downstream market, and therefore of helping the defendant to acquire or maintain a monopoly in that market.” IP AND ANTITRUST, *supra* note 103, §13(c)(1).

¹⁷⁴ *See, e.g.*, Mark A. Lemley, *Antitrust and the Internet Standardization Problem*, 28 CONN. L. REV. 1041, 1085-1086 (1996).

intellectual property rights then becomes doubly controversial and problematic. Whereas the owner of such rights is normally entitled to use or license them as he sees fit, the essential facilities doctrine leads to a general obligation to license all comers.

Nevertheless, the growing complexity of intellectual property transactions in some fields, such as computer software, has elicited academic discussion of a potential new role for this doctrine,¹⁷⁵ and efforts to use it to induce compulsory licensing were made in some recent intellectual property cases. In one, a district court's finding that Intel's intellectual property rights in chip architecture amounted to an essential facility was subsequently reversed by the Court of Appeals for the Federal Circuit.¹⁷⁶ In another, Microsoft was not obliged to incorporate a disk caching program into its Windows '95 Operating System once Microsoft had solved the problems with its system that this company had been correcting, because "even monopolists may improve their products" and could "lawfully decline to reveal advances in technology."¹⁷⁷ In a third, a federal district court held that there was a genuine issue of fact as to whether a copyrighted telephone directory constituted an essential facility because competitors needed access to the information it contained in order to compete.¹⁷⁸

Some reputable commentators argue that the essential facilities doctrine should never be applied to intellectual property rights except in "the most unusual circumstances."¹⁷⁹ These claims rest on efficiency and incentive arguments, including the usual complaints about the difficulty of determining reasonable prices and conditions under compulsory licenses, which were criticized above.

Whatever the merits of these arguments in developed economies, a case might logically be made for greater use of this doctrine in developing countries, on fairness grounds,¹⁸⁰ especially where local competitors demand "a continuation of privileged access to a monopolist's technology" because they have "built a market in goods or services complementary to or downstream from that particular technology."¹⁸¹ Moreover, even experts who are generally skeptical about applying the essential facilities

¹⁷⁵ See, e.g., David McGowan, *Regulating Competition in the Information Age: Computer Software as an Essential Facility under the Sherman Act*, 18 HASTINGS COMM. & ENT. L.J. 771 (1996).

¹⁷⁶ *Intergraph Corp. v. Intel Corp.*, 3 F. Supp. 2d 1255 (N.D. Ala. 1998), *rev'd*, 195 F.3d 1346, 1356-59 (Fed. Cir. 1999).

¹⁷⁷ *Aldridge v. Microsoft Corp.*, 995 F. Supp. 728 (S.D. Tex. 1998).

¹⁷⁸ *Bellsouth Advertising v. Donnelly Information*, 719 F. Supp. 1551 (S.D. Fla. 1988), *rev'd on other grounds*, 999 F.2d 1436 (11th Cir. 1993) (*en banc*).

¹⁷⁹ IP AND ANTITRUST, *supra* note 103, §13.3(c)(2).

¹⁸⁰ Cf. e.g., Eleanor Fox, *Trade, Competition, and Intellectual Property – TRIPS and Its Antitrust Counterparts*, 29 VAND. J. TRANSNAT'L L. 481 (1996) (suggesting that developing countries may reasonably choose antitrust options that promote fairness over efficiency in certain circumstances).

¹⁸¹ IP AND ANTITRUST, *supra* note 27, §13.3(c)(2) (criticizing such arguments).

doctrine to intellectual property rights recognize that it may be needed in some situations, and statutes may sometimes require a similar result.¹⁸²

ii. Refusal to License in Support of Monopolization

While a unilateral refusal to deal is generally not actionable as an abuse under United States antitrust law for the reasons discussed earlier, a monopolist who refuses to deal in order to unduly strengthen or enhance his market power may incur liability. However, this claim in connection with the exercise of intellectual property rights elicits skepticism, because such rights necessarily entail a power to exclude.¹⁸³ Even so, claims that a refusal to deal facilitates monopolization in ways that exceed the scope of the relevant intellectual property rights have increasingly cropped up in recent cases, and different appellate jurisdictions take different approaches to resolving them.

The United States Court of Appeals for the Federal Circuit will almost never question a refusal to license patented inventions or copyrighted works, even when it drives third parties who might perform after-market services out of business.¹⁸⁴ Other jurisdictions are less rigid, however. For example, the United States Court of Appeals for the First Circuit was more willing to scrutinize a denial of access to needed diagnostic software in order to maintain after-market servicing than was the Federal Circuit in an analogous case; but the presumption of legality conferred by the intellectual property rights controlled the outcome in both cases.¹⁸⁵ In still another similar case concerning after-market sales and servicing of Kodak photocopiers, the United States Court of Appeals for the Ninth Circuit actually held that a unilateral refusal to license intellectual property violated the antitrust laws where the competitors had been cut off after years of coexistence with Eastman Kodak and where claims based on the intellectual property rights were deemed pretextual.¹⁸⁶

While the precedents discussed above clearly reveal the deference shown to intellectual property owners in the United States, there is no reason to assume that an equally deferential or protectionist approach would benefit developing countries. In those countries, fairness and the ability of local firms to enter markets may legitimately outweigh concerns about incentives to innovate, at least until per capita GDP reaches fairly high levels.¹⁸⁷ Courts in developing countries, for example, might justifiably hold

¹⁸² See *id.* §13.3(c)(3) (citing Telecommunications Act of 1990).

¹⁸³ See, e.g., *Abbott Labs v. Brennan*, 952 F.2d 1346, 1354 (Fed. Cir. 1991) (market power under intellectual property rights not actionable unless coupled with violations of §2 of the Sherman Act).

¹⁸⁴ See, e.g., *In re Independent Service Organizations Antitrust Litigation*, 203 F.3d 1322 (Fed. Cir. 2000) (known as the *Xerox* decision); see also *Intergraph Corp. v. Intel Corp.*, 195 F.3d 1346 (Fed. Cir. 1999).

¹⁸⁵ See, e.g., *Data General v. Grumman Systems Support*, 36 F.3d 1147 (1st Cir. 1994).

¹⁸⁶ See *Image Technical Services v. Eastman Kodak*, 125 F.3d 1195 (9th Cir. 1997).

¹⁸⁷ See, e.g., KEITH MASKUS, *INTELLECTUAL PROPERTY RIGHTS IN THE GLOBAL ECONOMY* (2000) [hereinafter K. MASKUS]; J. H. Reichman, *Taking the Medicine, with Angst: An Economist's View of the TRIPS Agreement*, 4 J.I.E.L. 795 [hereinafter Reichman, *Review of MASKUS*].

refusals to deal actionable where they cut off established after-market services without cause, as occurred in some of the cases mentioned above.¹⁸⁸

Even in the United States, moreover, once market power has been established, courts will strictly scrutinize the anticompetitive effects of any refusals to deal that concern acts that fall outside the legitimate scope of the underlying intellectual property rights at issue. For example, in *United States v. Microsoft*,¹⁸⁹ the district court found that certain contractual restrictions forbidding computer hardware manufacturers from introducing their own boot-up screen to the Windows Operating System or from modifying the appearance of the Windows desktop by removing the Internet Explorer icon were not derived from or immunized by the exclusive rights that its copyrights otherwise conferred on Microsoft. This reasoning was affirmed by the United States Court of Appeals for the District of Columbia Circuit, sitting *en banc*, which rejected Microsoft's claims of "an absolute and unfettered right to use its intellectual property as it wishes."¹⁹⁰

One must also distinguish unilateral refusals to deal, which are presumptively legal, especially in the exercise of intellectual property rights, from conditional or concerted refusals to deal, as where intellectual property owners agree among themselves to constrain their pricing or output decisions.¹⁹¹ Among the most common examples of the latter are cases of tying arrangements, patent pools and cross-licenses, grant back clauses, and field-of-use restrictions.¹⁹²

Certain refusals to deal may produce adverse effects on other parties' incentives to innovate, which can trigger antitrust liability. However, intellectual property owners in the United States are not generally liable for claims of "monopoly pricing" or "excessive pricing," on a theory that the purpose of such rights is to enable entrepreneurs to recover the costs of research and development. Even in cases where the intellectual property right is found to confer market power, "the power to charge a monopoly price is ... part of the point of the intellectual property system."¹⁹³ Other countries do, however,

¹⁸⁸ Even in the United States, courts are sometimes more willing to impose antitrust liability on monopolists who refuse to continue existing relationships than in circumstances involving a refusal to enter a new relationship. See, e.g., *Aspen Skiing Co. v. Aspen Highlands Skiing Corp.*, 472 U.S. 585 (1985) (not involving intellectual property rights).

¹⁸⁹ *United States v. Microsoft Corp.*, 87 F. Supp. 2d 30, 40 (D.D.C. 2000).

¹⁹⁰ *United States v. Microsoft Corp.*, 235 F.3d 34, 63 (D.C. Cir. 2002) (*en banc*) [Microsoft IV].

¹⁹¹ See, e.g., *Zenith Radio Corp. v. Hazeltine Research Inc.*, 395 U.S. 100, 135 (1969) (concerted refusal to license patents was illegal, even if unilateral refusals would not have been so).

¹⁹² See Reichman with Hasenzahl, *Law and Practice of the U.S.*, *supra* note 88, at 69-86

¹⁹³ IP AND ANTITRUST, *supra* note 103, §13.5(a); see, e.g., *Brulotte v. Thys Co.*, 379 U.S. 29, 33 (1964) ("[a] patent empowers the owner to exact royalties as high as he can negotiate with the leverage of that monopoly").

often include “excessive pricing” either within their doctrine of abuse,¹⁹⁴ or within their competition laws, and developing countries in particular may wish to consider emulating these stricter practices. Moreover, most countries treat unreasonable pricing as an abuse, and this ground is recognized in South African law.¹⁹⁵

Finally, commentators stress the importance of distinguishing the “refusal to deal” cases as such from judicial use of compulsory licensing of intellectual property rights as a remedy for other sorts of antitrust violations. “Compulsory licensing has a long history as an antitrust remedy, and [it] may be quite appropriate depending on the nature of the antitrust violation itself.”¹⁹⁶

C. Restrictive Licensing Practices: Misuse or an Antitrust Violation?

United States patent legislation does not define abuse in the way that the patent law of South Africa does.¹⁹⁷ Case law, however, provides a judicially crafted remedy of misuse of patent rights, which operates as “an internal mechanism to police the abuse of intellectual property rights.”¹⁹⁸

Given the lack of statutory recognition of abuse of the patentee’s exclusive rights, the judicial doctrine of patent misuse has developed as an affirmative, equitable defense to a claim of patent infringement. The gravamen of the complaint is that, by imposing conditions that derive their force from the patent, the patentee has wrongfully broadened the scope of the patent grant or otherwise used it to improperly limit competition.¹⁹⁹ In this context, the doctrine also serves “to restrain practices that did not in themselves violate any law, but that draw anticompetitive strength from the patent right, and thus were deemed to be contrary to public policy.”²⁰⁰

¹⁹⁴ See, e.g., BODENHAUSEN, *supra* note 19 at 71 (stressing that Paris Union Countries “are free to define these, and other abuses”).

¹⁹⁵ See South African Patent Act § 56(2)(d).

¹⁹⁶ IP AND ANTITRUST, *supra* note 103, §13.3(g); see also F.M. Scherer, *The Economic Effects of Compulsory Patent Licensing* (1977), reprinted in F.M. SCHERER, COMPETITION POLICY, DOMESTIC AND INTERNATIONAL 327-42 (2000).

¹⁹⁷ See South African Patent Act § 56. Cf. Reichman, *The Canadian Experience*, *supra* note 18, at 5-7.

¹⁹⁸ See IP AND ANTITRUST, *supra* note 103, §3.1.

¹⁹⁹ *Id.* See, e.g., *Mallinckrodt, Inc. v. Medipart, Inc.*, 976 F.2d 700, 703-4 (Fed. Cir. 1992); *Virginia Panel Corp. v. MAC Panel Co.*, 133 F.3d 860, 868 (Fed. Cir. 1997); *B. Braun Medical, Inc. v. Abbott Labs*, 124 F.3d 1419, 1426 (Fed. Cir. 1997).

²⁰⁰ See *Mallinckrodt, Inc. v. Medipart, Inc.*, 976 F.2d 700, 703-4 (Fed. Cir. 1992).

The doctrine of patent misuse (which has now been extended to other intellectual property rights) is closely related to antitrust law, and many findings of misuse would also violate the antitrust laws. Conceptual distinctions between “misuse” and “antitrust” remain important, however; and they may produce different outcomes at the margins, especially in cases where the conduct in question fails to meet the heavy pre-requisites for antitrust violations and yet strikes the courts as an improper use of the patentee’s legal monopoly.²⁰¹

Above all, the remedies available to the successful litigant (including the availability of compulsory licenses) will vary significantly with the rubric applied, even when the conduct at issue falls within the reach of both misuse and antitrust doctrines. These remedial differences are particularly relevant to this report.²⁰²

2. Conceptual Distinctions

Technically speaking, the doctrine of misuse focuses on the scope of the Congressionally granted exclusive rights and asks whether the patentee’s sales or licensing practices have improperly leveraged these rights to produce commercial advantages or anticompetitive effects that exceed those contemplated by the enabling legislation.²⁰³ Although there is no statutory recognition of what does constitute misuse, the United States Congress passed the Patent Misuse Reform Act of 1988 to clarify that certain behavior did not necessarily constitute misuse.²⁰⁴ That law provides as follows:

(d) No patent owner otherwise entitled to relief for infringement or contributory infringement of a patent shall be denied relief or deemed guilty of misuse or illegal extension of the patent right by reason of his having done one or more of the following:

²⁰¹ See, e.g., *Zenith Radio Corp. v. Hazeltine Research, Inc.*, 395 U.S. 100, 140-41 (1969) (viewing patent misuse as a broader wrong than antitrust violations because of the economic power that may be derived from the patentee’s right to exclude, and finding that misuse may arise even when the conditions of antitrust violation are not met).

²⁰² See Reichman with Hasenzahl, *Law and Practice of the U.S.*, *supra* note 88, at 60-68.

²⁰³ See, e.g., *C.R. Bard, Inc. v. M3 Systems, Inc.*, 157 F.3d 1340, 1372-74 (Fed. Cir.), *rehearing en banc denied* (1998), *cert. denied* (1999).

²⁰⁴ Patent Misuse Reform Act of 1988, P.L. 100-703, Title II, §201, 102 Stat. 4676 (codified at 35 U.S.C. §§271(d)(4)-(5) (2002)). See also Patent Act of 1952, ch. 950, §1, 66 Stat. 811 (codified as amended at 35 U.S.C. §§271(d)(1)-(3) (2002)).

1. derived revenue from acts which if performed by another without his consent would constitute contributory infringement of the patent;
2. licensed or authorized another to perform acts which if performed without his consent would constitute contributory infringement of the patent;
3. sought to enforce his patent rights against infringement or contributory infringement;
4. refused to license or use any rights to the patent; or
5. conditioned the license of any rights to the patent or the sale of the patented product on the acquisition of a license to the rights in another patent or purchase of a separate product, unless in view of the circumstances, the patent owner has market power in the relevant market for the patent or patented product on which the license or sale is conditioned.²⁰⁵

The exact meaning of these provisions remains uncertain, and different interpretations have yet to be adjudicated.²⁰⁶

The statutory amendments adopted in 1988 reflect a certain degree of skepticism about judicial application of the misuse doctrine, a bias that the United States Court of Appeals for the Federal Circuit has shared since its inception in 1982. This court increasingly limited its findings of misuse “primarily to conduct that also violated the antitrust laws,” and these decisions - together with the 1988 amendments - have made misuse claims “much harder to sustain.”²⁰⁷ Some commentators have accordingly argued that misuse should be dealt with exclusively under competition law,²⁰⁸ although that would not address the concern that behavior falling outside the purview of the competition laws tests the boundaries of the patent system.

²⁰⁵ 35 U.S.C. §271(d) (2002).

²⁰⁶ See, e.g., Katherine E. White, *A Rule for Determining When Patent Misuse Should Be Applied*, 11 FORDHAM INTELL. PROP. MEDIA & ENT. L.J. 671, 674-76 (2001).

²⁰⁷ IP AND ANTITRUST, *supra* note 103, §3.2(a).

²⁰⁸ See, e.g., *USM Corp. v. SPS Technology, Inc.*, 694 F.2d 505, 512 (7th Cir. 1982) (where Judge Posner suggests that the doctrine of misuse arose before the body of antitrust law was fully developed and that the doctrine’s continued applicability subjects patent holders to “debilitating uncertainty”); see also JAY DRATLER, *LICENSING OF INTELLECTUAL PROPERTY* (2001) [hereinafter DRATLER].; Edward F. Sherry and David J. Teece, *The Misuse Doctrine: An Economic Reassessment*, in ABA SECTION OF ANTITRUST LAW, *INTELLECTUAL PROPERTY MISUSE: LICENSING AND LITIGATION* 136-47 (2000) [hereinafter *INTELLECTUAL PROPERTY MISUSE*]; Mark Lemley, *The Economic Irrationality of the Patent Misuse Doctrine*, 78 CAL. L. REV. 1599-1632 (1990) [hereinafter Lemley, *Economic Irrationality of Patent Misuse*].

In practice, recent decisions of the United States Court of Appeals for the Federal Circuit insist on evaluating alleged instances of misuse in terms of their potential anticompetitive effects, and they tend to apply the same “rule of reason” analysis that would govern antitrust decisions.²⁰⁹ Some observers believe this approach has “narrowed the scope of patent misuse beyond the level Congress dictated,” without producing the pro-competitive effects that Congress intended.²¹⁰

Whether true or not, most of the relevant precedents from both the Supreme Court and the Federal Circuit still formally recognize that analytical principles that exhaust the evaluation of economic impact for purposes of ascertaining an antitrust violation do not necessarily resolve claims that the patentee’s exercise of his exclusive rights impermissibly broadened the statutory grant of those rights.²¹¹ In other words, a finding of misuse may still implicate aspects of intellectual property law that differ from considerations of antitrust law, and despite pressures for convergence of the two regimes, a finding of misuse may stand even though the conduct in question did not constitute an antitrust violation.²¹²

When, instead, a complainant alleges that the patentee’s sales or licensing practices violate the antitrust laws, the fact that they might also constitute a form of patent “misuse” does not exempt them from meeting the stiff prerequisites to liability that antitrust law imposes in cases concerning intellectual property rights, especially since the 1970s. In analyzing this topic, moreover, leading commentators distinguish between so-called “vertical” restraints on competition, which involve relations between suppliers or others in a buyer-seller relationship, and “horizontal” restraints, which concern relations that reduce competition between competitors and that implicate collusion, oligopoly, exclusion of rivals, or other analogous practices.²¹³

On a benign view, intellectual property licensing constitutes a presumptively efficient form of vertical integration except when the transaction threatens to eliminate or reduce competition between one party to the license in question and others who are not parties to that arrangement.²¹⁴ Such a transaction would arise 1) when it results in a foreclosure of assets or inputs needed by rivals; 2) when it unduly raises the rivals’ costs

²⁰⁹ See, e.g., *Mallinckrodt, Inc. v. Medipart, Inc.*, 976 F.2d 700 (Fed. Cir. 1992); *C.R. Bard, Inc. v. M3 Systems, Inc.*, 157 F.3d 1340, *rehearing en banc denied* (1998), *cert. denied* (1999).

²¹⁰ White, *supra* note 205, at 674-76.

²¹¹ See, e.g., *Transparent-Wrap Machine Corp. v. Stokes & Smith Co.*, 329 U.S. 637 (1947); Note, *Is the Patent Misuse Doctrine Obsolete?*, 110 HARV. L. REV. 1922, 1927 (1997) [hereinafter *Harvard Note*].

²¹² See *Zenith Radio Corp. v. Hazeltine Research, Inc.*, 395 U.S. 100, 140 (1969); *Peter Schreiber v. Dolby Laboratories, Inc.*, 293 F.3d 1014 (7th Cir. 2002).

²¹³ See IP AND ANTITRUST, *supra* note 103, §20.3.

²¹⁴ See *id.* §20.3 (citing government guidelines).

of production; 3) or when it facilitates collusion.²¹⁵ Examples of such practices include “vertically imposed customer, field-of-use, or territorial restrictions, tying, reciprocity, or exclusive dealing” constraints, but only if the firm imposing them has market power (or can otherwise deny needed inputs to rivals), and only if the transaction tends to reduce quality in some relevant market.²¹⁶ Even then, both “power and anti-competitive effects must be independently proven,” and the alleged violator must always have an opportunity to provide reasonable justifications.²¹⁷

In contrast, horizontal restraints involving intellectual property licenses that affect relations between competitors “carry the most significant potential for anticompetitive results,” and they are subject to strict scrutiny under antitrust law.²¹⁸ A restraint is said to be horizontal when at least two of the relevant participants are either actual rivals or they would or could become actual rivals were it not for the restraint.²¹⁹ A threat to competition is thus said to be horizontal “if it concerns the elimination of competition between” participants to the agreement.²²⁰

A primary line of antitrust analysis in horizontal integration cases then further distinguishes between so-called “naked” and “ancillary” restraints:

A restraint is said to be naked if it involves no integration of research or production, no risk taking, and if its only rational purpose is to reduce market wide output and raise prices. Naked price fixing or output limitation is the clearest example. A more useful definition of a naked restraint is that it is an agreement whose profitability depends on the power to control the market. By contrast, a restraint is ancillary if its objectively intended purpose or likely effect is lower prices or increased output as measured by quantity or quality.²²¹

²¹⁵ *See id.* §§20.2, 20.2(a)(3).

²¹⁶ *Id.* §20.4(a).

²¹⁷ *Id.* §20.4(b).

²¹⁸ *Id.* §§30.1, 30.2.

²¹⁹ *See id.* §30.2.

²²⁰ *Id.*

²²¹ *Id.* §30.3.

2. Misuse and Antitrust Compared

Although some commentators would prefer to view misuse and antitrust as co-extensive, the federal judiciary formally continues to regard misuse as a defense grounded in part on intellectual property policy and not entirely or necessarily on antitrust principles.²²² This distinction becomes important because misuse is easier to prove than an antitrust violation, and because the remedies for the former (which do not encompass compulsory licensing) are more readily available to the courts than remedies for the latter, which do include the possibility of compulsory licensing.²²³

a. Claims and Remedies in General

To assert a claim of patent misuse, a party must typically demonstrate that the patent has been “broadened” in some manner and that the broadening has an effect on competition.²²⁴ Misuse is also concerned with the integrity of the patent system. “Patent . . . policy permits the grant of exclusive rights only under certain conditions and only within a limited scope, and the expansion of that scope through coercive use of government-granted legal rights has been thought to undermine the limitations built into the patent law.”²²⁵

While the distinction between misuse of patents and misuse that constitutes an antitrust violation has become less clear in recent United States case law, the difference in the remedies that flow from the different labels can be dramatic. The remedy for misuse is that the exclusive rights of the patent holder are rendered unenforceable until his abusive conduct has been purged; it does not, of itself, invalidate the patent.²²⁶ Upon a finding of misuse, the courts will refuse an injunction to prevent further infringement, and they will not award damages as a consequence of infringement to the patent holder.²²⁷ This is tantamount to a judicially imposed royalty-free license. Technically,

²²² See IP AND ANTITRUST, *supra* note 103, §3.1; see also George Gordon & Robert J. Hoerner, *Overview and Historical Development of the Misuse Doctrine* [hereinafter Gordon & Hoerner] in INTELLECTUAL PROPERTY MISUSE, *supra* note 207 (stating that courts may uphold a misuse defense “based on an attempt to extend the scope of the patent, even if . . . [it] does not also have an unreasonable competitive effect or otherwise contravene antitrust law”).

²²³ See IP AND ANTITRUST, *supra* note 103, §§3.6, 3.6(a).

²²⁴ See *Virginia Panel Corp. v. MAC Panel Corp.*, 133 F.3d 860 (Fed. Cir. 1997) (quoting *Windsurfing Int’l, Inc. v. AMF, Inc.*, 782 F.2d 995 (Fed. Cir. 1986))

²²⁵ See IP AND ANTITRUST, *supra* note 103, §3.2(c).

²²⁶ See, e.g., *Morton Salt Co. v. G.S. Suppiger Co.*, 314 U.S. 488 (1942); *Senza-Gel Corp. v. Seiffhart*, 803 F.2d 661, 668 n.10 (Fed. Cir. 1986).

²²⁷ See IP AND ANTITRUST, *supra* note 103, §3.6(a); *Senza-Gel Corp. v. Seiffhart*, 803 F.2d 661, 668 (Fed. Cir. 1986) (because plaintiff’s tying of a staple article of commerce to use of patented process was misuse, its exclusive rights were unenforceable in an action for infringement).

however, no compulsory license is normally available to remedy misuse that does not rise to the level of an antitrust violation,²²⁸ and forfeiture as such is not an option.

In contrast, the antitrust laws provide for treble damages and attorneys' fees in addition to injunctive relief,²²⁹ and the latter form of relief may or may not encompass a payment of royalties for continued use of the patented invention.²³⁰ A compulsory license may also, but need not, constitute part of the overall resolution when the evidence demonstrates that the misuse in question rises to the level of an antitrust violation.²³¹

In principle, both remedies may be combined in a single action. In such a case, the remedy for a claim of misuse operates to *shield* the infringer from any liability to compensate the patentee for use of the patented product or process; while the remedy for a claim of antitrust violations could operate as a *sword* by enabling the infringer to collect treble damages.²³²

Examples of particularly harsh injunctive remedies are found in cases arising during the 1940s and 1950s, when the Supreme Court tended to scrutinize claims of patent misuse with particular rigor.²³³ In *Besser Manufacturing Co. v. United States*,²³⁴ for example, the Supreme Court held that both compulsory licensing and the sale of patented devices were recognized remedies within the trial judge's range of discretion and were particularly appropriate where a penchant for abuses of patent rights had demonstrably contributed to a scheme to monopolize the concrete block-making machinery industry.²³⁵

²²⁸ See, e.g., *Senza-Gel Corp. v. Sieffhart*, 803 F.2d 661, 668 n.10 (Fed. Cir. 1986). See also IP AND ANTITRUST, *supra* note 103, §21.3 (stating that courts applying either patent misuse or antitrust policy could refuse to enforce certain terms in a contract forbidding a patentee to purchase supplies or other unpatented goods elsewhere, while leaving the obligation to pay royalties intact).

²²⁹ See, e.g., *Harvard Note*, *supra* note 210, at 1924-25.

²³⁰ See *supra* note 227.

²³¹ See, e.g., *Besser Mfg. Co. v. United States*, 343 U.S. 444 (1952); *United States v. General Electric Co.*, 115 F.Supp. 835 (Dist. N.J. 1953). In more recent cases, judicially imposed compulsory licenses seem relatively rare, except as a remedy for patent pools. See Reichman with Hasenzahl, *Law and Practice of the U.S.*, *supra* note 88 at 80-86.

²³² Cf. *Sherry & Teece*, *supra* note 207, at 126.

²³³ See, e.g., *Besser Mfg. Co. v. United States*, 343 U.S. 444 (1952); *United States Gypsum Co. v. National Gypsum Co.*, 352 U.S. 457 (1957); *United States v. National Lead Co.*, 332 U.S. 319 (1947); *Hartford-Empire Co. v. United States*, 323 U.S. 386, *clarified*, 324 U.S. 570 (1945).

²³⁴ 343 U.S. 444 (1952).

²³⁵ *Besser Mfg.*, 343 U.S. at 446-47.

As late as 1973, the Supreme Court sounded the same theme in *United States v. Glaxo Group, Ltd.*²³⁶ Here British drug companies that manufactured and sold the fungicide griseofulvin had pooled their bulk-and-dosage form patents and sub-licensed certain firms in the United States to practice the patents. In reversing the lower court's decision not to grant a compulsory license, the Supreme Court ordered mandatory, nondiscriminating sales to all applicants as the appropriate mode of relief to "pry open to competition" a market that antitrust violations had closed.²³⁷ The Court also held that, where the manufacturer may choose not to make bulk-form sales, and the licensees are not bound by the court's order for mandatory sales, further relief in the form of reasonable-royalty licensing of the patents was also proper,²³⁸ and it ordered a compulsory license to address the effects of the defendant's anticompetitive behavior, including the patent pooling agreements.²³⁹

Between 1940 and 1973, the United States federal courts handed down numerous decisions that imposed compulsory licenses for anticompetitive behavior involving the exercise of patent rights.²⁴⁰ Exactly how many compulsory licenses were granted in this period will never be known. One Senate Committee Report declared that compulsory licenses had been granted as a remedy in over 125 domestic antitrust cases by late 1959,²⁴¹ although there is no way of knowing how many licenses were actually issued in these actions.²⁴² Another source estimates that "between 40,000 and 50,000 patents had been affected by antitrust/misuse compulsory licensing judgments" by the end of 1959.²⁴³ Some courts also imposed royalty-free licenses that were in some respects even harsher,²⁴⁴ although the legitimacy of such licenses has not altogether been settled.²⁴⁵

²³⁶ 410 U.S. 52 (1973).

²³⁷ *United States v. Glaxo Group, Ltd.*, 410 U.S. 52, 60-64 (1973).

²³⁸ *See United States v. Glaxo Group, Ltd.*, 410 U.S. 52, 60-64 (1973).

²³⁹ *See United States v. Glaxo Group, Ltd.*, 410 U.S. 52, 60-64 (1973). The Court stated that, although it usually remands to the district court in these cases, the circumstances of this case warranted the direct issuance of the order that the district court had failed to make. *See id.*

²⁴⁰ Reichman with Hasenzahl, *Law and Practice of the U.S.*, *supra* note 88, at 62-63; *see also United States v. Glaxo Group, Ltd.* 410 U.S. 52 (1973).

²⁴¹ SENATE COMM. ON THE JUDICIARY, SUBCOMM. ON PATENTS, TRADEMARKS, AND COPYRIGHTS, 90th CONG. COMPULSORY PATENT LICENSING UNDER ANTITRUST JUDGMENTS (Comm. Print 1960).

²⁴² *See* WARD BOWMAN, JR., PATENT AND ANTITRUST LAW 246 (1973).

²⁴³ STAFF OF SENATE COMM. ON THE JUDICIARY, SUBCOMM. ON PATENTS, TRADEMARKS, AND COPYRIGHTS, 86th CONG., REPORT ON COMPULSORY LICENSING UNDER ANTITRUST JUDGMENTS 5 (Comm. Print 1960). *See also* Scherer & Watal, *supra* note 104 at 916-917 (noting that most of these licenses provided for "reasonable royalties" which tended to be low in practice.)

²⁴⁴ *See, e.g., United States v. General Electric*, 115 F.Supp. 835 (Dist. N.J. 1953); *United States v. Singer Mfg. Co.*, 231 F. Supp. 240 (S.D.N.Y. 1969) (on remand from the Supreme Court).

Since the mid-1970s, and especially after the establishment of the United States Court of Appeals for the Federal Circuit in 1982 (which hears all patent appeals), the federal appellate courts have tended to strengthen the rights of patentees and to weaken the impact of both the antitrust laws and the misuse doctrine on such rights.²⁴⁶ Moreover, the 1988 Patent Misuse Reform Act can be interpreted to have significantly curtailed resort to the patent misuse doctrine,²⁴⁷ and whether or not this interpretation proves accurate, the number of cases applying it, let alone finding actual misuse, have become few and far between.

When comparing patent misuse with an antitrust violation, the United States Court of Appeals for the Federal Circuit has stressed a distinction “between patent misuse as a defensive shield and patent misuse as an offensive sword.”²⁴⁸

In both cases, the patentee’s act is the same. That act may serve... as a defense to a charge of patent infringement. That act may also serve as an element in a complaint charging antitrust violation. Thus... the patentee’s act may constitute patent misuse without rising to the level of an antitrust violation... All that a successful defense of patent misuse means is that a court of equity will not lend its support to enforcement of a misuser’s patent.²⁴⁹

In theory, “non-enforcement” thus constitutes a weaker remedy than those available from antitrust law, and it should accordingly be easier to obtain.²⁵⁰ A related

²⁴⁵ See, e.g., *United States v. Imperial Chemical Industries, Ltd.*, 105 F. Supp. 215 (S.D.N.Y. 1952) (ordering compulsory licenses to address past misuse, but declining to impose a royalty-free license as lacking statutory authority); see also *W. FUGATE*, *supra* note 111, §14.9.

²⁴⁶ See, e.g., Remarks of Susan De Santi, *supra* note 120; Frankie Cox [Press Release], FTC Office of Public Affairs, “Federal Trade Commission and Department of Justice Hold Joint Hearings on Intellectual Property,” (2001):

Former FTC Chairman Robert Pitofsky referred to the 1970s as a period in which, “we must conclude that enforcement agencies, backed by courts, had come to a conclusion where antitrust usually trumped intellectual property.” But Pitofsky went on to say, “the pendulum has swung a long way since then.”

²⁴⁷ 35 U.S.C. §271(d) (1988); see also Senate Comm. on Judiciary, Subcomm. On Patents, Trademarks and Copyrights, The Intellectual Property Antitrust Protection Act, 1988, S. Doc.100-492 (2d Sess. 1988); Gordon & Hoerner, *supra* note 221, at 27-28.

²⁴⁸ *Senza-Gel Corp. v. Seiffhart*, 803 F.2d 661, 667-68 (Fed. Cir. 1986); see also *Zenith Radio Corp. v. Hazeltine Research, Inc.*, 395 U.S. 100, 140 (1969).

²⁴⁹ *Senza-Gel*, 803 F.2d at 667-68.

²⁵⁰ See IP AND ANTITRUST, *supra* note 103, §3.6 (quoting *Hewlett Packard Co. v. Bausch & Lomb Inc.*, 882 F.2d 1556, 1563 (Fed. Cir. 1989)).

question concerns the extent to which the patent holder may cure the abuse and thereby reinstate its rights under the patent once again. The general rule is that the patent holder may cure the abuse, although it is not so easily done²⁵¹ because the misuse must cease and its consequences must be “fully dissipated” or “purged.”²⁵² However, some forms of misuse cannot be cured, for example, when the behavior includes some fraud or inequitable conduct in the patent holder’s acquisition of the patent in question.²⁵³

The notion that “non-enforcement” constitutes a weaker remedy than those available from antitrust law has elicited some caustic observations from critics, who complain about the lack of proportionality between misuse behavior and the applicable remedy. Because there is no operative distinction in the law between acts of misuse that cause significant harm and those which cause only a little harm, the applied remedy is “not necessarily (or even likely) well matched to the problem that it is designed to solve.”²⁵⁴ When the effect of the misuse is relatively minor, for example, the remedy of unenforceability may seem harsh; and it creates a free-rider problem by allowing infringers to derive significant benefit in the face of the patent holder’s inability to enforce its rights. The courts understand this problem, and it may cause them to react by refusing to find misuse in order to avoid inflicting such a harsh penalty.²⁵⁵

b. Current Status of the Misuse Doctrine

The status of the misuse doctrine has become controversial in recent years, especially because those who favor a high-protectionist approach to patents almost invariably favor restricting the misuse doctrine to conduct that also violates the antitrust laws.²⁵⁶ This position, though much trumpeted and of some influence in the Federal Circuit, has not prevailed in practice, however. The misuse doctrine manages to survive

²⁵¹ See IP AND ANTITRUST, *supra* note 103, §3.6(a).

²⁵² See *B.B. Chem. Co. v. Ellis*, 314 U.S. 495, 498 (1942); *Morton Salt Co. v. G.S. Suppinger Co.*, 314 U.S. 488 (1942); *Senza-Gel Corp. v. Sieffhart*, 803 F.2d 661, 668 n.10 (Fed. Cir. 1986). Misuse may be purged during the course of an infringement action where the patent holder abandons the contested behavior and none of the illegal effects of the behavior remain. See *Printing Plate Supply Co. v. Crescent Engraving Co.*, 246 F. Supp. 654 (W.D. Mich. 1965) (noting cases where abuse has been cured during the pendency of an action for patent infringement); see also HAROLD EINHORN & DAVID EINHORN, PATENT LICENSING TRANSACTIONS [hereinafter EINHORN] §7.05[4] (2001).

²⁵³ See *Kearney & Trecker Corp. v. Giddings & Lewis Inc.*, 452 F.2d 579 (7th Cir. 1971); see also EINHORN, *supra* note 248, §7.05[4].

²⁵⁴ See IP AND ANTITRUST, *supra* note 103, §3.6(a); see also Mark Ostran, *The Misuse Doctrine: Issues of Scope and Remedy*, in INTELLECTUAL PROPERTY MISUSE, *supra* note 204, at 216-21 (“Debate about the Penalty of Nonenforceability of Intellectual Property Rights”).

²⁵⁵ See IP AND ANTITRUST, *supra* note 103, at §3.6(a).

²⁵⁶ See, e.g., Lemley, *Economic Irrationality of Patent Misuse*, *supra* note 204 (who is not, however, a high protectionist); *Harvard Note*, *supra* note 210.

outside and beyond its overlap with antitrust,²⁵⁷ even if no two commentators agree as to the precise dimensions of the area lying beyond antitrust law.

Recently, moreover, the misuse doctrine has elicited renewed interest in some quarters precisely because intellectual property transactions have become increasingly complex, especially in the networked environment, and these complexities give rise to an array of unintended consequences.²⁵⁸ Lost opportunity costs seem to multiply, and anticommons effects that can impede both basic and applied research are frequently feared.²⁵⁹ From this angle, the doctrine of misuse potentially preserves valuable elements of balance and flexibility that antitrust law cannot readily match,²⁶⁰ and it should continue to play an important role in innovation policy.²⁶¹

In this same vein, one recent view endorsing the continued vitality of the misuse doctrine stresses that it has evolved from three distinct if related areas of public policy, viz: the prevention of anticompetitive effects, the protection of licensees against overreaching by patentees, and the need to ensure compliance with the purposes of the patent laws. On this view, “the doctrine cannot be understood by analyzing it from any one of these perspectives alone.”²⁶² Even authorities imbued with a more pro-patent bias concedes that courts still “intend to apply the misuse doctrine to at least some sorts of

²⁵⁷ See, e.g., Gordon & Hoerner, *supra* note 221; see also *Harvard Note*, *supra* note 210; White, *supra* note 2005.

²⁵⁸ See generally J.H. Reichman & Jonathan A. Franklin, *Privately Legislated Intellectual Property Rights: Reconciling Freedom of Contract with Public Good Uses of Information*, 147 U. PA. L. REV. 875, 922-25, 929-47, 951-53 (proposing a “public interest unconscionability” doctrine to curb the misuse of standard form digital information contracts).

²⁵⁹ See, e.g., Michael A. Heller & Rebecca S. Eisenberg, *Can Patents Deter Innovation? The Anticommons in Biomedical Research*, 280 SCIENCE 698 (1998); Rebecca S. Eisenberg, *Bargaining Over the Transfer of Proprietary Research Tools: Is this Market Failing or Emerging?* in EXPANDING THE BOUNDARIES OF INTELLECTUAL PROPERTY: INNOVATION POLICY FOR THE KNOWLEDGE SOCIETY, 223, 225 (Rochelle Dreyfus et al eds. 2001) (discussing the “widely-shared perception that negotiations over the transfer of proprietary research tools present a considerable and growing obstacle to progress in biomedical research and product development”). Cf. also J. H. Reichman & Paul F. Uhlir, *Database Protection at the Crossroads: Recent Developments and Their Impact of Science and Technology*, 14 BERKELEY TECH. L. J. 793 (1999); J. H. Reichman & Paul F. Uhlir, *A Contractually Reconstructed Research Commons for Scientific Data in a Highly Protectionist Intellectual Property Environment*, 66 LAW AND CONTEMP. PROBS. 315, 396-415 (2003). But see John P. Walsh, Ashish Arora & Wesley M. Cohen, “The Patenting and Licensing of Research Tools and Biomedical Innovation,” paper prepared for the Science, Technology and Economic Policy Board of the National Academies (5 May 2002) (few anticommons effects yet).

²⁶⁰ See, e.g., White, *supra* note 205, at 672 (“Patent Misuse is a doctrine that seeks to balance the idea that a patent is an absolute property right with the notion that a patent must be exercised in a manner consistent with the public policies underlying its grants.”).

²⁶¹ See, e.g., *Harvard Note*, *supra* note 210, at 1936 (contending that the misuse doctrine should be retained “because patents are intended to induce innovations and courts should ... ensure that patent holders use them to promote this end”).

²⁶² Gordon & Hoerner, *supra* note 221, at 33.

conduct antitrust law would not reach,” although in most cases the two doctrines will be “largely coextensive.”²⁶³

These contradictions in domestic law would seem to reinforce the opportunities for developing countries under international law. The right of states to regulate patent misuse under the TRIPS Agreement remains clear,²⁶⁴ and the remedies for misuse are not constrained by most of the limitations on compulsory licensing under article 31 of that Agreement.²⁶⁵ If “non-enforcement” for misuse is understood to merely suspend the patentee’s exclusive rights, subject to cure, without invalidating the patents as such, this practice could arguably fall outside both the Paris Convention²⁶⁶ and the TRIPS Agreement. If so, a developing country that seeks to regulate practices that United States law has, at one time or another, deemed “misuse,” would remain as free to resort to the remedy of non-enforcement as are courts in the United States, regardless of what other criteria might apply if the remedy also entailed the grant of a compulsory license.²⁶⁷ Moreover, courts in developing countries are entitled to grant compulsory licenses to remedy abuses, subject to the limits of the Paris Convention, even in cases where the United States doctrine of misuse would sanction only “non-enforcement” but not a compulsory license. In evaluating their options, policymakers in developing countries might find that the more pro-competitive approach to misuse that prevailed in the United States through the 1970s was better suited to their needs than the more refined, pro-patent doctrines applied in recent years.

3. Specific Applications

In principle, the misuse doctrine in United States practice can trigger the remedies of non-enforcement and, given an antitrust violation, of compulsory licensing as well. A detailed survey of conduct or practices that may support applications of either the judge-made misuse doctrine or of its antitrust variants could fill several volumes and lies beyond the scope of this report.

²⁶³ IP AND ANTITRUST, *supra* note 103, §3.2(b).

²⁶⁴ *See* TRIPS Agreement, *supra* note 36, arts. 8, 40.

²⁶⁵ *See id.* art. 31; Reichman with Hasenzahl, *Historical Perspective*, *supra* note 1, at 3.

²⁶⁶ *See* Paris Convention, *supra* note 3, art. 5A(3), 25 Stat. 1372, 828 U.N.T.S. 305, art. 5A(3) (regulating “forfeitures” for abuse in the absence of compulsory licenses); *see also id.* art. 5A(2) (allowing legislative measures providing for compulsory licences to prevent abuses of the patentee’s exclusive rights).

²⁶⁷ *See* Paris Convention, *supra* note 3, art. 5A(2); TRIPS Agreement *supra* note 35, art. 31.

Traditionally, the patent misuse doctrine has been applied to a very broad range of practices, many of which are listed below:

- Refusal to license
- Tying arrangements
- Package licensing
- Covenants not to deal in competing products or technologies (“tie-outs”)
- Excessive royalties
- Post-expiration royalties
- Royalties based on total sales
- Discriminatory royalties
- Field-of-use and customer limitations in licenses
- Territorial limitations in licenses
- Price limitations and minimum resale price maintenance
- Non-price resale restrictions after the first sale (“exhaustion”)
- Grantback clauses
- Use of patents contributing to an antitrust violation
- Bad faith enforcement of intellectual property rights
- Misuse and inequitable conduct²⁶⁸

Of these practices, only a few continue to attract most of the judicial attention, especially tying, field-of-use restrictions, grantback clauses, and price limitations. Conduct falling within any of these rubrics could also amount to an antitrust violation, but the burden of proof becomes high. The 1988 Patent Misuse Statute would seem to make it extremely difficult to claim any refusal to deal as a misuse unless it also rose to the level of an antitrust violation, as discussed above.²⁶⁹

On the whole, the defense of patent misuse is much harder to sustain today than it was prior to the 1980s, largely because the United States Court of Appeals for the Federal Circuit, which now hears all appeals in patent cases, takes a dim view of this doctrine.²⁷⁰ In a series of recent cases, this Court imposed new conditions limiting the ability of alleged infringers to invoke the doctrine of patent misuse, and it has insisted on analyzing the anticompetitive effects of alleged misuse in economic terms drawn from the antitrust laws.²⁷¹ Nevertheless, the patent misuse doctrine remains broader than antitrust

²⁶⁸ For details, see Nicholas Loch & Heidi Chen, *Specific Practices That Have Been Challenged as Misuse*, in INTELLECTUAL PROPERTY MISUSE, *supra* note 207, at 37-69; see also Sheila McCarney, *Practical Aspects of the Law of Misuse: Misuse in the Licensing Context*, in INTELLECTUAL PROPERTY MISUSE, *supra* note 207, at 71-91 (concluding that “ingenuity in drafting and prudence in negotiations can minimize many risks for licensors”).

²⁶⁹ See *supra* text accompanying notes 255-266.

²⁷⁰ See IP AND ANTITRUST, *supra* note 103, §3.2.

²⁷¹ See, e.g., *In re ISO Antitrust Litigation*, 203 F.2d 1322 (Fed. Cir. 2000); *Virginia Panel Corp. v. MAC Panel Corp.*, 133 F.3d 860 (Fed. Cir. 1997); *B. Braun Med. Inc. v. Abbott Labs*, 124 F.3d 1419 (Fed. Cir. 1997).

limitations on a patentee's exclusive rights, and new cases continue to arise.²⁷² Moreover, other courts have more frequently allowed misuse defenses in *copyright* cases than in the past,²⁷³ and the Supreme Court has not pronounced on any of these issues in recent years. Whether the patent misuse doctrine will stage a come-back or not remains to be seen.

As regards the specific remedy of compulsory licensing, the chances of obtaining such an outcome even when the misuse violates the antitrust laws appear relatively low today. On the whole, compulsory licenses are disfavored for the reasons discussed above, despite empirical economic evidence to allay the fears that often surround their use,²⁷⁴ although courts do continue to grant such licenses to remedy instances of horizontal integration, such as illicit patent pools.²⁷⁵ Even today, however, if patent misuse is found, the standard judicial remedy remains that of non-enforcement of the patent in question until and unless the misuse has been cured.²⁷⁶

The situation in South Africa is different, however, because that country's statute specifically provides for several grounds of abuse that are not traditionally recognized in United States law, including local nonworking, failure to supply the market "to an adequate extent and on reasonable terms," failure to license on reasonable terms, and charging higher prices for imports than those charged by foreign producers in the countries of manufacture. Several of these grounds would seem applicable to the facts of this case.

Moreover, the South African statute expressly provides for compulsory licenses to remedy abuses, whereas U.S. law will only refuse to enforce the patent unless misuse

²⁷² See, e.g., *Peter Schreiber v. Dolby Laboratories, Inc.*, 293 F.3d 1014 (7th Cir. 2002) (holding that a patent owner could not enforce a contract for the payment of patent royalties beyond the expiration date of the patent); *Bayer AG v. Housey Pharmaceuticals, Inc.*, 169 F. Supp. 2d 328 (D. De. 2001) (claim of misuse for royalties abusively based on total sales and research budget survives motion to dismiss); *Moore U.S.A. Inc. v. The Standard Register Co.*, 139 F. Supp. 2d 348, 362 (W.D.N.Y. 2001) (claim of patent misuse based on sham litigation theory survives motion to dismiss); but see *Bayer AG v. Housey Pharmaceuticals, Inc.*, 228 F.Supp 2d 467 (D. Del. 2002) (Patentee's motion for summary judgement denying plaintiff's claim of misuse granted (where plaintiff had sought declaratory judgement of non-infringement of defendant's patent)).

²⁷³ See *Lasercomb America, Inc. v. Reynolds*, 911 F.2d 970 (4th Cir. 1990); *Alcatel USA, Inc. v. DGI Technologies*, 166 F.3d 772 (5th Cir. 1999); *Practice Management Information Corp. v. The American Medical Assn.*, 121 F.3d 516 (9th Cir. 1997), amended by 133 F.3d 1140 (9th Cir. 1998). See also Ralph Jonas, Michele E. Beuerlein, George C. Gordon & Charles W. Cohen, *Copyright and Trademark Misuse*, in *INTELLECTUAL PROPERTY MISUSE*, *supra* note 325; Brett Frischman, *Innovation and Institutions: Rethinking the Economics of U.S. Science and Technology Policy*, 24 Vt. L. Rev. 347 (2000).

²⁷⁴ See Scherer, *supra* note 118.

²⁷⁵ See Reichman with Hasenzahl, *Law and Practice of the U.S.*, *supra* note 88 at 80-86.

²⁷⁶ See, e.g., *Senza-Gel Corp v. Sieffhart*, 803 F.2d 661 (Fed. Cir. 1986); *PSC Inc. v. Symbol Technologies, Inc.*, 26 F. Supp. 2d 505 (W.D.N.Y. 1998).

rises to the level of an antitrust violation. By the same token, if an abuse is found under the South African statutes, the royalties should logically be low, say, in the range of zero to 3 per cent to reflect their punitive nature.²⁷⁷

D. Compulsory Licensing on Public Interest Grounds

In general, the limited monopolies granted under the domestic patent laws are thought to promote the public interest by stimulating private investment in, and disclosure of, inventions beyond the reach of routine engineers that might not otherwise come to light. Because patents expire in due course and enter the public domain, a patent grant can be understood, in economic terms, as elevating the technical parameters of industrial competition to their next highest level.²⁷⁸ Nevertheless, circumstances may arise in which the availability of certain patented products or processes on preferential or more competitive terms and conditions than those offered by a monopoly supplier may be deemed so vital to a given country's needs that the authorities will break the patentee's exclusive right in the greater public interest and open the market to other private suppliers under a royalty bearing compulsory license.²⁷⁹ Such a license effectively converts an exclusive property right, which prevents anyone from using the patented invention without permission, to what economists call a liability rule, which allows some or all competitors to take and use the invention without permission if they pay the established royalty.²⁸⁰

Most countries have enacted general compulsory licensing statutes to authorize third-party private uses of patented inventions when breaking the inventor's exclusive

²⁷⁷ The TRIPS Agreement does not directly discuss the level of compensation for abusive conduct under articles 8 and 40. In article 31(k) it allows states to waive the conditions of article 31(b)-(i) in adjudicated cases of anticompetitive conduct and declares that "the need to correct anticompetitive practices may be taken into account in determining the amount of remuneration in such cases." TRIPS Agreement, *supra* note 36, art. 31(k).

²⁷⁸ Lehman (1989).

²⁷⁹ See e.g., BODENHAUSEN, *supra* note 19, at 70 (stressing cases "where the public interest is deemed to require such measures" even in the absence of abusive conduct; noting the "vital interests" of countries in military security, public health, and so-called dependent patents; and recognizing "that the member States have freedom to legislate in this regard" under the Paris Convention).

²⁸⁰ See Robert P. Merges, *Contracting into Liability Rules: Intellectual Property Rights and Collective Rights Organizations*, 84 CAL. L. REV. 1293 (1996) [hereinafter Merges *Contracting into Liability Rules*]; J. H. Reichman, *Of Green Tulips and Legal Kudzu: Repackaging Rights in Subpatentable Innovation*, 53 VAND. L. REV. 1743 (2000) [hereinafter Reichman, *Green Tulips*]; Guido Calabresi & A. Douglas Melamed, *Property Rules, Liability Rules, and Inalienability: One View of the Cathedral*, 85 Harv. L. Rev. 1089, 1092 (1972).

rights is deemed to promote some overriding public interest.²⁸¹ Typical grounds for triggering these compulsory licenses are the need to ensure adequacy of supply; to regulate the availability of products deemed vital to security, public health, or environmental protection; to ensure that patents are worked in countries that grant them;²⁸² and to permit improvers or “dependent” patentees to use a dominant or pioneer patent in order to make patentable improvements that might otherwise have been “blocked” by the dominant patentee’s power to exclude.²⁸³ Developing countries have also imposed compulsory licenses on foreign patentees whose technologies were deemed of vital importance to economic development goals,²⁸⁴ and questions concerning the legitimacy of such practices figured prominently in multilateral negotiations to revise the Paris Convention in the pre-TRIPS period.²⁸⁵

²⁸¹ See, e.g., J.-M. SALAMOLARD, *supra* note 1, at 31-39 (stressing the “exceptional nature” of such licenses in practice and the broad extent to which “each state, according to its own interests and philosophy, defends its own conception of the public interest” (at 37)); Fauver, *Comment, supra* note 89, at 666, 667 (stating that a general compulsory licensing power that “enables the government granting the patent to force the patentee to license the invention” to another individual or company “if the government does not approve of the patent’s use” is “common throughout the world, but virtually absent in the United States”). See also Demaret, *supra* note 89 at 162-165 (stressing that such licenses may be either of an individual character (when third-party must apply for it and the license is restricted to that party) or of a general character (when the national authority subjects a type of class of patents to a regime of mandatory licensing). All E.U. member states had provisions dealing with compulsory licenses as of the late 1980s, as did the Luxemburg Patent Convention. Demaret, *supra* at 163.

²⁸² See, e.g., Fauver, *Comment, supra* note 89, at 668-69 (noting that the United Kingdom, Canada, Japan, and West Germany allowed compulsory licensing to address inadequacies of supply as of 1991). See also *id.* at 670-71 (noting that compulsory licensing on public interest grounds commonly pertains to inventions affecting public health, welfare, or national defense, “areas where the inventor’s interest may be subordinate to that of the public”); see also *id.* at 672-74 (noting that the United Kingdom, Canada, West Germany, Japan, Sweden and Switzerland all had local working requirements on their books as of 1991). See generally J-M SALAMOLARD, *supra* note 1, at 39-47.

²⁸³ Compulsory licenses that allow improvers to make otherwise infringing uses (dependent patents) of a prior patented technology are granted in Austria, China, France, Germany, Italy, Japan, the Netherlands, Sweden, Switzerland, and the United Kingdom. See, e.g., Fauver, *Comment, supra* note 89, at 668 n.11 (citing authorities); Robert Merges, *Intellectual Property Rights and Bargaining Breakdown: The Case of Blocking Patents*, 62 TENN. L. REV. 75, 76-88, 104-06 (1994) [hereinafter, Merges, *Blocking Patents*]. For the view that the doctrine of reverse equivalents in United States patent law can serve a similar purpose, see *id.* at 89-104.

²⁸⁴ See, e.g., Fauver, *Comment, supra* note 89, at 670-71. Developed countries have also recognized “economic development” and the “development of international trade” as valid grounds for emitting public-interest compulsory licenses. See, e.g., J.-M. SALAMOLARD, *supra* note 1, at 44-45; Demaret, *supra* note 89, at 89. (noting statutory provision aiming “to induce the establishment of manufacturing activities within the country, to increase exports or more generally to promote the economic interests of the state”).

²⁸⁵ See Paris Convention, *supra* note 3, art. 5A. See also Reichman with Hasenzahl, *Historical Perspective, supra* note 1, at 7-8.

1. United States Law and Practice

The United States Congress has consistently declined to enact any general compulsory licensing provision of this kind, even for patents that have not been practiced or that have been used for anticompetitive purposes, despite repeated proposals to do so.²⁸⁶ To fill this gap in domestic law, both Congress and the courts have nonetheless resorted occasionally to the imposition of ad hoc, nonvoluntary licenses on specific public interest grounds. The availability of a nonvoluntary license on such grounds in the United States thus depends primarily on specialized enabling clauses incorporated into specific statutes.²⁸⁷ On rare occasions, moreover, single courts may decline to provide a patentee with injunctive relief on public interest grounds, although such relief has been too sporadic and fact specific to support the formulation of any general rule concerning its potential availability.²⁸⁸

Turning first to judicial applications of nonvoluntary licensing on public interest grounds, only a handful of cases have been found to illustrate this principle in United States patent law. The best known is *City of Milwaukee v. Activated Sludge, Inc.*,²⁸⁹ a 1934 case in which the Seventh Circuit effectively granted a nonvoluntary license for the use of a patented apparatus and process pertaining to sewage purification, which the City of Milwaukee had used in the design and operation of its sewage treatment facility. The Seventh Circuit reversed the lower court's order enjoining further infringement by the City on public interest grounds, and it held that the patent owner was entitled only to compensatory damages. The court stated that preventing the City's further use of the patents would "close the sewage plants, leaving the entire community without any means for the disposal of raw sewage other than running into Lake Michigan, thereby polluting its waters and endangering the health and lives of that and other adjoining communities."²⁹⁰

²⁸⁶ See, e.g., Mark W. Lauroesch, *General Compulsory Licensing in the United States: Good in Theory, But not Necessary in Practice*, 6 SANTA CLARA COMPUTER & HIGH TECH L. J. 41, 43; Fauver, Comment, *supra* note 89, at 667; see also S. Delvalle Goldsmith, *The Case for "Restricted" Compulsory Licensing*, 2 AIPLA Q. J. 146 (1974); Jason Mirabito, *Compulsory Patent Licensing for the United States: A Current Proposal*, 57 J. PAT. OFF. SOC'Y 404 (1975); but see, e.g., B.R. Pravel, Say "No" to More Compulsory Licensing Statutes, 2 AIPLA Q.J. 185 (1974).

²⁸⁷ See, e.g., Fauver, Comment, *supra* note 89, at 670-71.

²⁸⁸ See Reichman with Hasenzahl, *Law and Practice of the U.S.*, *supra* note 88, at 89-90. No judicial decision expressly denying injunctive relief on public interest grounds without statutory authority has been found since the 1940s. See *id.* For the Supreme Court's implicit hostility to such actions, see also *Dawson Chemical Co. v. Rohm & Haas Co.*, 448 U.S. 176, 215 (1980) (stating that "compulsory licensing is a rarity in our patent system and we decline to manufacture such a requirement").

²⁸⁹ 69 F.2d 577 (7th Cir. 1934).

²⁹⁰ *City of Milwaukee v. Activated Sludge, Inc.*, 69 F.2d 577, 593 (7th Cir. 1934).

A similar situation arose in a nineteenth century case, *Bliss v. City of Brooklyn*.²⁹¹ In that case, a court denied injunctive relief for the City's continued infringing use of patented fire hose coupling devices because they were "necessary for the daily use of the city in the prevention of fires."²⁹²

In both *City of Milwaukee* and *Bliss*, governmental entities were infringing the plaintiffs' patents, but defended their actions as an exercise of local police powers in furtherance of public health, safety, or environmental protection needs.²⁹³ Arguably, such uses are analogous to the federal government's power to use patented inventions under section 1498 of the United States Civil Code, which is discussed below,²⁹⁴ and the courts in both cases ordered the infringing authorities to pay the patentees reasonable royalties. In one other noteworthy case, however, *Vitamin Technologists, Inc. v. Wisconsin Alumni Research Foundation*,²⁹⁵ the United States Court of Appeals for the Ninth Circuit upheld, at least in dicta, the principle of denying injunctive relief on public interest grounds even when the defendant was not a governmental body.

This 1945 case appears to be the first to raise health-care policy considerations under a public interest rubric when evaluating the remedies for patent infringement. The Wisconsin Alumni Research Foundation held patents on a process for producing vitamins in dietary substances through exposure to ultraviolet rays, which was valuable in fighting the disease of rickets. The patent holder had licensed the technology for some uses, but it had refused to license the process for irradiation to create vitamin D in ergosterol and yeast. Acting without such a license, Vitamin Technologists used the process for this purpose in order to produce margarine, and the patent holder filed suit for patent infringement, in which it sought injunctive relief.²⁹⁶

In dicta, the court asked "whether the effect on the public health of refusing to the users of oleomargarine, the butter of the poor, the right to have such a food irradiated by the patented process is against the public interest," indicating that it could constitute "a public offense to withhold such processes from any of the principal foods of the rachitic poor."²⁹⁷ In the end however, the court declined to issue the injunction sought by the patent holder on grounds of patent invalidity rather than specifically finding that the

²⁹¹ 3 Fed. Cas. 706 (E.D.N.Y. 1871) (No. 1,544).

²⁹² *Id.*

²⁹³ See Lauroesch, *supra* note 286, at 48-49.

²⁹⁴ 28 U.S.C. § 1498 (2002); Reichman with Hasenzahl, *Law and Practice of the U.S.*, *supra* note 88, at 104-109.

²⁹⁵ 146 F.2d 941 (9th Cir. 1945).

²⁹⁶ *Vitamin Technologists, Inc. v. Wisconsin Alumni Research Found.*, 146 F.2d 941, 945 (9th Cir. 1945).

²⁹⁷ See *Vitamin Technologists, Inc.*, 146 F.2d at 946-47.

public's need for the invention should prevail over the patent holder's refusal to license it.

The precedential importance of these cases is somewhat attenuated by the general equitable powers of United States federal courts to deny injunctive relief, even in patent cases, on a variety of grounds.²⁹⁸ Nevertheless, "permitting public access to inventions crucial to the public health and safety"²⁹⁹ has arguably become one of those factors, albeit in a seldom used, common-law accommodation of conflicting interests.

In this connection, issues of public health were raised in two infringement actions, one dealing with patents on stem cell separation technology,³⁰⁰ and the other with patents on diagnostic devices to detect a form of hepatitis.³⁰¹ The patent holders prevailed in both actions, and there was no express mention of public-interest considerations. Nevertheless, it seems worth noting that, in both cases, injunctive relief was narrowed to permit continuing infringement until the patent holders were either authorized to market the product in question,³⁰² or had actual capacity to meet some market demand for the patented products.³⁰³

Although there is no general public-interest licensing provision in United States patent law, and the federal courts remain reluctant even to consider nonvoluntary licenses outside the context of antitrust violations, a number of specialized statutes expressly authorize compulsory licensing on public interest grounds. Examples include the Clean Air Act of 1970,³⁰⁴ the Bayh-Dole Act of 1980 (concerning private patents on federally funded research results),³⁰⁵ the Plant Variety Protection Act of 1970,³⁰⁶ and the Atomic Energy Act of 1954.³⁰⁷ [Details omitted]

²⁹⁸ See, e.g., 35 U.S.C. §283 (2002); see generally, DRATLER, *supra* note 207, §3.03[2].

²⁹⁹ Lauroesch, *supra* note 285, at 49.

³⁰⁰ See *Johns Hopkins Univ. v. CellPro*, 978 F. Supp. 184 (D. Del. 1997).

³⁰¹ See *Hybritech Inc. v. Abbott Labs.*, 1987 U.S. Dist. Lexis 16768, 4 U.S.P.Q. 2d (BNA) 1001 (C.D. Cal. 1987).

³⁰² See *Johns Hopkins Univ. v. CellPro*, 978 F. Supp. at 184; see also Reichman with Hasenzahl, *Law and Practice of the U.S.*, *supra* note 88, at 95-97 (discussing request for compulsory license).

³⁰³ See *Hybritech Inc. v. Abbott Labs.*, 1987 U.S. Dist. Lexis 16768, at 5.

³⁰⁴ Clean Air Act of 1970 §308, P.L. 91-604, §12, 84 Stat. 1708 (codified at 42 U.S.C. §7608 (2002)).

³⁰⁵ Bayh-Dole Act, Act of 12 Dec. 1980, P.L. No. 96-517, §6(a), 94 Stat. 3015, 3019-28 (codified at 35 U.S.C. §§200-212 (2002)).

³⁰⁶ Plant Variety Protection Act of 1970, P.L. 91-577, Title II, ch.4, §44, 84 Stat. 1547, amended by Act of 6 Oct. 1994, P.L. 103-349, §2, 108 Stat. 3136 (codified as amended at 7 U.S.C. §2404 (2002)).

³⁰⁷ Atomic Energy Act of 1954, ch.1073, Title I, ch.13 §153, 68 Stat. 945 (codified as amended at 42 U.S.C. §2183 (2002)).

Of these specialized statutes, the most relevant for developing countries is the compulsory license provision of the Plant Variety Protection Act. Concerns about the security of the country's food supply underlie the compulsory license provision incorporated into the Plant Variety Protection Act of 1970 (PVPA).³⁰⁸ Under this provision, which was retained in the 1994 amendment,³⁰⁹ the Secretary of Agriculture "may declare a protected variety open to use on the basis of equitable remuneration to the owner," when he determines this to be necessary "in order to ensure an adequate supply of fiber, food or feed in this country and that the owner is unwilling or unable to supply the public needs for the variety at a price which may reasonably be deemed fair."³¹⁰ Any license under this provision must terminate after two years, and the amount of remuneration remains subject to judicial review.³¹¹

It appears that this provision was adopted to deal with national emergencies, such as "a corn blight affecting all types of corn except a patented variety that the patentee is unwilling to license."³¹² Hence, its lack of use may simply reflect the absence of any such emergencies since the statute was adopted.

2. Relevance to South Africa

It appears that South Africa, like the United States, has no general public interest compulsory license provision, nor has it emulated the United States in enacting specialized enabling statutes to the same end. In view of the South African government's newly announced AID's policy, it would be well advised to fill this gap by enacting appropriate statutory provisions either on the generalized model used by European countries or on a specialized model, like those of the United States, but with specific regard to medicines, public health, and perhaps food.³¹³ In the meantime, the South African law does allow courts to take the public interest into account when determining whether a patentee's refusal to license or failure to license on reasonable terms amounts to "abuse" under section 56 of the Patent Act of 1978 or an abuse of dominance under section 8 of the Competition Act.

³⁰⁸ See Plant Variety Protection Act (PVPA) of 24 Dec. 1970, P.L. 91-577, title III, ch. 14, 84 Stat. 1558 (codified as amended at 7 U.S.C. §§2401, *et seq.* (2002)) [hereinafter PVPA].

³⁰⁹ Act of 6 Oct. 1994, P.L. 103-349, §2 108 Stat. 3136

³¹⁰ PVPA, *supra* note 307, §2404.

³¹¹ See *id.*

³¹² Lauroesch, *supra* note 285, at 55.

³¹³ See *supra* note 305; *cf.*, Reichman, *The Canadian Experience*, *supra* note 18.

If a public interest rationale is used, the question of determining “adequate remuneration” arises under article 31(h) of the TRIPS Agreement when compulsory licenses are imposed on foreign patentees. In our view, the royalties paid for public interest compulsory licenses should be higher than those applicable to cases of abuse or antitrust violations, which may be largely punitive or cautionary in nature, and lower than those paid in cases of private infringement where high royalties serve to deter future law breakers. At the same time, we find no compelling reason why a public-interest royalty should ever exceed the rates paid for government use (discussed below); and there are reasons why such licenses might sometimes be justified at lower rates than those applicable to government use, for example, when numerous firms selling the product at lower prices are likely to confer multiplier or lottery benefits on a patentee that he would not otherwise have obtained.

Our study of government use shows that until 1993, royalties averaged about 6 per cent of gross sales, with a high of 10 per cent. After 1993, a different, more refined calculus was used (“*Georgia Pacific* factors”), which has led to higher rates. The highest we have found was 17 per cent, with a rate of 10 per cent more common than before. This would give an initial range of 0-3 per cent to 17 per cent.

However, when a refined calculus like that of the *Georgia Pacific* factors is used, we believe that additional public interest factors applicable to developing countries should also apply such as the per capita GDP and the ability of the relevant populace to afford the needed products, especially medicines. Such factors could greatly reduce the upper limit of the calculus for reasonable royalties. These topics are discussed further below, in connection with government use.

3. Concluding Observations

The foregoing review of United States practice with regard to the nonvoluntary licensing of patented inventions on public interest grounds is instructive when viewed from the developing countries’ perspective. It reveals, for example, that even though the United States lacks the kind of general public-interest licensing statute that other developed countries have enacted, it does not hesitate to “permit the granting of involuntary licenses to private individuals” when specific intellectual property subject matter is deemed to be of particular public interest.³¹⁴ Moreover, the subject matter areas in which Congress has enacted ad hoc compulsory licensing authority are precisely those of importance to developing countries, *viz*, public health and welfare, technology transfer, environmental protection, food security, and national defense. It follows that the United States trade authorities lack any credible standing to complain about statutes of other

³¹⁴ Lauroesch, *supra* note 285, at 46-47.

countries that authorize public interest compulsory licensing on comparable grounds for comparable policy objectives.

At the same time, having the power to impose such licenses and actually exercising that power are two different things, and it seems clear that neither the United States nor those developed countries that enact general public interest enabling statutes have made extensive use of them.³¹⁵ On the contrary, such licenses are rarely imposed in developed countries, partly because the social costs of doing so are thought to outweigh the benefits, except in special circumstances. These costs are thought primarily to arise from the risk of diminishing the incentive to invest in research and development expenditures, especially if the grounds for public-interest licensing are vague and ill-defined,³¹⁶ or if the royalties awarded under such licenses are inferior to those available from voluntary licensing.³¹⁷

However, this concern may be less acute in developing countries with limited industrial capabilities. In these countries, the need to gain access to new technologies vital to economic development on reasonable terms and conditions must be balanced against the concerns of foreign investors and the risk of deterring either the licensing of advanced technology or the sale of patented products.³¹⁸

Finally, the paucity of cases in which nonvoluntary licenses have been issued on public-interest grounds even in countries that broadly permit them may conceal another practical reality that policymakers in developing countries should bear in mind. At bottom, the “threat of compulsory licensing encourages parties to grant licenses voluntarily,”³¹⁹ and as Stephen Ladas observed in 1975, “the threat of it usually induces the grant of contractual licenses on reasonable terms, and thus the [societal] objective ... is accomplished.”³²⁰

E. GOVERNMENT USE

When assertions are made about extensive compulsory licensing of patented inventions in United States practice, the source of law most logically being referenced is

³¹⁵ See, e.g., *id.* at 54-56.

³¹⁶ See, e.g., Fauver, *Comment, supra* note 89, at 679.

³¹⁷ See, e.g., Lauroesch, *supra* note 285, at 53. Compulsory licensing on public interest grounds may also put some undue pressure on patentees to rush to market. See *id.*

³¹⁸ See, e.g., Fauver, *Comment, supra* note 89, at 671; see generally KEITH MASKUS, INTELLECTUAL PROPERTY RIGHTS IN THE GLOBAL ECONOMY (2000) [hereinafter K. MASKUS]; J. H. Reichman, *Taking the Medicine, with Angst: An Economist's View of the TRIPS Agreement*, 4 J.I.E.L. 795 [hereinafter Reichman, *Review of MASKUS*].

³¹⁹ Fauver, *Comment, supra* note 89, at 671.

³²⁰ 1 S. LADAS, *supra* note 3 at 927 (discussing compulsory licenses for non-working of patents).

the government use provision, codified at section 1498 of the United States Code.³²¹ This provision empowers the government, or its contractors, to make any use or manufacture of a patented product or process “by or for the United States without license” and without incurring liability for infringement, other than a duty to pay “reasonable and entire compensation” to the patentee or his assignees for such use and manufacture.³²² It was, indeed, the necessity of accommodating the United States’ reliance on this power that ultimately led the TRIPS negotiators to enable WTO member states to grant compulsory licenses for virtually any purpose under article 31.³²³

When evaluating the workings of section 1498, one should understand that it does not empower the government to convert a patentee’s exclusive rights into the kind of nonexclusive use rights available to private third parties under a typical compulsory licensing provision imposed for reasons of public interest.³²⁴ In this respect, government use of patents and other intellectual property rights (including copyrights, plant breeders’ rights, and semiconductor chip design rights)³²⁵ under section 1498 is often understood to partake of the sovereign power of eminent domain, which inheres in every nation state.³²⁶ In the United States, the exercise of this power is subject to Constitutional guarantees of citizens’ rights and they are entitled to “just compensation” whenever private property is “taken” for a “public purpose.”³²⁷ Hence, courts and commentators often characterize section 1498 as “a compulsory license in eminent domain,” and the government is not treated on the same footing as an ordinary infringer in cases arising under the statute.³²⁸

³²¹ Act of 25 June 1948, ch. 646, §1, 62 Stat. 941 (codified as amended at 28 U.S.C. §1498 (2002)).

³²² See 28 U.S.C. §1498 (2002). See generally Lionel Marks Lavenue, *Patent Infringement Against the United States and Government Contractors Under 28 U.S.C. Section 1498 in the United States Court of Federal Claims*, 2 J. INTELL. PROP. L. 389 (1995).

³²³ See TRIPS Agreement, *supra* note 36, art. 31; J. WATAL, *supra* note 21, at 319-21; Reichman with Hasenzahl, *Historical Perspective*, *supra* note 1, at 10-11.

³²⁴ Reichman with Hasenzahl, *Law and Practice of the U.S.*, *supra* note 88 at 89-100.

³²⁵ See 28 U.S.C. §§1498(b), (d), (e) (2002). These provisions are beyond the scope of this study.

³²⁶ See, e.g., *Crozier v. Fried Krupp Aktiengesellschaft*, 224 U.S. 290, 307 (1912); see also Daniel R. Cahoy, *Treating the Legal Side Effects of CIPRO: A Reevaluation of Compensation Rules for Government Takings of Patent Rights*, 40 Am. Bus. L. J. 125, 143-44 (2002) (stating that government use provision of §1498 “has generally been recognized as incorporating eminent domain principles”); Thomas F. Cotter, *Do Federal Uses of Intellectual Property Implicate the Fifth Amendment?*, 50 Fla. L. Rev. 529, 571-72 (1998).

³²⁷ See U.S. CONST., AMEND. V; *McKeever v. United States*, 14 Ct. Cl. 396 (1878); *Tektronix, Inc. v. United States*, 552 F.3d 343, 346 (Ct. Cl. 1977), *cert. denied*, 439 U.S. 1048 (1978); Lavenue, *supra* note 565, at 469 (stating that Supreme Court, Court of Claims, Federal Circuit, Claims Court, and Court of Federal Claims have at various times all interpreted patent infringement claims under §1498(a) “as suits in eminent domain”).

³²⁸ See *Crozier v. Fried Krupp Aktiengesellschaft*, 224 U.S. 290 (1912); Lavenue, *supra* note 565, at 453 (characterizing claims for “direct infringement” under §1498 as “more properly a compulsory nonexclusive license in eminent domain”); see also Richard J. McGrath, *The Unauthorized Use of Patents by the United States Government or Its Contractors*, 18 AIPLA Q.J. 349, 352 (1991).

In the 1990s, however, the United States Court of Federal Claims twice rejected the notion that a section 1498 action constituted a “taking” under the government’s eminent domain power.³²⁹ It reasoned that the patent law’s grant of exclusive rights to inventors does not encompass the right to exclude the government from using a patented invention in the first place. On this approach, which is known as the “established statutory authority” theory of government appropriation,³³⁰ governmental use represents a power reserved to the state when it initially grants the patent.³³¹ Because “the government cannot ‘take’ what it already possesses,”³³² section 1498 “grants the government the absolute power to take a compulsory, non-exclusive license to a patented invention at will.”³³³

In its most recent pronouncements, the Federal Court of Claims has apparently retreated from this thesis. In two decisions handed down in 2002, this court has once more espoused the orthodox view that patent infringement by the government constitutes a government taking under an eminent domain theory, which arguably triggers the constitutional guarantees of “just compensation” under the Fifth Amendment.³³⁴

Regardless of which view prevails at any given time, there is clearly a serious tension, in both theory and practice, concerning the proper rationale for “government use” of patented inventions. If the authorities adopt an “eminent domain” theory of government appropriation, the resulting governmental use will be treated as a taking of private property for a public purpose, analogous to any taking of real property. In that event, patentees will logically claim high levels of compensation, including the recovery of lost profits, in order to deter the government from exercising its sovereign powers except in cases where an arm’s length negotiated license from the patentee proves infeasible or impossible to obtain.³³⁵

³²⁹ See *De Graffenried v. United States*, 29 Fed. Cl. 384, 388 (1993); *Brunswick Corp. v. United States*, 36 Fed. Cl. 204, 207-208 (1996).

³³⁰ See Cahoy, *supra* note 92 at 147-53.

³³¹ See *Brunswick*, 36 Fed. Cl. at 207-08; *De Graffenried*, 29 Fed. Cl. at 387-88. This analysis deviates from most of the prior case law and has elicited scholarly criticism. See, e.g., Cahoy, *supra* note 92; Cotter, *supra* note 325.

³³² *De Graffenried*, 29 Fed. Cl. at 387-88.

³³³ *Brunswick*, 36 Fed. Cl. at 207 (adding that “this exercise of the government’s right is not a ‘taking’ in violation of the Fifth Amendment, for the government has the statutory right to use a patented devise”).

³³⁴ See *Zoltek Corp. v. United States*, 51 Fed. Cl. 829, 838 (2002) (stating that “the Federal Circuit has repeatedly stated that patent infringement by the government constitutes a government taking under an eminent domain theory”); *Wright v. United States*, 53 Fed. Cl. 466, 469 (2002) (“Compensation is premised on a Fifth Amendment taking of a nonexclusive license under the patent.”).

³³⁵ See Cahoy, *supra* note 92, at 143. In practice, however, United States courts currently continue to resist a lost profits calculus in government use cases, despite an eminent domain rationale, and almost always opt

If instead, the “established statutory authority” theory of government appropriation is adopted, government use of patented inventions represents the exercise of a right inherently reserved to the government in the creation of intellectual property rights.³³⁶ The exercise of these rights, reserved at the time of the grant, is then not logically treated as either an “infringement” or a “taking,” but rather as the legitimate use of “a non-exclusive, nontransferable, irrevocable, paid-up license for the invention to practice it or have it practiced for or on the government’s behalf throughout the world.”³³⁷ On this theory, “patent owners have taken their grants with the knowledge that the government has the right to appropriate patent rights without prior authorization of the patent owner,” and the patentee’s claim to compensation would at best entitle him to a grant of reasonable royalties, which could even be limited to a nominal rate.³³⁸ Compensation in the form of lost profits, would never be made available under this approach.

The lesson for developing countries seems clear. In order to preserve the maximum degree of flexibility to deal with overriding public policy needs that may arise from time to time, governments in developing countries should uniformly espouse the “established statutory authority” rationale of government appropriation and avoid the “eminent domain” theory. In that event, the compensation due to foreign patentees subject to compulsory licenses for government use would be limited primarily by article 31 of the TRIPS Agreement which requires “adequate remuneration in the circumstances of each case, taking into account the economic value of the authorization.”³³⁹ While merely nominal royalties would probably not suffice,³⁴⁰ and national treatment must always be observed,³⁴¹ a reasonable royalty standard exercised in good faith and with due regard to the public policy goals prompting the invocation of government use provisions should normally pass muster. This approach thus leaves the domestic authorities with a broad range of options and should normally afford little possibility for patentees to claim

for a “reasonable royalty.” See Reichman with Haselzahl, *Laand Practice of the U.S.*, *supra* note 88, at 115-117.

³³⁶ See Cahoy, *supra* note 92, at 146-47.

³³⁷ *Id.*, at 146-47. The language quoted from Cahoy in the text is actually drawn from §§200, 202, 207, 209 of the Bayh-Dole Act, *supra* note 304, as amended Nov. 1, 2000.

³³⁸ Cahoy, *supra* note 92, at 148. In principle, this theory would also prevent injured patentees from claiming all the elements of compensation that might be available in a true eminent domain action, especially attorneys’ fees and litigation expenses. Lavenue, *supra* note 321, at 505-06. In practice, an amendment added in 1996 would allow independent inventors, nonprofit organizations, and businesses with fewer than 500 employees to recover costs and attorneys fees. See U.S.C. §1498(a) (2002).

³³⁹ TRIPS Agreement, *supra* note 36, art. 31(h).

³⁴⁰ See *id.*, art. 30.

³⁴¹ *Id.*, art. 3.1.

high royalties based on lost profits, as might more logically occur under “infringement” or “taking” rationales.

Developing countries should nonetheless take care not to abuse the exercise of their sovereign powers to impose compulsory licenses for government use. Otherwise they risk compromising economic development strategies that depend on foreign investment, or the licensing of patented technology, and on reliable imports of technologically advanced patented goods, and they could also undermine local incentives to innovate in some circumstances.³⁴²

1. The Statutory Framework of Section 1498

The operative language in the current version of section 1498(a) pertaining to government use of patented inventions provides as follows:

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. 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 other 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.³⁴³

The purpose of section 1498 is “to provide complete relief to a contractor from liability for any kind of patent infringement in manufacturing any item for the government.”³⁴⁴ This immunity, in turn, enables the government to purchase goods and services for performance of governmental functions without threat that work might not be

³⁴² See Reichman with Hasenzahl, *Historical Perspective*, *supra* note 1, at 24-27 (“Non-voluntary Licensing is a Two-Edged Sword”).

³⁴³ 28 U.S.C. §1498(a) (2002).

³⁴⁴ Lavenue, *supra* note 321, at 415. See, e.g., *Richmond Screw Anchor Co. v. United States*, 275 U.S. 331, 343 (1928) (stating that the precursor of section 1498 was intended “to relieve the contractor entirely from liability of every kind for the infringement of patents in manufacturing anything for the Government”); see also *Coakwell v. United States*, 372 F.2d 508, 510 (1967).

carried out because a supplier or contractor was enjoined from or feared suit for patent infringement.³⁴⁵

There are essentially five elements to a claim for compensation due to government use of patented inventions under section 1498, namely: (1) an invention described in and covered by a United States patent; (2) used or manufactured by or for the United States; (3) without license of the owner or lawful right to use or manufacture the same; (4) with remedy by action against the United States in the United States Court of Federal Claims; (5) for the recovery of reasonable and entire compensation for such use and manufacture.³⁴⁶

2. Reasonable and Entire Compensation

The statute requires payment of “reasonable and entire compensation” for the government’s use of a patent or copyright, and the right holder has a statutorily protected right to challenge the royalty determination before the Federal Court of Claims.³⁴⁷ In the face of an unlicensed use of a patented invention by the government, the patent holder may choose either to file an administrative claim with the relevant government agency, or to file a suit to recover reasonable and entire compensation in the Court of Claims pursuant to section 1498(a).³⁴⁸ While filing an administrative claim tends to be the least expensive course of action, such claims are frequently denied.³⁴⁹

³⁴⁵ See *Windsurfing Int’l, Inc. v. Ostermann*, 534 F. Supp. 581 (S.D.N.Y. 1982).

³⁴⁶ See 28 U.S.C. §1498(a) (2002); see also Lavenue, *supra* note 321, at 417-423. The Federal Circuit apparently regards §1498 as jurisdictional in suits against the United States that are filed in the Court of Federal Claims, while it sees the same provision as affording an affirmative defense to private litigants sued for patent infringement in the federal district courts. See *Manville Sales Corp. v. Paramount Systems, Inc.*, 917 F.2d 544, 554-55 (Fed. Cir. 1990). All the precedents confirm that the exclusive remedy for a patent infringement action against the United States remains in the Court of Federal Claims. See, e.g., *TVI Energy Corp. v. Blane*, 806 F.2d 1057, 1058 (Fed. Cir. 1986).

³⁴⁷ 28 U.S.C. §1498(a) (2002). See also *Penda Corp. v. United States*, 29 Fed. Cl. 533, 573 (1993), *appeal dismissed*, 44 F.3d 967 (Fed. Cir. 1994) (holding that the patent holder’s sole remedy under §1498 is for reasonable and entire compensation in the Court of Federal Claims).

³⁴⁸ See McGrath, *supra* note 327, at 354. In a case where the patent holder elects to file a claim with the relevant administrative agency before the government contract is signed, the agency can enter into an agreement with the patent holder for authorized use, with the licensing fee built into the value of the contract, although it is rare for an agency to do so. See *id.* (citing 48 C.F.R. §27.204-3; 10 U.S.C. §2386).

³⁴⁹ See McGrath, *supra* note 327, at 355. Administrative claims are typically made in the form of a letter to the relevant agency, and must include “(1) an allegation of infringement; (2) a request for compensation, either express or implied; (3) a citation of the patent or patents alleged to be infringed; (4) a sufficient designation of the allegedly infringement item; and (5) a designation of a least one claim alleged to be infringed.” See *id.* (citing 48 C.F.R. §227.7004).

If the patent holder fails to file a claim in one of the aforementioned ways, he is unlikely to receive compensation for the use.³⁵⁰ Moreover, litigation costs are not recoverable in these actions unless the patent holder is “an independent inventor, a nonprofit organization, or an entity that had no more than 500 employees at any time during the 5-year period preceding the use or manufacture of the patented invention by or for the United States.”³⁵¹ Once a claim for compensation is filed under section 1498 and the court has determined that the relevant patents were valid and infringed by the government, it must then determine “reasonable and entire compensation” for the unauthorized government use.

The term “entire” in Section 1498 does not bear on the amount of compensation. Rather, it indicates “the exclusivity of the jurisdiction of the Court of Claims in such matters, i.e., that the entire compensation would be awarded by that court and no other.”³⁵² But, as Professor Cahoy observes, that leaves open the question of how to determine “reasonable compensation,” which “is no more clear on its face than the ‘just compensation’ requirement of the Fifth Amendment.”³⁵³

a. Three Basic Formulas

In the absence of guidelines from the Supreme Court, the Federal Court of Claims has recognized three methods of determining compensation. These include: (1) the savings to the government resulting from the use of the patented invention; (2) lost profits of the patent holder; and (3) a reasonable royalty comparable to that available under a voluntary license.³⁵⁴

Courts disfavored and rarely used the cost savings form of compensation,³⁵⁵ because it “often involves excessive speculation as to the costs associated with using an unpatented alternative, the effects of competition, and market fluctuation. This renders

³⁵⁰ See, McGrath, *supra* note 327, at 354.

³⁵¹ 28 U.S.C. §1498(a) (2002) (as amended in 1996); see *Calhoun v. United States*, 453 F.2d 1385 (Ct. Cl. 1972).

³⁵² Cahoy, *supra* note 92, at 143 N. 75. See *Leesona Corp. v. United States*, 599 F.2d 958, 967 (Ct. Cl. 1997) (en banc).

³⁵³ Cahoy, *supra* note 92, at 143 N. 75.

³⁵⁴ See *Decca, Ltd. v. United States*, 453 F.2d 1156, 1167 (Ct. Cl. 1980), *cert. denied*, 454 U.S. 819 (1981); see also Lavenue, *supra* note 321, at 423-424.

³⁵⁵ See *Decca, Ltd. v. United States*, 453 F.2d 1156, 1172 (Ct. Cl. 1980), *cert. denied*, 454 U.S. 819 (1981); *Standard Mfg. Co., Inc. v. United States*, 42, Fed. Cl. 748, 758 (1999). But see *Dow Chemical Co. United States*, 36 Fed. Cl. 15 (1996), *rev'd in part on different grounds*, 226 F.3d 1334 (Fed. Cir. 2000).

the cost savings analysis inherently unreliable and unsound in many cases.”³⁵⁶ If, moreover, an “eminent domain” rationale is to be applied – as recent commentators recommend³⁵⁷ – the measure of compensation should not be what the government has gained, but rather what the patentee has lost.³⁵⁸

The methodology of determining compensation in section 1498 cases by awarding the patent holder lost profits is also infrequently used, usually because of the heavy burden of proof it places on the patent holder. Additionally, the validity of the approach has been called into question either because it “assumes a right to exclusivity which conflicts with the government’s power of eminent domain”³⁵⁹ or because it conflicts with the inherently reserved power of government use under the “established statutory authority” theory of compensation.³⁶⁰ Recent commentators have criticized this judicial bias against what they regard as “full” or “just” compensation and the common expectation that there is a “presumed discount” for government use.³⁶¹

To receive lost profits in a section 1498 action, the patent holder must show under a standard of “strictest proof” that it would have “actually earned and retained such profits on sales to the government.”³⁶² This requires a demonstration that, but for the infringement, the patent holder would have enjoyed the benefit that the government’s use denied it.³⁶³ This causation element requires the patent holder to demonstrate “(1) demand for the patented product, (2) absence of noninfringing alternatives, (3) manufacturing and marketing capacity to exploit the demand, and (4) the profit amount that would have been made.”³⁶⁴ Despite the dislike of the cost-savings and lost profits

³⁵⁶ *Brunswick Corp. v. United States*, 36 Fed. Cl. 204, 209 (1996).

³⁵⁷ See, e.g., Cahoy *supra* note 92, Cotter, *supra* note 325.

³⁵⁸ “The proper measure in eminent domain is what the owner has lost, not what the taker has gained.” *Leesona Corp. v. United States*, 220 Ct. Cl. 234, (Ct. Cl.), cert. denied, 444 U.S. 991, (1979). See also *Dow Chem. Co. v. United States*, 226 F.3d 1334, 1348 (Fed. Cir. 2000).

³⁵⁹ *Standard Mfg. Co., Inc. v. United States*, 42 Fed. Cl. 748, 758 (1999); *Brunswick Corp. v. United States*, 36 Fed.Cl. 204, 208 (1996).

³⁶⁰ See Cahoy, *supra* note 92, at 147-51.

³⁶¹ See *esp.* Cahoy, *supra* note 92, at 137 (criticizing the assumption that “government appropriation. . . will result in the use of the appropriated right in exchange for some payment or royalty rate that is far below the actual market value.” i.e., a “presumed discount” for government use.)

³⁶² *Standard Mfg. Co., Inc.*, 42 Fed. Cl. at 758 (citing *Tektronix, Inc. v. United States*, 552 F.2d 343, 349 (Ct. Cl. 1977), cert. denied, 439 U.S. 1048 (1978)).

³⁶³ *Standard Mfg. Co., Inc.*, 42 Fed. Cl. at 758 (citing *Kearns v. Chrysler Corp.*, 32 F.3d 1541, 1551 (Fed. Cir. 1994), cert. denied, 514 U.S. 1032 (1995)).

³⁶⁴ *Id.* There is no need for the deterrence afforded by the award of lost profits in government use cases (contrary to the use of such deterrence in infringement cases). See *Brunswick Corp. v. United States*, 36 Fed. Cl. 204, 208 (1996).

methodologies often expressed by the courts,³⁶⁵ both are factors to be considered in today's more favored determination of a reasonable royalty,³⁶⁶ which- as discussed below- requires an evaluation of many different factors.³⁶⁷

A pure "lost profits" calculus can give rise to very large compensatory awards.³⁶⁸ While only three cases are known to have relied entirely on this principle,³⁶⁹ those who support the "eminent domain" rationale also tend to favor the lost profits calculus and to criticize the "reasonable royalty" model that the courts continue to apply.³⁷⁰ As discussed below, moreover, there is a growing tendency to take lost profits into account when determining reasonable royalties, along with many other factors, which seems to have exerted upward pressure on the rates deemed reasonable in recent cases.³⁷¹

b. Comparative Royalties in General

A pro-competitive approach to government procurement after 1958 left patent holders far more dependent on judicial methods of calculating compensation under section 1498 than before, and especially on the determination of reasonable royalties, which became the preferred modality over time.³⁷² The courts are especially prone to use the method of comparative royalties when there is a voluntary rate from a past commercial licensing transaction available for comparison, as occurred in *Tektronix Inc. v. United States*.³⁷³ In such cases, the court may modify the reported voluntary rate either to increase or decrease it based on the factual circumstances at hand.

The *Tektronix* decision also provided guidance for the situation in which there was no ascertainable royalty rate by allowing a rate to be elected on the basis of royalty

³⁶⁵ "[F]or 68 years the government has successfully argued against the award of lost profits." David M. Schlitz & Richard J. McGrath, *Patent Infringement Claims Against the United States Government*, 9 FED. CIR. B. J. 351, 363 (2000) [hereinafter Schlitz & McGrath].

³⁶⁶ See *Standard Mfg. Co., Inc.*, 42 Fed. Cl. at 758.

³⁶⁷ See Reichman with Hasenzahl, *Law and Practice of the U.S.*, *supra* note 88, at 119-124.

³⁶⁸ For the economics of lost profit awards see Scherer & Watal, *supra* note 104, at 920-922.

³⁶⁹ See *Imperial Machine & Foundry v. United States*, 69 Ct.Cl. 667, 669-670 (Ct.Cl. 1930); *Waite v. United States*, 69 Ct.Cl. 153, 157-158 (Ct.Cl. 1930), *rev'd on other grounds*, 282 U.S. 508 (1931); *Welin Davit & Boat Corp. v. United States*, 78 Ct.Cl. 772, 780-781, 787 (1934).

³⁷⁰ See Cahoy, *supra* note 92; Cotter, *supra* note 325.

³⁷¹ See Reichman with Hasenzahl, *Law and Practice of the U.S.*, *supra* note 88, at 123-124.

³⁷² See *Penda Corp. v. United States*, 29 Fed. Cl. 533, 573 (1993), quoting *Decca Ltd. v. United States*, 640 F.2d 1156, 1172 (Ct. Cl. 1980), *cert. denied*, 454 U.S. 819 (1981).

³⁷³ 552 F.2d 343, 347 (Ct. Cl. 1977), *cert. denied*, 439 U.S. 1048 (1978).

rates for related patents.³⁷⁴ If there is no base royalty available for comparison, the Claims Court, which preceded the current U.S. Court of Federal Claims, then became willing to consider the royalty rate under a hypothetical license. “[T]he Section 1498 suit, in a sense, is a substitute for royalty negotiations that should have taken place at the time the invention was first manufactured or used by or for the government. In this context, it seems particularly appropriate to base the royalty on the outcome of a hypothetical negotiation that would have occurred at the time.”³⁷⁵

Determining a hypothetical licensing rate at reasonable royalties today entails a consideration of some fifteen or more distinct factors, which were originally set out in a private infringement action in a federal district court and were subsequently recognized by the Federal Circuit in 1991.³⁷⁶ These factors, known as the *Georgia Pacific* factors,³⁷⁷ were adopted by the United States Court of Federal Claims in a 1993 decision under section 1498,³⁷⁸ and this court has routinely applied them ever since. The factors constitute “[a] comprehensive list of evidentiary facts relevant, in general, to the determination of the amount of reasonable royalty for a patent license...drawn from a conspectus of the leading cases,”³⁷⁹ and they include:

- 1 current, established royalty rates under the patent at issue,³⁸⁰
- 2 royalty rates for comparable technology,³⁸¹
- 3 scope, exclusivity, and restrictiveness of a retroactive license,³⁸²

³⁷⁴ See *Tektronix, Inc. v. United States*, 552 F.2d 343, 349 (Ct. Cl. 1977), *cert. denied*, 439 U.S. 1048 (1978).

³⁷⁵ *DeGraffenried v. United States*, 25 Cl. Ct. 209, 221 (1992); *see also* Lavenue, *supra* note 286, at 423-424.

³⁷⁶ See *Georgia-Pacific Corp. v. United States Plywood Corp.*, 318 F. Supp. 1116, 1120 (S.D.N.Y. 1970), *modified*, F.2d. 295 (2d Cir.), *cert. denied*, 404 U.S. 870 (1971), *recognized by the Federal Circuit in Smith Kline Diagnostics Inc. v. Helena Labs. Corp.*, F.2d 1161, 1168 (Fed. Cir. 1991).

³⁷⁷ See *Georgia-Pacific Corp. v. United States Plywood Corp.*, 318 F. Supp. at 1120.

³⁷⁸ See *Penda Corp. v. United States*, 29 Fed. Cl. 533 (1993).

³⁷⁹ *Brunswick Corp. v. United States*, 36 Fed. Cl. 204, 211 (1996).

³⁸⁰ Developmental expenses may be considered as a floor in the determination of the hypothetical royalty. See *Penda Corp.*, 29 Fed. Cl. at 576 (citing *Leesona Corp. v. United States*, 599 F.2d 958, 978 (Ct. Cl. 1979)).

³⁸¹ It is the government that acts as the licensee for the purpose of the hypothetical negotiation. See *Penda*, 29 Fed. Cl. at 576. In cases involving infringement by a government contractor, the court in *Penda* noted that it would not be unreasonable to examine royalties paid by the contractor for similar technology in determining the hypothetical royalty rate. See *Penda*, 29 Fed. Cl. at 576.

³⁸² In *Motorola Inc. v. United States*, 729 F.2d 765, 768 (Fed. Cir. 1984), the Federal Circuit held that the government is in the position of “a compulsory, nonexclusive licensee” in §1498 cases. See *Motorola*, 729 F.2d at 768. This factor may therefore be relatively less important in the context of §1498 cases.

4 the patent holder's established licensing and marketing practices;³⁸³
5 commercial/competitive relationship of licensor and licensee;³⁸⁴
6 derivative/convoys sales of unpatented, accompanying materials by
patentee and competitors;³⁸⁵
7 duration of patent and license terms;
8 profitability and commercial success of invention;³⁸⁶
9 utility and advantages of invention over prior art;
10 nature, character, and benefits of use;
11 extent and value of infringing use;
12 allocation of a portion of profits or sales for use of invention;
13 portion of realizable profits creditable to the invention alone;³⁸⁷
13 expert testimony on royalty rates; and
14 the totality of other intangibles impacting a hypothetical negotiation
between a willing licensor and licensee.³⁸⁸

³⁸³ In the specific context of a §1498 claim, *Leesona Corp. v. United States*, 599 F.2d 958, 978 (Ct. Cl. 1979), held that a patent holder's reluctance could be considered in determining reasonable and entire compensation for government use. "The court held that although the license agreement was deemed to involve a willing licensor, that licensor is still the plaintiff and embodies all of the plaintiff's particular interests. Moreover, the court justified its decision by reference to the general law of eminent domain, in which the property is regarded from the point of view of the owner." See *Penda*, 29 Fed. Cl. at 578 (describing the holding in *Leesona Corp. v. United States*, 599 F.2d at 976-77).

³⁸⁴ This is another factor where, in the case of a government contractor's use of the patent "for" the government, it is appropriate to consider the government contractor as the licensee. See *Tektronix, Inc. v. United States*, 552 F.2d at 349.

³⁸⁵ A "convoys sale occurs when the sale of the patented product naturally brings with it some additional component," such as good publicity. *Penda*, 29 Fed. Cl. at 579-80.

³⁸⁶ "In the context of a section-1498 action, exploitation of the commercial market is usually not an objective...Even from the perspective of the manufacturer of the infringing item, the conditions in the commercial market are of little import. Absent a license from the patentee, the manufacturer of the infringing articles may not exploit the patent except for government use until the patent term expires. The factor would be significant, however, in determining what value the reasonable licensor would place on the patent. The license is valued from the perspective of the licensor. In this case, plaintiff invested significant quantities of time and money in developing a product that, based on the need perceived to exist by the inventors, it expected to be a commercial success." *Penda*, 29 Fed. Cl. at 580 (citing *Leesona Corp. v. United States*, 599 F.2d at 977).

Moreover, in analyzing the profitability of the invention used by the government, courts have made a distinction between pioneer inventions and less valuable follow-on applications. See *Brunswick Corp. v. United States*, 36 Fed. Cl. 204, 214 (1996).

³⁸⁷ In the case of *Tektronix, Inc. v. United States*, in determining "the amount an infringer would have been willing to pay, the court took the selling price of the article, deducted both fixed and variable manufacturing costs to find gross profit, then allocated to the infringer its 'normal' profit and assigned the rest to the patentee as royalty. This reasoning would seem to assume implicitly that the selling price of the article in some way incorporates the value of the property taken, so that the manufacturer would be making more on this sale than it otherwise would have." See *Penda*, 29 Fed. Cl. at 585 (citing *Tektronix*, 552 F.2d at 349).

³⁸⁸ See generally *Brunswick Corp. v. United States*, 36 Fed. Cl. 204, 211 (1996) (restating the factors articulated in *Georgia-Pacific Corp. v. United States Plywood Corp.*, 318 F. Supp. 1116, 1120 (S.D.N.Y.

While highly probative, the *Georgia Pacific* factors do not constrain a court in its estimation of reasonable compensation, and still other factors may be taken into account.³⁸⁹ Even when the court determines a reasonable hypothetical royalty, in this fashion, moreover, it may compare the result with the amount of compensation that the patent holder would be due under the different accounting methodologies of awarding cost savings and lost profits.³⁹⁰

c. Applying the Georgia Pacific Factors

Determination of a reasonable royalty first requires the court to ascertain a “compensation base” to which any royalty rate would be applied.³⁹¹ It will then use the *Georgia Pacific* factors to set a specific royalty rate.

(1) The Compensation Base

The problem here is that a patented invention may constitute only one component of a larger whole. When the government takes the patent, the patentee normally claims compensation for the ensemble, and the courts have been sympathetic to such claims.³⁹² However, demarking the limits of the actionable ensemble may pose difficult questions.

In principle, courts apply an “entire market value rule” to determine which, if any, unpatented components should be included in the compensation base. This method “allows the recovery of damages based on the value of an entire apparatus containing several features, even though only one feature is patented.”³⁹³

However, to avoid overcompensation, the court must carefully evaluate how far outside of the patented invention the royalty base should extend. The least controversial

1970), recognized by the Federal Circuit in, *SmithKline Diagnostics, Inc. v. Helena Labs. Corp.*, 926 F.2d 1161, 1168 (Fed. Cir. 1991)).

³⁸⁹ “While the *Georgia Pacific* factors are often probative of a reasonable royalty rate, the court is neither constrained by them nor required to consider each one where they are inapposite or inconclusive.” *Brunswick Corp. v. United States*, 36 Fed. Cl. 204, 211-222 (1996).

³⁹⁰ See *De Graffenried v. United States*, 25 Ct. Cl. 209 (1992); *Standard Mfg. Co. v. United States*, 42 Fed. Cl. 748 (1999).

³⁹¹ See *Gargoyles, Inc. v. United States*, 37 Fed. Cl. 95, 103 (1997). “It is axiomatic that a royalty rate can only have meaning when viewed relative to the base to which it is applied.” *Id.*

³⁹² See *Lessona Corp. v. United States*, 220 Ct. Cl. 234, 262-264 (1979); *Brunswick Corp. v. United States*, 36 Fed. Cl. 204, 211 (1996).

³⁹³ *Paper Converting Machine Co. v. Magna-Graphics Corp.*, 745 F.2d 11, 22 (Fed.Cir. 1984).

results occur when courts include in the royalty base patented and unpatented components that function together to achieve the desired functional result.³⁹⁴

The Court of Claims, however, has experimented with a more controversial test of “financial and marketing dependence” rather than simple physical joinder of the components, as the test to determine whether an unpatented item should be included in the royalty base under the entire market value rule.³⁹⁵ This test focuses on the extent to which the expected financial returns depend on the marketing of the ensemble rather than of the patented article alone. If the courts wholeheartedly embrace this test, it could considerably expand the compensation base to which the percentage royalty rates ultimately apply.

At present, according to Schlitz and McGrath, spare parts “are generally not considered to be part of the royalty base.” Even here, however, there may be an exception for “first-time spare parts.”³⁹⁶

(2) *Setting the Royalty Rate*

Those plaintiffs who succeed in overcoming the procedural and substantive obstacles on the road to compensation under section 1498, including aggressive government challenges to patent validity, may collect large and sometimes staggering sums of money, even when the royalty rate is low. For example, the protracted litigation concerning the government’s use of Hughes Aircraft’s patents on space vehicle stabilization technology resulted in a 1 per cent royalty computed on a base of \$3.577 billion.³⁹⁷ Because the litigation lasted some twenty years, moreover, the court added delay compensation averaging more than 7.5 per cent interest a year, compounded annually, for the period 1973-1980, and about 2 per cent annual interest, compounded daily, for the period 1980-1996.³⁹⁸

³⁹⁴ See *Wright v. US*, 53 Fed. Cl. 466, 470 (2002); see also *Rite-Hite Corp. v. Kelley Co., Inc.*, 56 F.3d 1538, 1549 (Fed. Cir. 1995).

³⁹⁵ See *Leesona Corp. v. United States*, 220 Ct. Cl. 234, 262 (1979) (stating that the test for whether an unpatented item should be included in the royalty base should look beyond physical joinder to its “financial and marketing dependence on the patented item under standard marking procedures for the goods in question.”); see also *Brunswick Corp. v. United States*, 36 Fed.Cir. 204, 211 (1996); *Paper Converting Machine Co. v. Magna-Graphics Corp.*, 745 F.2d 11, 22-23 (1984).

³⁹⁶ Schlitz & McGrath, *supra* note 364, at 365.

³⁹⁷ See *Hughes Aircraft Co. v. United States*, 86 F.3d 1566, 1569 (Fed. Cir. 1996). There are twelve court decisions related to this claim.

³⁹⁸ See *Hughes Aircraft Co. v. United States*, 86 F.3d 1566, 1569 (Fed. Cir. 1996) (citing *Tektronix, Inc. v. United States*, 552 F.2d 343 (Ct. Cl. 1977); see also *Miller v. United States*, 620 F.2d 812 (Ct. Cl. 1980); *Bendix Corp. v. United States*, 676 F.2d 606 (Ct. Cl. 1982)). For discussion of delay compensation, see Reichman with Hasenzahl, *Law and Practice of the U.S.*, *supra* note 88 at 124-126.

Before the *Georgia Pacific* factors were applied in 1993, it appears that royalty rates of 6 per cent were commonly applied and in 1991, McGrath reported finding no case in which the royalty rate exceeded 10 per cent.³⁹⁹ In one of the last important cases before 1993, *DeGraffenried v. United States*,⁴⁰⁰ the court imposed an up-front payment of \$150,000 plus a 5 per cent royalty on each lathe delivered under the contract. It seems worth noting that this decision was one of two opinions that rejected the “eminent domain” rationale in favor of the “established statutory authority” theory of government appropriation.⁴⁰¹

Since 1993, however, when courts began rigorously applying the *Georgia Pacific* factors under an “eminent domain” rationale, there has been a marked upward trend in the rates applied. For example, in a 1997 case that went to the Federal Circuit, the court upheld a royalty rate of 10 per cent on the bulk of the infringing articles and 50 per cent on a small portion of a government contract covering the development phase.⁴⁰² In 1999, the Court of Federal Claims awarded a 16.31 per cent royalty,⁴⁰³ and in 2000, it approved an award of 15 per cent of the benefit conferred by use of the patent in view of the importance of the patent itself.⁴⁰⁴ This award was subsequently challenged by the Federal Circuit.⁴⁰⁵ The highest known percentage rate appears to have been awarded in *Brunswick Corp. v. United States*,⁴⁰⁶ where the plaintiff obtained 17 per cent of the total cost of procurement, including closely related unpatented items under the “entire market value rule” discussed above. The value of this award totaled \$17,325,000.⁴⁰⁷

One factor in these cases may be a greater willingness of the courts to consider lost profits and cost savings by the back door, i.e., by giving more weight to them as *Georgia Pacific* factors than in the past. For example, one court applying these factors started with a low baseline rate of 4.31 per cent, which jumped another 4 per cent when the court evaluated factor 11, viz, “the extent and value of the infringing use,” which

³⁹⁹ See McGrath *supra* note 364, at 359; Scherer & Watal, *supra* note 104, at 922.

⁴⁰⁰ *DeGraffenried v. United States*, 25 Ct. Cl. 209 (1992).

⁴⁰¹ See Reichman with Hasenzahl, *Law and Practice of the U.S.*, *supra* note 88, at 102.

⁴⁰² *Gargoyles, Inc. v. United States*, 113 F.3d 1572 (Fed.Cir. 1992).

⁴⁰³ *Standard Manufacturing Co. v. United States*, 42 Fed. Cl. 748 (1999).

⁴⁰⁴ *Dow Chemical Co. v. United States*, 36 Fed. Cl. 15 (1996), *rev'd in part on other grounds*, 226 F.3d 1334 (Fed. Cir. 2000).

⁴⁰⁵ *Dow Chemical Co. v. United States*, 226 F.3d 1334, 1348 (Fed. Cir. 2000).

⁴⁰⁶ 36 Fed. Cl. 204 (1996).

⁴⁰⁷ Schlitz & McGrath, *supra* note 364 at 359.

reflects cost savings. By the time all the factors were evaluated one by one, including factor 8, *viz*, lost profits, the royalty rate had climbed to 16.31 per cent.⁴⁰⁸

It should also be noted that the government's proposed royalty rates in these cases were generally quite low, often ranging from 0.5 per cent to 5 per cent of the cost of the patented items.⁴⁰⁹ The higher rates actually awarded, when compared to the pre-*Georgia Pacific* norm of 6 per cent, would thus seem to reflect a judicial shift toward fuller compensation.⁴¹⁰

III. NOTES ON REASONABLE ROYALTIES FOR SOUTH AFRICA

In determining reasonable royalties for government use as well as in competition cases, South Africa may find the *Georgia Pacific* factors of some relevance, but they should not be blindly applied. The *Georgia Pacific* factors tend to capture key aspects of the private rights holders interests, but they ignore equally key offsetting factors bearing on the public interest. For example, developing country evaluators would be advised to take account of the following additional factors:

- 1) Particular social impact of the invention such as the therapeutic value of a pharmaceutical product;
- 2) Per capita GDP and the ability of the general population to pay for needed or essential products;
- 3) The existence of crises or emergency conditions, such as environmental disasters or epidemics threatening public health;
- 4) Vital needs of national economic development, national security, or the like;
- 5) The extent to which the underlying research and development was covered by public funds in either the country of origin or the importing country;
- 6) The extent to which the investment in research and development was directed at developing countries, or made

⁴⁰⁸ *Standard Manufacturing Co. v. United States*, 42 Fed. Cl. 748, 777 (1999).

⁴⁰⁹ See *Schlitz & McGrath*, *supra* note 364, at 359.

⁴¹⁰ *Cf. id.*, at 364 (stating that, under the *Georgia Pacific* factors, "the court has made very generous awards to plaintiffs").

in the country imposing the compulsory license, which would pull for a higher royalty;

7)The extent to which imposition of a compulsory license would broaden consumption beyond that likely to occur under an exclusive license, and this broadening of consumption (or of producers) could yield a multiplier or lottery effect that would translate into revenues beyond investment-backed expectations.

These and other public interest factors should be weighed against those of the *Georgia Pacific* factors to arrive at a reasonable royalty tailored to the different circumstances found in developing countries.

If the American experience is used as a base, reasonable royalties could range from a low of zero to 3 per cent in antitrust cases to a high of 17 per cent given in one recent government use case. The norm for government use prior to 1993 was, however, 6 percent, and even now, it seems hard to obtain more than 10 percent under the *Georgia Pacific* factors, although rates of 16 and 17 per cent are reported. We believe that, if the offsetting factors listed above are applied, royalties in a government use context may range between 4 and 8 per cent of the price the government charges the public, depending on the circumstances that motivated public noncommercial use in the first place.

⁴¹¹ 28 U.S.C. §1498(a) (2002).

⁴¹² See *Hughes Aircraft, Inc. v. United States*, 31 Fed. Cl. 481, 492 (1994); Lavenue, *supra* note 286, at 424-425.

⁴¹³ *Brunswick Corp. v. United States*, 36 Fed. Cl. 204, 218-19 (1996).

⁴¹⁴ *Brunswick Corp. v. United States*, 36 Fed. Cl. 204, 219 (1996) (citing *Kirby Forest Indus. v. United States*, 467 U.S. 1, 10 (1994); *Dynamics Corp. of America v. United States*, 766 F.2d 518, 520 (Fed. Cir. 1985); *Whitney Benefits, Inc. v. United States*, 30 Fed. Cl. 411, 413 (1994)). The Federal Circuit has approved the compounding of interest in the calculation of delay compensation. See *Hughes Aircraft v. United States*, 86 F.3d 1566, 1575-76 (Fed. Cir. 1996); *Dynamics Corp. of America v. United States*, 766 F.2d 518, 520 (Fed. Cir. 1985).

⁴¹⁵ Act of 18 May 1933, ch. 32, §19, 48 Stat. 68 (codified as amended at 16 U.S.C. §831r (2002)).

⁴¹⁶ Act of 30 Aug. 1954, ch. 1073, Title I, Ch. 13, §151, 68 Stat. 943 (codified as amended through 1999 at 42 U.S.C. §2181 (2002)) (“Inventions relating to atomic weapons, and filing of reports”).

⁴¹⁷ Pub.L. No. 96-517, §6(a), 94 Stat. 3015, 3019-28 (1980), codified as amended at 35 U.S.C. §§200-212 (2000).

⁴¹⁸ See generally Lavenue, *supra* note 321, at 436 n. 271.

⁴¹⁹ See Lavenue, *supra* note 321, at 436-37.

⁴²⁰ See Reichman with Hasenzahl, *Law and Practice of the U.S.*, *supra* note 88 at 140-141.

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- ⁴²¹ See EINHORN, *supra* note 251, at §1.07[1].
- ⁴²² Tennessee Valley Authority Act, 16 U.S.C. §831 (2002) (emphasis supplied).
- ⁴²³ 16 U.S.C. §831r (2002).
- ⁴²⁴ See *id.*
- ⁴²⁵ 448 F. Supp. 1175 (W.D. Tenn. 1978).
- ⁴²⁶ *Alco Standard Corp. v. Tennessee Valley Authority*, 448 F. Supp. 1175, 1178 (W.D. Tenn. 1978).
- ⁴²⁷ See *Alco Standard Corp.*, 448 F. Supp. at 1179 (emphasis supplied).
- ⁴²⁸ See *Alco Standard Corp.*, 448 F. Supp. at 1179.
- ⁴²⁹ See Reichman with Hasenzahl, *Law and Practice of the U.S.*, *supra* note 88, at 93-97 (discussing 35 U.S.C. §203).
- ⁴³⁰ 35 U.S.C. §202(c)(4) (as amended through May 29, 2003), P.L. 108-30.
- ⁴³¹ See Cahoy, *supra* note 92 at 146 (“Due to the unique qualities of government-created property rights, it is possible for the government to set aside a means of appropriating such property that would not “implicate the protections of the Fifth Amendment,” which requires “just compensation” for government takings of private property).
- ⁴³² See Reichman with Hasenzahl, *Law and Practice of the U.S.*, *supra* note 88 at 105-117.
- ⁴³³ See 35 U.S.C. §202(b)(4) (final provisio).
- ⁴³⁴ See Reichman with Hasenzahl, *Law and Practice of the U.S.*, *supra* note 88 at 91-99.
- ⁴³⁵ Lavenue, *supra* note 565 at 436-37.
- ⁴³⁶ See 10 U.S.C. §2386 (2002).
- ⁴³⁷ See, e.g., 22 U.S.C. §526 (2002) (providing that the Army and Navy compensate patent owners for rights used in government contracts concerning war material); Lavenue, *supra* note 321, at 436-37 n. 271.
- ⁴³⁸ See *Robishaw Engineering v. United States*, 891 F. Supp. 1134, 1150 n. 41 (E.D. Va. 1995).
- ⁴³⁹ See Reichman with Hasenzahl, *Law and Practice of the U.S.*, *supra* note 88 at 140-141.
- ⁴⁴⁰ See 30 U.S.C. §937(b) (2002).
- ⁴⁴¹ Report of the National Institutes of Health (NIH) Working Group on Research Tools, presented to the Advising Committee to the Director, June 4, 1998, available at <http://www.nih.gov/news/researchtools>. See also 48 C.F.R. §27.104(1) (2001) stating that “[g]enerally, the government encourages the use of inventions in performing contracts and, by appropriate contract clauses, authorizes and consents to such use, even though the inventions may be covered by U.S. patents and identification against infringement may be appropriate”).
- ⁴⁴² Cahoy, *supra* note 92, at 135-36 (citing authorities).
- ⁴⁴³ See Lavenue, *supra* note 321, at 492n. 558.
- ⁴⁴⁴ See Lavenue, *supra* note 321, at 492.

⁴⁴⁵ See *id.* at 494-95 (noting 240 reported cases since 1949). Congress replaced 35 U.S.C. §68 with 28 U.S.C. §1498 in 1948. See *id.*

⁴⁴⁶ See Lavenue, *supra* note 321, at 494, 496 n.563 (noting an average of about five and one-half reported cases a year after 1949).

⁴⁴⁷ For this survey, a different database was used from that which Lavenue employed in 1994, and though the same case may have been reported several times on different issues, it was counted only once. Hence, any apparent decline (see *supra* note 445) might be statistically insignificant.

⁴⁴⁸ See Lavenue, *supra* note 321, at 501-02, 502 n. 576.

⁴⁴⁹ See *id.* at 500.

⁴⁵⁰ See 28 U.S.C. §1498(a) (allowing costs and attorneys' fees only to "independent inventors," small business concerns (under 500 employees), and nonprofit entities (such as universities)).

⁴⁵¹ See *Crozier v. Fried, Krupp Aktiengesell-Schaft*, 224 U.S. 290 (1911).

⁴⁵² See *Olsson v. United States*, 87 Ct. Cl. 642 (1938) (holding that the patent owner was entitled to the fair and reasonable value of the license appropriated by the government and not just the value of the taking to the government).

⁴⁵³ See *Marconi Wireless Telephone Co. of America v. United States*, 99 Ct. Cl. 1 (1942) (awarding compensation based on cost savings to the government for use of the Marconi patent from July 1910 to Nov. 1919, and a 10 per cent royalty on the market value of the Lodge patent from 1913 to 1915, plus delay compensation at 5 per cent a year). See also *Waite v. United States*, 69 Ct. Cl. 153 (1930) (components of x-ray units for Army); *Waite v. United States*, 282 U.S. 508 (1931) (attaining recovery below and adding delay interest to make compensation "entire").

⁴⁵⁴ See Merges, *Blocking Patents*, *supra* note 282, at 84-89.

⁴⁵⁵ See *Fauber v. United States*, 81 F. Supp. 218 (Ct. Cl. 1948).

⁴⁵⁶ See *Saulnier v. United States*, 314 F.2d 950 (Ct. Cl. 1963).

⁴⁵⁷ See *Rolls-Royce Ltd. v. United States*, 364 F.2d 415 (Ct. Cl. 1966).

⁴⁵⁸ See *Coakwell v. United States*, 372 F.2d 508 (Ct. Cl. 1967); see also *Calhoun v. United States*, 453 F.2d 1385 (Ct. Cl. 1972) (O-Rings used to prevent fluid leakage).

⁴⁵⁹ See *Pitcairn v. United States*, 547 F.2d 1106 (Ct. Cl. 1976).

⁴⁶⁰ See *Jamesbury Corp. v. United States*, 207 U.S.P.Q. (BNA) 131 (Ct. Cl. 1980).

⁴⁶¹ See *Decca Ltd. v. United States*, 640 F.2d 1156 (Ct. Cl. 1980).

⁴⁶² See *Motorola, Inc. v. United States*, 729 F.2d 765 (Fed. Cir. 1984); see also *Bendix Corp. v. United States*, 676 F.2d 606 (Ct. Cl. 1982) (fuel metering control system used in jet aircraft).

⁴⁶³ See *Gargoyles, Inc. v. United States*, 113 F.3d 1572 (Fed. Cir. 1997); see also *Rockwell Int'l, Inc. v. United States*, 31 Fed. Cl. 536 (1994) (night vision equipment).

⁴⁶⁴ See *Fike Corp. v. United States*, 41 Fed. Cl. 776 (1998).

⁴⁶⁵ See *Standard Mfg. Co., Inc. v. United States*, 42 Fed. Cl. 748 (1999).

⁴⁶⁶ See *Hughes Aircraft Co. v. United States*, 86 F.3d 1566 (Fed. Cir. 1996).

⁴⁶⁷ See *Chemical Separation Technology, Inc. v. United States*, 51 Fed. Cl. 771 (2002) (compensation has yet to be awarded in this case).

⁴⁶⁸ See *Shearer v. United States*, 101 Ct. Cl. 196 (1944).

⁴⁶⁹ See *Dow Chemical Co. v. United States*, 36 Fed. Cl. 15 (1996), *rev'd in part on other grounds*, 226 F.3d 1334 (Fed. Cir. 2000).

⁴⁷⁰ See *Hazeltine Corp. v. United States*, 820 F.2d 1190 (Fed. Cir. 1987) (patent holder was denied compensation because invention was reduced to practice during a government contract).

⁴⁷¹ See Reichman with Hasenzahl, *Law and Practice of the U.S.*, *supra* note 88, at 98-99, 129-133.

⁴⁷² See *Penda Corp. v. United States*, 29 Fed. Cl. 533 (1993).

⁴⁷³ See *Symorex, Inc. v. Siemens Indus. Automation*, Case No. 99-71803, 1999 U.S. Dist. LEXIS 15924 (E.D. Mich. 1 Oct. 1999) (denying patent holder injunctive relief to stop patent infringement by a government contractor).

⁴⁷⁴ See *Alco Standard Corp. v. Tennessee Valley Authority*, 448 F. Supp. 1175 (W.D. Tenn. 1978).

⁴⁷⁵ See Alfred B. Engelberg, *Increasing Access to Cipro: A Strategy for Rapid Creation of a Government Stockpile*, memo prepared for Senator Charles Schumer, 13 Oct. 2001.

⁴⁷⁶ See Engelberg, *supra* note 474.

⁴⁷⁷ See *id.* The FTC was reportedly investigating the payment to Barr, as well as other possible antitrust violations by Bayer. Additionally, several class action antitrust cases had been commenced on behalf of consumers. See *id.*

⁴⁷⁸ See *Striking a Balance on Patent Rights*, INT'L HERALD TRIB., 30 Oct. 2001, available at <<http://www.iht.com/cgi-bin/generic.cgi?template=articleprint.tmplh&articleid=37323>>. See also Cahoy, *supra* note 92, at 135-37.

⁴⁷⁹ See *Carter-Wallace, Inc. v. United States*, 196 Ct. Cl. 35 (Ct. Cl. 1971) (action brought by the patent holder to obtain reasonable compensation for the government's use of the patented medication).

⁴⁸⁰ See Engelberg, *supra* note 475.

⁴⁸¹ 806 F.2d 1057 (Fed. Cir. 1986).

⁴⁸² See Engelberg, *supra* note 475.

⁴⁸³ See, e.g. Cahoy, *supra* note 92, at 135-37; see also Cotter, *supra* note 325; Schlitz & McGrath, *supra* note 364.

The United States used section 1498 in the past to procure a cheaper generic version of a patented medicine. In *Carter-Wallace Inc. v. United States*, 204 Ct. Cl. 341 (1974) the military sought to make use of a medicine that implicated four patent claims held by Carter-Wallace. In 1967, the Veterans Administration (VA) began to make use of the medication Meproamate that was subject to the Carter-Wallace patent. The VA's decision to use this patent was taken in reaction to an allegedly abusive pricing scheme, which had made the price in the United States some 2000 per cent higher than the price of an

If the United States has used this tool primarily to promote stable and reasonably priced procurement for its defense industries, nothing impedes developing countries or least developed countries from applying similar tools to address other concerns of vital importance to them, such as health and welfare, or major economic development projects analogous to the Tennessee Valley project in the United States.⁴⁸⁶ Even in the United States, concerns about mounting health care costs have prompted a new legislative proposal, known as the Public Health Emergency Medicines Act, that would expressly empower the Secretary of Health and Human Services “to authorize use of the subject matter of . . . [any invention relating to health care] without authorization of the patent holder or any licensees of the patent holder if the Secretary makes the determination that the invention is needed to address a public health emergency.”⁴⁸⁷

In such cases, “reasonable remuneration for the use of the patent” would be paid, determined on the basis of the following criteria:

- (1) evidence of the risks and costs associated with the invention claimed in the patent and the commercial development of products that use the invention;
- (2) evidence of the efficacy and innovative nature and importance to the public health of the invention or products using the invention;

alternative form available in Denmark. See Donald G. McNeil, *NEW YORK TIMES*, 17 Oct. 2001, available at <http://www.nytimes.com/2001/10/17/health/policy/17ETHI.html>. The patented Carter-Wallace product cost \$34.25 for 500 capsules, while a Danish company produced the same quantity of pills for a mere \$1.55. However, there was a difference between the two drugs in that the patented medication was a long-acting formula.

The government opted to purchase the Danish version and paid Carter-Wallace a modest royalty for the use, but the patent holder eventually filed suit in the Court of Claims to recover “reasonable and entire compensation.” This claim proved unsuccessful, however, because the patent was found to be unenforceable due to violations of sections 1 and 2 of the Sherman Act, and because it was misuse to extend the monopoly beyond the scope of the patent. See *Carter-Wallace, Inc. v. Davis-Edwards Pharmacal Corp.*, 341 F. Supp. 1303 (E.D.N.Y. 1972).

This case seems to have triggered legislation limiting the government’s ability to resolve medical supply problems due to patents by means of certain imports. See Scherer & Watal, *supra* note 404, at 916 (stating that the practice of reimporting patented pharmaceuticals was ended by a rider attached to a foreign economic assistance bill in 1961 Public Law 87-195 §606(c)).

⁴⁸⁴ See TRIPS Agreement, *supra* note 36, art. 31(b).

⁴⁸⁵ See Reichman with Hasenzahl, *Law and Practice of the U.S.*, *supra* note 88, at 103-104.

⁴⁸⁶ See Reichman with Hasenzahl, *Law and Practice of the U.S.*, *supra* note 88, at 126-128.

⁴⁸⁷ See H.R. 3235, 107th Cong., 1st Sess., House of Representatives, Nov. 6, 2001, § 158(a) [hereinafter H.R. 3235].

- (3) the degree to which the invention benefitted from publicly funded research;
- (4) the need for adequate incentives for the creation and commercialization of new inventions;
- (5) the interests of the public as patients and payers for health care services;
- (6) the public health benefits of expanded access to the invention;
- (7) the benefits of making the invention available to working families and retired persons;
- (8) the need to correct anti-competitive practices; or
- (9) other public interest considerations.⁴⁸⁸

This bill would also allow the Secretary to permit “the use of a patent, without authorization of the patent holder or any licensees of the patent holder, to export medicines or other health care products that are needed to address global public health emergencies, when the legitimate rights of the patent holder are protected in the export market.”⁴⁸⁹ Still other proposals to enact compulsory licensing statutes that would facilitate access to “affordable prescription drugs and medical inventions” in the United States have recently been put forward.⁴⁹⁰

Finally, it is worth recalling in this context a sobering theme that has recurred throughout this study. While it remains true that compulsory licensing can effectively

⁴⁸⁸ H.R. 3235, *supra* note 486, Sec. 158(b).

⁴⁸⁹ *Id.* §158(c). The need to reconcile this provision with the TRIPS Agreement by regulation is recognized. *See id.*, §158(d).

⁴⁹⁰ *See* Affordable Prescription Drugs Act, H.R. 2927, 106th Cong., 1st Sess., House of Representatives, Sep. 23, 1999, § 158(a).

⁴⁹¹ *See, e.g.*, J. H. Reichman, *Patents and Public Health in Developing Countries: Bargaining Around the TRIPS Impasse*, Paper presented to the Conference on Access to Essential Medicines, University of Wisconsin School of Law, 8-10 Mar. 2002. As indicated above, even the eminent domain theory may be sidestepped by the rationale which views “government use” as the exercise of an inherent right that was never part of the bundle of rights conferred on patentees in the first place. *See* Reichman with Hasenzahl, *Law and Practice of the U.S.*, *supra* note 88 at 102-104.

⁴⁹² *See* TRIPS Agreement, *supra* note 36, art. 31.

⁴⁹³ *Cf., e.g.*, Joseph E. Stiglitz, Peter R. Orzag & Jonathan Orzag, “The Role of Government in a Digital Age,” Computer and Communications Industry Association, Washington, D.C. (2000); *see also* Dana G. Dalrymple, “International Agricultural Research as a Global Public Good,” USAID, unpublished manuscript (2002).

discipline patentees whose technologies are needed for vital endeavors of all kinds, it remains equally true that the exercise of such powers is a long way from developing and implementing a well-conceived national system of innovation.⁵⁰¹ Stimulating local innovation and fostering the economic policies to support it are, or ought to be, primary goals of all developing countries. It is the adoption of sound innovation policies, and a legal framework consistent with international intellectual property law to implement them, that will ultimately determine a developing country's long-term growth potential.⁵⁰² The use of nonvoluntary licensing of patented inventions for any legitimate purpose may ultimately stand or fall only insofar as it advances these higher policy goals.

⁴⁹⁴ See Reichman with Hasenzahl, *Law and Practice of the U.S.*, *supra* note 88, at 88.

⁴⁹⁵ See, e.g., TRIPS Agreement, *supra* note 36, art. 31(b) (permitting waiver of duty to negotiate “in cases of public non-commercial use”); see also *id.* art. 31(c) (apparently negating nonvoluntary licensing on “public interest” grounds “in the case of semi-conductor technology”).

⁴⁹⁶ See, e.g., K. MASKUS, *supra* note 317, at 143-70.

⁴⁹⁷ See, e.g., SUSAN SELL, PRIVATE POWER, PUBLIC LAW: THE GLOBALIZATION OF INTELLECTUAL PROPERTY RIGHTS, ch.6 (2003) (“Life After TRIPS: Aggression and Opposition”); see also SUSAN K. SELL, POWER AND IDEAS: NORTH-SOUTH POLITICS OF INTELLECTUAL PROPERTY AND ANTITRUST, ch. 1 (1998).

⁴⁹⁸ See Doha Declaration on Public Health, *supra* note 70.

⁴⁹⁹ See WTO Agreement, *supra* note 313, Annex 2: Understanding on Rules and Procedures Governing the Settlement of Disputes, 33 I.L.M. 112 (1994), art 23; *United States -- Sections 301-310 of the Trade Act of 1974*, Report of the Panel, WT/DS200/R (22 Dec. 1999).

⁵⁰⁰ See, e.g., J. H. Reichman & David Lange, *Bargaining Around the TRIPS Agreement: The Case for Ongoing Public-Private Initiatives to Facilitate Worldwide Intellectual Property Transactions*, 9 DUKE J. COMPAR. & INT'L L. 11 (1998); J. H. Reichman, *The TRIPS Agreement Comes of Age: Conflict or Cooperation with the Developing Countries?*, 32 CASE WESTERN RESERVE. J. INT'L L. 441, 463-470 (2000).

⁵⁰¹ See generally Richard R. Nelson and Nathan Rosenberg, *Technology Innovations and National Systems*, in NATIONAL INNOVATION SYSTEMS: A COMPARATIVE ANALYSIS 3-21 (Richard R. Nelson, ed. 1993).

⁵⁰² See further INTERNATIONAL PUBLIC GOODS AND TRANSFER OF TECHNOLOGY UNDER A GLOBALIZED INTELLECTUAL PROPERTY REGIME (K. Maskus & J. H. Reichman eds., forthcoming 2004).