

# Patent Declaration: Reasons and Purposes

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## INTRODUCTION

When the first modern patent laws were enacted during the Industrial Revolution, states were able to engage in the regulatory design process under conditions of high sovereignty. The patent system was expected to promote domestic industrialization, so the law was constructed along these lines. Ever since, states have continuously relinquished that sovereignty in the name of international commerce and trade. The growing opportunities for multinational companies to exploit their intellectual assets on international markets has given rise to persistent lobbying<sup>1</sup> toward the development of common rules, procedures, and minimum standards of intellectual property ('IP') protection. Today, states face an intricate legal regime made up of multilateral, regional, and bilateral agreements, which set more and more limits to their regulatory autonomy.

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1. See 2 WILLIAM A. FENNELL & JOSEPH W. TYLER, *THE GATT URUGUAY ROUND: A NEGOTIATING HISTORY (1986-1992)* 2249 *et seq.* (Terrence P. Stewart ed., 1993); Peter Drahos, *Global Property Rights in Information: The Story of TRIPS at the GATT*, 13 *PROMETHEUS* 62 (1995); PETER DRAHOS WITH JOHN BRAITHWAITE, *INFORMATION FEUDALISM* (2002); MICHAEL J. TREBILCOCK & ROBERT HOWSE, *REGULATION OF INTERNATIONAL TRADE* 406 *et seq.* (2d ed. 2002); DUNCAN MATTHEWS, *GLOBALISING INTELLECTUAL PROPERTY RIGHTS* 7 *et seq.* (2002); SUSAN K. SELL, *PRIVATE POWER, PUBLIC LAW: THE GLOBALIZATION OF INTELLECTUAL PROPERTY RIGHTS* (2003).

The Agreement on Trade-Related Aspects of Intellectual Property Rights<sup>2</sup> (“TRIPS Agreement”) marks a milestone in the evolution of that regime.<sup>3</sup> Unlike prior conventions,<sup>4</sup> which operated on the basis of reciprocity and thus left national sovereignty largely intact, the TRIPS Agreement introduced a very concrete notion of IP protection into international—and, consequently, national—law. The preamble to the TRIPS Agreement recognizes that IP rights are *private rights*, thereby implying that they ought to be protected by some sort of *property right*. The TRIPS Agreement even tells states how to define such rights in terms of the subject matter, the requirements and the scope of protection, and the exceptions and limitations thereto. In doing so, it wields considerable influence on how governments regulate their national innovation markets. Despite its roots in international trade law,<sup>5</sup> TRIPS is much more about market regulation than trade liberalization;<sup>6</sup> it is far more intrusive on states’ sovereignty than what would have been necessary in light of its overarching objective—i.e., liberalizing international trade by internalizing cross-border externalities.<sup>7</sup>

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2. Agreement on Trade-Related Aspects of Intellectual Property Rights, Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1C, 1869 U.N.T.S. 299 [hereinafter TRIPS Agreement].

3. See William Cornish & Kathleen Liddell, *The Origins and Structure of the TRIPS Agreement*, in TRIPS PLUS 20: FROM TRADE RULES TO MARKET PRINCIPLES 4 *et seq.* (Hanns Ullrich et al. eds., 2016).

4. Paris Convention for the Protection of Industrial Property, Mar. 20, 1883, as revised at Stockholm on July 14, 1967, 21 U.S.T. 1583 [hereinafter Paris Convention]; Berne Convention for the Protection of Literary and Artistic Works, Sept. 9, 1886; International Convention for the Protection of Performers, Producers of Phonograms and Broadcasting Organizations, Oct. 26, 1961, 496 U.N.T.S. 43; Treaty on Intellectual Property in Respect of Integrated Circuits, May 26, 1989, 28 I.L.M. 1483.

5. The TRIPS Agreement is part of Annex 1 to the Agreement Establishing the World Trade Organization, Apr. 15, 1994 [hereinafter WTO Agreement], just like the General Agreement on Tariffs and Trade, Oct. 30, 1947 [hereinafter GATT] and the General Agreement on Trade in Services, Apr. 15, 1994 [hereinafter GATS].

6. See William Cornish & Kathleen Liddell, *supra* note 3, at 3 *et seq.*; Hanns Ullrich, *The Political Foundations of TRIPS Revisited*, in TRIPS PLUS 20: FROM TRADE RULES TO MARKET PRINCIPLES, *supra* note 3, at 85 *et seq.*; Josef Drexl, *The Concept of Trade-Relatedness of Intellectual Property Rights in Times of Post-TRIPS Bilateralism*, in TRIPS PLUS 20: FROM TRADE RULES TO MARKET PRINCIPLES, *supra* note 3, at 53 *et seq.*; Matthias Lamping, *Intellectual Property Harmonization in the Name of Trade*, in TRIPS PLUS 20: FROM TRADE RULES TO MARKET PRINCIPLES, *supra* note 3, at 313 *et seq.*

7. Without harmonization, countries could free ride on the innovative capacities of others while not contributing to the social costs entailed in the development of these capacities (including access restrictions and, concomitantly, higher prices for IP protected goods and services). In theory, this distorts the conditions of interstate competition, because countries with weak(er) IP systems benefit from positive externalities created in countries with strong(er) IP systems. Harmonization levels the playing field by internalizing these cross-border externalities. This is also part of the explanation for why the TRIPS Agreement follows a *minimum standards* approach. If the goal is to internalize positive externalities, there is no need to worry about other countries granting *too much* protection. Unfortunately, this is likely to create a vicious circle. As soon as a country raises its level of protection beyond the agreed standards, it creates new positive externalities to its detriment. It will therefore try to induce other states to also raise their level of protection by arguing that this is the only way to restore the fairness of interstate competition and international trade. See *infra* note 20.

Although countries have learned to live with the TRIPS Agreement, none seem to be particularly happy with it.<sup>8</sup> For the industrialized world, the World Trade Organization (“WTO”)—which is responsible for the administration of the Agreement—has proven to be a brake as much as it used to be an accelerator. After the collapse of the Ministerial Conferences at Seattle in 1999 and Cancún in 2003, most developed countries turned their backs on the multilateral approach and pursued bilateral and regional free trade agreements (“FTAs”) among like-minded in order to further their interests in strong patent protection.<sup>9</sup> In turn, developing countries soon began to regret the *horse trade* they had concluded by committing themselves to increase their level of protection in return for a mere promise of market access (mainly to textile, apparel, and agriculture markets)<sup>10</sup> and a distant hope for technology transfer (mainly through trade in capital and technology goods, foreign direct investments, and licensing).<sup>11</sup> During the Uruguay Round, the TRIPS Agreement was propagated as a means to bridging the innovation gap between the developed and the developing world.<sup>12</sup> Today, it is increasingly suspected of having mainly served mercantilist interests of a few advanced economies.<sup>13</sup> Although economists support the view that stronger patent protection can be associated with an increase in foreign direct investment (“FDI”) and inbound licensing,<sup>14</sup> there are

8. See, e.g., GRAEME B. DINWOODIE & ROCHELLE C. DREYFUSS, A NEOFEDERALIST VISION OF TRIPS: THE RESILIENCE OF THE INTERNATIONAL INTELLECTUAL PROPERTY REGIME 14 *et seq.* (2012); Graham Dutfield, *North/South: An Asymmetric Global Market?*, in INTELLECTUAL PROPERTY AND MARKET POWER 180 *et seq.* (Gustavo Ghidini & Luis Mariano Genovesi eds., 2008); Peter K. Yu, *Five Disbarmonizing Trends in the International Intellectual Property Regime*, in 4 INTELLECTUAL PROPERTY AND INFORMATION WEALTH: ISSUES AND PRACTICES IN THE DIGITAL AGE 73, 77 *et seq.* (Peter K. Yu ed., 2007).

9. See JOSEF DREXL, HENNING GROSSE RUSE-KHAN & SOUHEIR, EU BILATERAL TRADE AGREEMENTS AND INTELLECTUAL PROPERTY: FOR BETTER OR WORSE? (2014); Henning Grosse Ruse-Khan et al., *Principles for Intellectual Property Provisions in Bilateral and Regional Agreements*, 44 INT’L REV. INTELL. PROP. COMP. L. 878 (2013); Susan K. Sell, *TRIPS Was Never Enough: Vertical Forum Shifting, FTAs, ACTA, and TPP*, 18 J. INTELL. PROP. L. 447 (2011).

10. See DINWOODIE & DREYFUSS, *supra* note 8, at 32; KEITH E. MASKUS, PRIVATE RIGHTS AND PUBLIC PROBLEMS: THE GLOBAL ECONOMICS OF INTELLECTUAL PROPERTY IN THE 21ST CENTURY 95 (2012); Thomas Dreier, *Shaping a Fair International IPR-Regime in a Globalized World: Some Parameters for Public Policy*, in INTELLECTUAL PROPERTY, PUBLIC POLICY, AND INTERNATIONAL TRADE 43, 50 (Inge Govaere & Hanns Ullrich eds., 2007).

11. See Keith E. Maskus & Jerome H. Reichman, *The Globalization of Private Knowledge Goods and the Privatization of Global Public Goods*, in INTERNATIONAL PUBLIC GOODS AND TRANSFER OF TECHNOLOGY UNDER A GLOBALIZED INTELLECTUAL PROPERTY REGIME 3, 11 (Keith E. Maskus & Jerome H. Reichman eds., 2005).

12. See Daniel Gervais, *Current Issues in International Intellectual Property Norm-Making*, in EU BILATERAL TRADE AGREEMENTS AND INTELLECTUAL PROPERTY: FOR BETTER OR WORSE? 5 (Josef Drexel et al. eds., 2014).

13. See, e.g., RICHARD NEWFARMER ET AL., GLOBAL ECONOMIC PROSPECTS AND THE DEVELOPING COUNTRIES: MAKING TRADE WORK FOR THE WORLD’S POOR 129 (2002); Phillip McCalman, *Reaping What You Sow: An Empirical Analysis of International Patent Harmonization*, 55 J. INT’L ECON. 161 (2001).

14. See Lee Branstetter et al., *Intellectual Property Rights, Imitation, and Foreign Direct Investment: Theory and Evidence* (Nat’l Bureau of Econ. Research, Working Paper No. 13033, 2007); Amy Jocelyn

not many signs of increased domestic innovation, technology transfer, or learning spillovers in the developing world.<sup>15</sup> The policy implications of patent protection in areas such as health, nutrition or education are, on the other hand, quite conspicuous.<sup>16</sup>

The evolution of international patent law is compounded by increasing imbalances and dysfunctionalities within the patent system itself.<sup>17</sup> In recent decades, the position of patentees has continuously been reinforced: the burdens and costs for applicants have been reduced, international prosecution has been facilitated, the subject matter of rights has been expanded, the scope of protection has been extended, and enforcement measures have been strengthened. On the other hand, the rights and interests of all others affected by the system—competitors, scientists, users, consumers, and the public at large—are rarely attended to. Thanks to its intriguing simplicity, the fallacy of *more* protection equals *more* innovation continues to exert a seemingly magical attraction on policymakers worldwide. The assumption that exclusivity is better at promoting innovation than competition is probably one of the biggest and most disconcerting misconceptions of modern patent law and policy—and yet, strong patent protection remains at the core of most legislators' innovation agenda.

While strong patent protection can be conducive to the development of an economy or industry, it can also have the opposite effect. Patent systems are

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Glass & Kamal Saggi, *Intellectual Property Rights and Foreign Direct Investment*, 56 J. INT'L ECON. 387 (2002); Pamela J. Smith, *How Do Foreign Patent Rights Affect U.S. Exports, Affiliate Sales and Licenses?*, 55 J. INT'L ECON. 411 (2001).

15. See MASKUS, *supra* note 10, at 314. However, in the vast majority of cases, this does not come as a surprise. Knowledge is a good to be collected, not a debt to be provided. Technology transfer across borders will only take place where the receiving country offers attractive innovation and investment conditions. Patent rights can be an effective means of supporting FDI and inbound licensing, but they are only one—very often overestimated—element in a far broader set of influences that define the attractiveness of a foreign market, including political and social stability, taxation, investment law, commercial and corporate law, trade law, the labour market, or competition law. See Keith E. Maskus, *The Role of Intellectual Property Rights in Encouraging Foreign Direct Investment and Technology Transfer*, 9 DUKE J. COMP. & INT'L L. 109 (1998). For empirical evidence, see Edwin Mansfield, *Unauthorized Use of Intellectual Property: Effects on Investment, Technology Transfer, and Innovation*, in GLOBAL DIMENSIONS OF INTELLECTUAL PROPERTY RIGHTS IN SCIENCE AND TECHNOLOGY 140 (Mitchel B. Wallerstein et al. eds., 1993).

16. In order to address the concerns of the developing world, the Ministerial Conference at Doha in 2001 launched the Doha Development Agenda. Although the overall progress on the ground seems to have been rather modest, developing countries have had at least some success in consolidating what is left of their regulatory autonomy in relation to certain critical public goods, such as health care. See WTO, Ministerial Declaration, adopted on 14 Nov. 2001, ¶¶ 17 *et seq.*, WTO Doc. WT/MIN(01)/DEC/1, 41 ILM 746 (2002); WTO, Declaration on the TRIPS Agreement and Public Health, adopted on 14 Nov. 2001, WTO Doc. WT/MIN(01)/DEC/2, 41 ILM 755 (2002); WTO, Implementation of Paragraph 6 of the Doha Declaration on the TRIPS Agreement and Public Health, Decision of the General Council of 30 Aug. 2003, WTO Doc. WT/L/540 (Sept. 1, 2003).

17. See, e.g., ADAM B. JAFFE & JOSH LERNER, *INNOVATION AND ITS DISCONTENTS—HOW OUR BROKEN PATENT SYSTEM IS ENDANGERING INNOVATION AND PROGRESS, AND WHAT TO DO ABOUT IT* (2004).

regulatory institutions. Countries have different needs, aspirations, and capabilities, and thus different views on the goals and priorities of their patent systems—e.g., increasing innovation, enhancing economic efficiency, encouraging technology transfer and dissemination, supporting domestic industries, attracting foreign investors, making trade gains, or avoiding trade losses. Depending on their levels of development, countries also have different views on the optimal level of protection. Economic evidence may be rare, but history speaks a clear language: it is a historical fact that the level of protection declines “as economies move beyond the poorest stage into a middle-income stage in which they have greater abilities to imitate” and then increases again as they become “more innovative at the highest levels of income.”<sup>18</sup> With little to no prospect of gaining a comparative advantage as a technology producer (and exporter), a country will presumably have little to no interest in providing a high level of protection for technologies of which it will remain an imitator in the foreseeable future.<sup>19</sup> In their own best interests, most WTO member states would thus arguably, if they were not forced to do otherwise, provide weaker patent protection than what their more advanced trading partners consider “effective” and “adequate” from a—or rather, *their*—trade perspective.<sup>20</sup> Lastly, states may also have different views on the nature of intellectual property as a social institution,<sup>21</sup> its relation to other public policies, and its hierarchical status within the canon of constitutional rights.

The extent to which sovereign states can go their own way—by defining their own laws and policies—depends on the obligations they have assumed under international law. In the patent context, international law determines specific *minimum standards* of protection, but devotes—if at all—only cursory attention to the flip side of the coin, namely the protection of those whose freedom to operate is restrained by the exclusionary right granted to the patent holder.<sup>22</sup> Because the

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18. Keith E. Maskus, *The International Regulation of Intellectual Property*, 134 WELTWIRTSCHAFTLICHES ARCHIV 186, 192 (1998); see also B. Zorina Khan, *Intellectual Property and Economic Development: Lessons from American and European History* (Commission on Intellectual Property Rights, Study Paper 1a, 2002); Nagesh Kumar, *Intellectual Property Rights, Technology and Economic Development: Experiences of Asian Countries* (Commission on Intellectual Property Rights, Study Paper 1b, 2002); NEWFARMER ET AL., *supra* note 13, at 139 *et seq.*

19. See TREBILCOCK & HOWSE, *supra* note 1, at 314; Maskus & Reichman, *supra* note 11, at 10.

20. The problem here is that the “marriage of convenience” (see *supra* note 7) between patent and trade law creates an artificial dependency between the due level of national patent protection and the functioning of the international trading system. This shifts the perspective from what is considered “effective” and “adequate” (see preamble to the TRIPS Agreement) in terms of national innovation policy to what is considered “effective” and “adequate” in terms of international commerce and trade—i.e., from the perspective of more innovative countries that have adopted strong(er) patent systems and are therefore creating positive externalities for countries with weak(er) patent systems. From their point of view, any level of patent protection lower than what they consider appropriate for themselves would allegedly be “ineffective” and “inadequate” in terms of international trade. See Lamping, *supra* note 6, at 344 *et seq.*

21. See, e.g., PETER DRAHOS, *A PHILOSOPHY OF INTELLECTUAL PROPERTY* (1996).

22. See Annette Kur, *From Minimum Standards to Maximum Rules*, in *TRIPS PLUS 20: FROM TRADE RULES TO MARKET PRINCIPLES*, *supra* note 3, at 133 *et seq.*; Annette Kur & Henning Grosse

provisions of international IP treaties like the Paris Convention<sup>23</sup> and the TRIPS Agreement are frequently open-textured—or at least constructively ambiguous—and therefore generally leave to states considerable discretion regarding their implementation,<sup>24</sup> it is important to be clear about the exact scope of that discretion. States need to know all their options in order to make informed policy choices. At the end of the day, it is their responsibility to ensure that the patent system works in harmony with the market economy it is supposed to serve, without encroaching upon the social order within which it is embedded.

In view of these considerations, a multinational group of patent scholars has taken up the challenge to rebut the widespread assumption that the TRIPS Agreement requires states to implement a high level of patent protection and leaves little space for pursuing national public interest goals. The work of this group culminated in a document that marks the interpretive borders of the international patent regime: the Declaration on Patent Protection<sup>25</sup> ('Patent Declaration'). The Patent Declaration seeks to clarify some of the regulatory options that states retain with regard to the design of their patent systems. It is ultimately about sovereignty and the right to self-government. Its aim is to make policymakers, legislators, courts, and other authorities involved in the administration of the patent system aware of the fact that the TRIPS Agreement gives them much more leeway than commonly assumed—i.e., that there are many ways to pursue national interests without violating international law.

#### I. METHODOLOGY

The Patent Declaration is an apolitical, minimalistic approach to the interpretation of the obligations that international law imposes on states. In order to elucidate the methodology behind the Declaration, it appears instructive to focus on what the Patent Declaration *is not* rather than what it *is*:

(1) The Patent Declaration is not a political paper. It supports the position of neither developed nor developing countries. Both sides will occasionally be faced with dysfunctionalities within the patent system and imbalances between the rights and obligations conferred with a patent. Accordingly, both sides will occasionally have to reconsider their laws and legal practice in order to bring their systems back on track. It would be a capital mistake to assume that the regulatory leeway

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Ruse-Khan, *Enough is Enough—The Notion of Binding Ceilings in International Intellectual Property Protection*, in INTELLECTUAL PROPERTY RIGHTS IN A FAIR WORLD TRADE SYSTEM: PROPOSALS FOR REFORM OF TRIPS 359 *et seq.* (Annette Kur & Marianne Levin eds., 2011).

23. See *supra* note 4.

24. See ROBERT JENNINGS & ARTHUR WATTS, 1 OPPENHEIM'S INTERNATIONAL LAW 1278 (9th ed. 1992), for a definition of the principle of *in dubio mitius*, which demands that if the meaning of a term is ambiguous, that meaning is to be preferred which limits the sovereignty of the obliged party less. See, e.g., Appellate Body Report, *EC Measures Concerning Meat and Meat Products (Hormones)*, 165, WT/DS26/AB/R, WT/DS48/AB/R (adopted Feb. 13, 1998).

25. *Declaration on Patent Protection: Regulatory Sovereignty under TRIPS*, 45 INT'L REV. INTELL. PROP. COMPETITION L. 679 (2014) [hereinafter Patent Declaration].

determined by the Patent Declaration is only relevant for developing countries that have no ambitions of becoming innovative themselves.

(2) The Patent Declaration should not be understood as a menu of policy recommendations. The focus on what *could* be done as opposed to what *should* be done is a matter of methodology and should not be mistaken for a political statement. The Patent Declaration demonstrates policy space available to states. However, it does not provide policy advice. Whether it is advisable or, indeed, beneficial—in terms of innovation, development, or any other conceivable policy objective—to make use of the regulatory leeway identified in the Patent Declaration can only be answered in consideration of the concrete circumstances of the individual case. Without knowledge of the technological capabilities as well as the socioeconomic needs and priorities of a country, it is impossible to give a serious answer to the question of which options should be implemented and how they should be combined in order to best promote the objectives attached to the national patent system. Whether leeway is available is a matter of legal interpretation; whether it is sensible to exploit such is a matter of political preferences. The Patent Declaration is about the former, not about the latter.

(3) The Patent Declaration does not aspire to resolve any of the constructive ambiguities that have been built into the TRIPS Agreement. Unless a specific meaning follows from the wording or context, member states shall adopt their own definitions and draw their own conclusions.

(4) The Patent Declaration does not propose changes to the TRIPS Agreement,<sup>26</sup> and it does not *re*interpret its provisions in order to create regulatory autonomy contrary to what has been mutually agreed upon during the Uruguay Round negotiations.

(5) The Patent Declaration is not bound by WTO jurisprudence. Even though the rulings adopted by the Dispute Settlement Body ('DSB') are regarded as strong precedents, they do not constitute an official interpretation of the TRIPS Agreement. There is no rule of *stare decisis* in WTO dispute settlement.

(6) The Patent Declaration is not an academic paper. It therefore eschews explaining the legal reasoning behind its statements and findings in greater detail. The reason for that lies in its target audience. It is not the academic community but primarily policymakers and legislators who are addressed. Needless to say, this does not mean that the legal analysis has not been made. The Declaration has been drafted on the basis of a comprehensive evaluation of the TRIPS Agreement's negotiation history, academic literature, and WTO jurisprudence.

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26. See, e.g., ANNETTE KUR & MARIANNE LEVIN, INTELLECTUAL PROPERTY RIGHTS IN A FAIR WORLD TRADE SYSTEM: PROPOSALS FOR REFORM OF TRIPS (2011).

## II. RATIONALE

Harmonization can reduce transaction costs, but it also tends to reduce the responsiveness of the law to the specific conditions and needs of the economy.<sup>27</sup> What works for one country may not work for another, what works today may not work tomorrow, and what is good for international trade is not necessarily good for national development. Patent rights are attributed to individuals and thus protected by exclusivity,<sup>28</sup> but they are to ultimately serve the public good by fostering technological progress for the benefit of society as a whole.<sup>29</sup> This requires the rights and obligations encompassed in a patent right to be defined, justified, and continually reconsidered by reference to its specific socioeconomic benefits and costs. International law should, to the extent possible, be interpreted and implemented in a manner supportive of the states' freedom to weigh up the costs and benefits of their patent system and seek, within the bounds of good faith, to correct and prevent socioeconomic inefficiencies. Despite the need for a certain coordination of patent policies and laws as a means of internalizing—at least reducing—jurisdictional externalities<sup>30</sup> and thereby facilitating international commerce and trade, every state remains responsible for the functioning of its own system: (1) for the functional efficiency of patent protection, and (2) for the compatibility of patent protection with the objectives of other public policies. A certain degree of regulatory autonomy is crucial on both counts.

Functional efficiency refers to the intrinsic functionality of the patent system as a competition regulator. Innovation is a dynamic process driven by competitive pressure and the prospect of temporary market exclusivity due to first-mover advantages. The design of the patent system and the competitive order of the affected innovation and product markets are therefore inherently interdependent. Patents may be designed as property rights, but the patent system is not intended to operate as a property regime. It is conceived as a “framework regulation of the market economy.”<sup>31</sup> The priority objective of the patent system is to preserve

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27. See Matthias Lamping, *supra* note 6, at 313 *et seq.*

28. For an economic perspective, see Kenneth J. Arrow, *Economic Welfare and the Allocation of Resources for Invention*, in *THE RATE AND DIRECTION OF INVENTIVE ACTIVITY* 609 *et seq.* (Richard Nelson ed., 1962); FRITZ MACHLUP, *1 KNOWLEDGE, ITS CREATION DISTRIBUTION AND ECONOMIC SIGNIFICANCE* 160 *et seq.* (1983); CHRISTOPHER T. TAYLOR & ZANGWILL A. SILBERSTON, *THE ECONOMIC IMPACT OF THE PATENT SYSTEM: A STUDY OF THE BRITISH EXPERIENCE* 24 *et seq.* (1973). For the theoretical fundamentals, see Paul A. Samuelson, *The Pure Theory of Public Expenditure*, 36 *REV. ECON. & STAT.* 387 (1954).

29. Think, for example, of art. 14(2) of the German Constitution, which reads: “Property entails obligations. Its use shall also serve the public good.” The programmatic beauty of this provision may be hard to resemble in legal practice, but it has—or at least should have—a subliminal effect on the interpretation and application of ordinary statutory law.

30. See *supra* note 7.

31. See Hanns Ullrich, *Intellectual Property: Exclusive Rights for a Purpose—The Case of Technology Protection by Patents and Copyright* (Max Planck Institute for Intellectual Property and Competition Law Research Paper No. 13-01, 2012); Hanns Ullrich, *Propriété Intellectuelle, Concurrence*

effective competition at the invention and innovation levels. It is supposed to anticipate situations in which first-mover advantages could be mitigated by market dynamics to an extent that would discourage the first mover from inventing in the first place. Although the promotion of innovation underlines the classical rationale of the patent system, patents are neither granted to reward the inventor nor to encourage him to invent. Patents as such do not promote innovation—they protect market opportunities. This protection is not about *providing* incentives to innovate, but about *preserving* them. The main purpose of patent protection is to prevent a market failure due to the innovation incentives of market participants being suppressed as a result of the ability of competitors to free ride on the innovator's achievements—in other words, due to “chronic” inability of the market to allocate market revenues according to market performance.<sup>32</sup>

It follows from the above that a competitive market is a prerequisite for any patent system to operate properly, and that patent law must provide for appropriate measures—both prior to and after the patent has been granted—to ensure that patent protection does not interfere with the proper functioning of that market, including all related upstream and downstream markets. In terms of regulatory policy, this functional interdependence of the patent system and the competitive order poses a twofold challenge that must be tackled within the parameters of international law, in particular the TRIPS Agreement: unless there is a risk of market failure, states should not be obliged to intervene in the innovation process, and once granted, patent rights need to be recognized only to the extent that they do not unduly restrain competition and innovation. Where the exclusionary effects of patent protection go beyond what is necessary and sufficient to prevent a market failure, the patent lacks economic legitimacy. Consequently, the functional efficiency of a patent system will heavily depend on the specific market and technology environment within which it is expected to operate as an incentive, compensation, and distribution mechanism.

Besides being functionally efficient, a patent system must be in harmony with other public policies. Due to technology's continual expansion into more and more spheres of life, the system's intrinsic rationale of promoting innovation by allocating exclusive exploitation rights is increasingly confronted with other policy objectives and priorities. The functioning of the patent system as a social institution that benefits society as a whole depends heavily on whether patent protection can be reconciled with such objectives and priorities.

From a meta perspective, innovation is just one state goal among many others, such as economic growth, employment, protecting the environment, preserving biodiversity, sustainability, scientific progress, affordable access to health care and

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*et Regulation: Limites de Protection et Limites de Contrôle*, in REVUE INTERNATIONALE DE DROIT ÉCONOMIQUE 399 (2009) (Fr.).

32. See Eric Hoppman, *Die Funktionsfähigkeit des Wettbewerbs: Bemerkungen zu Kantzenbachs Erwiderung*, 3 J. ECON. & STAT. 16 *et seq.* (1967).

nutrition, education, or security. The importance of such policies is explicitly recognized in the TRIPS Agreement, which relativizes the member states' substantive obligations by embedding them into a system of socioeconomic policy controls.<sup>33</sup> At the same time, however, these policy controls are made subject to compliance with the very same provisions of the TRIPS Agreement that may be at the root of the policy conflict.<sup>34</sup> If this were to be interpreted restrictively (literally), it would create a hierarchy between the standards of patent protection established by the TRIPS Agreement and the attainment of other public policy objectives. Apart from functional concerns, this would also be irreconcilable with the international legal order,<sup>35</sup> in which the TRIPS Agreement is just one treaty among many others, all with their own goals and priorities. TRIPS requires states to protect IP according to specific minimum standards, but it does not—and cannot—alter the status of IP protection in relation to other public policies.<sup>36</sup> There is no ground for interpreting the TRIPS Agreement in a manner that generally gives patent protection priority over other public policy objectives. This would not only be incompatible with a series of international treaties; the policy trade-offs that such an interpretation would necessarily presuppose were also never a subject of the Uruguay Round negotiations.<sup>37</sup>

The consistency requirement should thus be understood as a proportionality assessment directed against an arbitrary or excessive use of socioeconomic policy correctives.<sup>38</sup> If states have a legitimate reason for acting contrary to an obligation under the TRIPS Agreement on grounds of important public interests,<sup>39</sup> the consistency requirement should not—and does not—prevent them from doing

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33. See the TRIPS Agreement, *supra* note 2, at art. 8(1), which confirms the member states' freedom to "adopt measures necessary to protect public health and nutrition, and to promote the public interest in sectors of vital importance to their socio-economic and technological development," and art. 8(2), which states that "appropriate measures . . . may be needed to prevent the abuse of intellectual property rights by right holders or the resort to practices which unreasonably restrain trade or adversely affect the international transfer of technology."

34. Both paragraphs of art. 8 of the TRIPS Agreement are only applicable to the extent that the adopted measures "are consistent with the provisions of the Agreement." (emphasis added).

35. See, e.g., Universal Declaration of Human Rights art. 27, G.A. Res. 217A (III) (Dec. 10, 1948); International Covenant on Economic, Social and Cultural Rights art. 15, G.A. Res. 2200A (XXI) (Dec. 16, 1966). For an extensive analysis, see Klaus D. Bieter, *Establishing Conformity Between TRIPS and Human Rights*, in *TRIPS PLUS 20: FROM TRADE RULES TO MARKET PRINCIPLES*, *supra* note 3, at 445 *et seq.*

36. See CARLOS M. CORREA, *TRADE RELATED ASPECTS OF INTELLECTUAL PROPERTY RIGHTS: A COMMENTARY ON THE TRIPS AGREEMENT* 108 (2007).

37. See UNITED NATIONS CONFERENCE ON TRADE AND DEV. & INT'L CTR. FOR TRADE AND DEV. [UNCTAD/ICTSD], *RESOURCE BOOK ON TRIPS AND DEVELOPMENT* 551 *et seq.* (2005).

38. See UNCTAD-ICTSD, *supra* note 37, at 552.

39. See WTO, Declaration on the TRIPS Agreement and Public Health, *supra* note 16, ¶ 4, which can be applied by analogy to other public policies. With regard to the legitimacy of the policy objective pursued, see Panel Report, *Canada—Patent Protection of Pharmaceutical Products*, ¶ 7.69, WT/DS114/R (adopted Apr. 7, 2000) [hereinafter *Canada—Pharmaceuticals*], defining the term "legitimate interests" as "a normative claim calling for protection of interests that are 'justifiable' in the sense that they are supported by relevant public policies or other social norms."

such, as long as the adopted measure is: appropriate to achieve the objective pursued; necessary to achieve the objective pursued (i.e., there are no less restrictive means of achieving it);<sup>40</sup> and proportional in terms of the expected benefits and costs (i.e., all interests at stake are duly taken into account).

The proportionality assessment reflects the need for a balance between, on the one hand, preserving member states' freedom to "set and achieve regulatory objectives through measures of their own choosing" and, on the other hand, "discouraging [them] from adopting or maintaining measures that unduly restrict trade" without serving a legitimate public policy interest.<sup>41</sup> There should be no doubt that, in certain situations, a coordination of conflicting public policies may require measures that are contrary to, or at least on the brink of what can be squared with the wording of the TRIPS Agreement. In that case, as long as the measure adopted serves a legitimate purpose and complies with the principle of proportionality, the end should be able to justify the means. After all, the TRIPS Agreement must be implemented in a manner supportive of the member states' freedom to make their own policy choices. Each member state retains the right to define its public policy objectives and priorities,<sup>42</sup> their relative importance, and the desired level of attainment.<sup>43</sup> As long as such policy choices are based on a proper exercise of discretion,<sup>44</sup> they should be respected.

Both in terms of functional efficiency and public policy coordination, there are strong arguments in favour of regulatory diversity.<sup>45</sup> The socioeconomic implications of the patent system vary in costs and benefits by country, technology, and over time. Patent law affects markets in a wide range of industry sectors ranging from nutrition to banking, and it influences entrepreneurial processes throughout the entire lifetime of a technology, from the initial investment decision through the end of the product life cycle. The evolution of new technologies and business models has exposed considerable differences in both the characteristics of technologies across sectors and in how industries innovate and make use of—their

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40. See Panel Report, *United States—Section 337 of the Tariff Act of 1930*, ¶ 5.26, L/6439 (adopted Nov. 7, 1989) GATT BISD (36th Supp.), at 345 (1989); Appellate Body Report, *Korea—Measures Affecting Imports of Fresh, Chilled and Frozen Beef*, ¶ 161, WT/DS161/AB/R, WT/DS169/AB/R (adopted Jan. 10, 2001).

41. WTO Working Party on Domestic Regulation, "Necessity Tests" in the WTO, *Note by the Secretariat*, ¶ 4, WTO Doc. S/WPDR/W/27/Add. 1 (Jan. 18, 2011).

42. For the purposes of dispute settlement, it is not the necessity of the policy objective that can be subject to review, but only the necessity of the measure chosen to achieve that objective. See WTO Working Party on Domestic Regulation, *supra* note 41, ¶¶ 4, 14 *et seq.*

43. See WTO Working Party on Domestic Regulation, *supra* note 41, ¶¶ 4, 24 *et seq.*

44. See UNCTAD-ICTSD, *supra* note 37, at 127 *et seq.*; DANIEL GERVAIS, *THE TRIPS AGREEMENT: DRAFTING HISTORY AND ANALYSIS* 2.86 (3d ed. 2008); CARLOS M. CORREA, *supra* note 36, at 105 *et seq.*; NUNO PIRES DE CARVALHO, *THE TRIPS REGIME OF PATENT RIGHTS* 8.8 (3d ed. 2010).

45. See Matthias Lamping, *supra* note 6, at 313 *et seq.*; Rupperecht Podszun & Benjamin Franz, *Regulatory Innovation and the Institutional Design of the TRIPS Agreement*, in *TRIPS PLUS 20: FROM TRADE RULES TO MARKET PRINCIPLES*, *supra* note 3, at 279 *et seq.*

own as well as others’—innovations on the marketplace. Every technology is more or less unique in terms of the level of protection required to induce upfront investments in research and development, the exceptions and limitations required to facilitate follow-on innovation, and the impact of patent protection on the conditions of competition on the affected markets. It is thus highly unlikely that a uniform patent system will optimally promote efficiency and progress in the wide range of technology sectors it is expected to cover.<sup>46</sup> For a patent system to be functionally efficient, in harmony with other public policies, and responsive to changing circumstances, it must internalize the differences between technologies and industries. This cannot be done on the basis of a “one size fits all” approach. It rather requires the legislator’s full attention to the specific patterns of innovation and market development in each technology sector, and to how these patterns evolve over time.

Contrary to popular belief, differentiation is not inconsistent with international law—actually, it is quite the contrary. According to the TRIPS Agreement, “patents shall be available and patent rights enjoyable without discrimination as to the field of technology.”<sup>47</sup> At its broadest, the term discrimination covers all kinds of differential treatment. However, this would not only jeopardize the functional efficiency of the patent system—which requires regulatory interventions in the market to be minimally invasive—but would also be incompatible with the concept of discrimination implied in the national treatment and most-favoured-nation provisions of the TRIPS Agreement.<sup>48</sup> Rather, discrimination should be interpreted in light of the principle of equal treatment or substantive equality: Equal situations should not be treated differently and different situations should not be treated alike.<sup>49</sup>

With this in mind, a differential treatment of technologies, or even industries, is not only explicitly allowed under the TRIPS Agreement, but may even be required in order to avoid discriminatory results—i.e., in order to avoid a situation where market effects of patent protection vary among different technologies and industries, thereby distorting the natural competitive order of the economy as a whole. This would be irreconcilable with the notion of the patent system as a

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46. See, e.g., Dan L. Burk & Mark A. Lemley, *Policy Levers in Patent Law*, 89 VA. L. REV. 1575, 1675 *et seq.* (2003).

47. See TRIPS Agreement, *supra* note 2, at art. 27(1).

48. See Canada—Pharmaceuticals, *supra* note 39, ¶ 7.94.

49. See Lionel Bently et al., *Standing Committee on the Law of Patents: Exclusions from Patentable Subject Matter and Exceptions and Limitations to the Rights*, WORLD INTELLECTUAL PROPERTY ORGANIZATION [WIPO], 41 WIPO Doc. SCP/15/3, Annex 1 (2011); CARVALHO, *supra* note 44, ¶¶ 27.55, 27.8; Graeme B. Dinwoodie & Rochelle C. Dreyfuss, *Diversifying without Discriminating*, 13 MICH. TELECOMM. TECH. L. REV. 445, 452 (2007); GERVAIS, *supra* note 44, at ¶ 2.249; CARLOS M. CORREA, *supra* note 36, at 282; Thomas Cottier, *From Progressive Liberalization to Progressive Regulation in the WTO Law*, 9 J. INT’L ECON. L. 796 (2006); UNCTAD/ICTSD, *supra* note 37, at 368. This interpretation of the non-discrimination requirement is also supported by the DSB. See, e.g., Canada—Pharmaceuticals, *supra* note 39, ¶¶ 7.92, 7.94, 7.101.

“framework regulation of the market economy”<sup>50</sup> Patents ought to *protect* competition as an institution—without *influencing* the competitive process.

#### CONCLUSION

Since the Renaissance, the patent system has been used by governments to control the development of their domestic economies. They were able to adjust the balance of static and dynamic efficiency (i.e., effectively exploiting existing knowledge while maintaining sufficient incentives for the production of further knowledge) in light of their current technological capabilities as well as their socioeconomic needs and priorities. This allowed them to develop and consolidate areas of comparative advantage in the sectors they considered to be most important for national development. As a matter of fact, many of today’s industrialized nations look back on a long and fruitful tradition as “imitators”.<sup>51</sup>

The evolution of the international legal regime has made it much more difficult for states to pursue such strategies,<sup>52</sup> but it still gives them considerable leeway in

50. See Hanns Ullrich, *supra* note 31.

51. See Jerome H. Reichman, *Compulsory Licensing of Patented Pharmaceutical Inventions: Evaluating the Options*, 37 J.L. MED. & ETHICS 247 (2009); Graham Dutfield & Uma Suthersanen, *Harmonisation or Differentiation in Intellectual Property Protection? The Lessons of History*, 23 PROMETHEUS 131, 135 *et seq.* (2005); HA-JOON CHANG, *KICKING AWAY THE LADDER: DEVELOPMENT STRATEGY IN HISTORICAL PERSPECTIVE* 13 *et seq.* (2002); Linsu Kim, *Technology Transfer and Intellectual Property Rights: Lessons from Korea’s Experience* (UNCTAD/ICTSD, Working Paper Issue N. 2, 2002); Ha-Joon Chang, *Intellectual Property Rights and Economic Development: Historical Lessons and Emerging Issues*, 2 J. HUM. DEV. 288 *et seq.* (2001); Jakob Tanner, *The Swiss Pharmaceutical Industry: The Impact of Industrial Property Rights and Trust in the Laboratory, 1907–1939*, in DETERMINANTS IN THE EVOLUTION OF THE EUROPEAN CHEMICAL INDUSTRY, 1900–1939 257 *et seq.* (Anthony S. Travis et al. eds., 1998); Cristian Simon, *The Rise of the Swiss Chemical Industry Reconsidered*, in THE CHEMICAL INDUSTRY IN EUROPE 1850–1914: INDUSTRIAL GROWTH, POLLUTION, AND PROFESSIONALIZATION 17 *et seq.* (Ernst Homburg et al. eds., 1998); Jerome H. Reichman, *From Free Riders to Fair Followers: Global Competition Under the TRIPS Agreement*, 29 NYU J. INT’L L. & POL. 11 *et seq.* (1996); CHALMERS JOHNSON, *JAPAN: WHO GOVERNS?: THE RISE OF THE DEVELOPMENTAL STATE* 74 *et seq.* (1995); Janusz A. Ordover, *A Patent System for Both Diffusion and Exclusion*, 5 J. ECON. PERSP. 43 *et seq.* (1991); DAVID J. JEREMY, *TRANSATLANTIC INDUSTRIAL REVOLUTION: THE DIFFUSION OF TEXTILE TECHNOLOGIES BETWEEN BRITAIN AND AMERICA, 1790–1830S* 8 *et seq.* (1981).

52. Whether this is a good or a bad thing is a matter of perspective. Just as imitation is an integral part of innovation (see JOSEPH A. SCHUMPETER, *CAPITALISM, SOCIALISM AND DEMOCRACY* 83 (5th ed. 1994)), global welfare may well benefit from the developing states temporarily free-riding on—or, to put it in positive terms, learning from—the technological achievements of the developed world. After all, competition is the driving force of all progress—not only within a state’s economy, but also among states as economic actors. There may even be a role for the WTO here. The preamble to the WTO Agreement explicitly recognizes the need for “positive efforts designed to ensure that developing countries, and especially the least-developed among them, secure a share in the growth in international trade commensurate with the needs of their economic development.” Furthermore, it recognizes that the relations between the member states “in the field of trade and economic endeavour should be conducted with a view to raising standards of living . . . while allowing for the optimal use of the world’s resources in accordance with the objective of sustainable development.” It is obviously difficult to derive any concrete rights or obligations from these statements, but it could be said that they do imply a certain commitment on behalf of the more advanced economies toward actively reducing

order to make sure that their patent systems are functionally efficient and in harmony with other public policies. The Patent Declaration suggests that much of the hostility shown to the TRIPS Agreement—mostly by developing countries—may be owed to a failure to recognize the actual autonomy afforded by the Agreement with regard to its implementation in national law.

Despite all due respect for the social, economic, and cultural needs and aspirations of states, it would be naïve not to recognize that IP regulation can no longer be treated as a purely domestic matter. The coalescence of national economies has turned it into an international concern that requires collective action. The effects of a country's IP policy will not stop at its national borders, nor will a country remain unaffected by repercussions of other countries' IP policies. States are no longer only responsible for their own people and markets, and national markets can no longer be regulated without the involvement of multinational public—and increasingly also private—actors. As a result of globalization, internal market regulation has become a shared responsibility of individual nation states and the international community of states—a responsibility that needs to be exercised jointly, with mutual respect for both national and international concerns. For better or worse, international politics has become an integral aspect of domestic governance.

However, this does not mean that states should place the fate of their IP systems into the hands of their trading partners; they should rather, wherever possible, resist the temptation to barter their regulatory sovereignty for trade concessions. It just means that they may occasionally have to make public policy choices that are not fully in line with their own best interests. *Nota bene*, *may* is the operative word here. Policy choices always involve trade-offs. International law imposes obligations on states, but it does not—and cannot—make these trade-offs. It does not balance producers' and users' interests, enhance social welfare, or promote the functioning of national innovation markets—all of which is stated, or at least implied,<sup>53</sup> in the TRIPS Agreement. Making these trade-offs is not only left to the discretion but also to the responsibility of the member states. Sovereignty entails the freedom to choose as well as the obligation to bear the consequences. It is certainly no panacea, but surely worth protecting as an end in itself.

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the development gap. It could therefore be argued that the WTO—being a member-driven institution built on the principle of solidarity—bears a certain responsibility for building a bridge between the industrialized economies and those who lag behind, so that the latter can benefit from the former without the former being exploited by the latter.

53. See TRIPS Agreement, *supra* note 2, at arts. 7, 8.