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Current Alliances in International Intellectual Property Lawmaking: The Emergence and Impact of Mega-Regionals

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Embedding Intellectual Property in International Law

Thomas Cottier

1. Introduction*

The advent of TRIPS-plus provisions in preferential trade agreements (PTAs) and mega-regional agreements further reinforces the position of holders of exclusive rights, changing the balance of rights and obligations initially negotiated in the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) and the Paris and Berne Conventions as incorporated into the law of the World Trade Organization (WTO). Preferential trade agreements largely fail to right the balance, because of successful lobbying by industries of industrialised countries and a willingness of developing countries to envisage higher levels of protection in return for other market access rights and opportunities under the preferential agreement. This evolution reinforces the call to explore the implications of principles and rules outside specific intellectual property (IP) instruments in other parts of public international law, and WTO law in particular. Embedding protection for intellectual property rights (IPRs) in the overall body of international law, and related fields in domestic law, allows some rebalancing of recent developments in treaty law. It is not an easy task, however, in light of a long tradition of fragmentation and isolation of intellectual property within public international law.

The protection of intellectual property rights evolved as a separate and distinct area of public international law. Based upon bilateral treaties extending domestic protection to neighbouring countries in combating counterfeiting and piracy, the 1883 Paris Convention for the Protection of Industrial Property and the 1886 Berne Convention for the Protection of Literary and Artistic Works formed the very first multilateral agreements of international economic law, long before the post-World War II order brought about the advent of the General Agreement on Tariffs and Trade (GATT) and other multilateral agreements.¹ International intellectual property, however, led a life of its own. Largely ignored by the community of public international lawyers and scholars, it was dealt with as an appendix to domestic law, mainly of interest to commercial and private law practitioners organised in the International Association for the Protection of Intellectual Property (AIPPI).² It was largely absent from international arbitration, and no case relating to IPRs has been discussed before the International Court of Justice. The Geneva-based World Intellectual Property Organization (WIPO) developed in the footsteps of the International Bureau originally located in Berne. It produced subsequent amendments to the Paris and Berne Conventions, and new treaties open for signature on standards, registration procedures and classification.³ This body of law on intellectual property protection, with its global registration systems, is substantial. It clearly goes beyond the protection of real property in customary international law and in investment agreements in terms of scope, complexity and regulatory density.

The TRIPS Agreement of the World Trade Organization, negotiated during the 1986–1993 Uruguay Round of the GATT, incorporated substantive standards of the Paris and Berne Conventions and added additional protection disciplines. For the first time, it introduced procedural rights and

* This paper builds upon a keynote speech entitled "The Future of IP Issues in the Multilateral Trading System" delivered to the WTO@20 Symposium on the TRIPS Agreement for TRIPS Council Members and Observers, Geneva, 26 February 2015. I am much indebted to Pedro Roffe and to Xavier Seuba for valuable comments. The paper is dedicated in gratitude to my PhD students, past and present. They travelled with me and taught me in their respective specialised areas of research in international economic law.

1 "WTO Legal Texts," https://www.wto.org/english/docs_e/legal_e/legal_e.htm.

2 See <http://aippi.org/>.

3 WIPO Lex, <http://www.wipo.int/wipolex/en/>.

obligations in international law relating to the registration and enforcement of intellectual property in domestic law in order to improve disciplines in combating piracy and counterfeiting. The story has been told many times, and there is no need to repeat it.⁴ What is important to note, however, is that for the first time IPRs were integrated into the multilateral trading system and thus linked to principles and rules on trade in goods and services. They are subject to effective international dispute settlement and enforcement, with withdrawal of concessions in case of non-compliance. The WTO dispute settlement system commenced a long-term process of interpreting and applying IPR standards in line with the principles and rules on interpretation of the Vienna Convention on the Law of Treaties (VCLT), and the overall disciplines of WTO law, in particular the most favoured nation principle and the national treatment principle. With the increasing integration and recognition of international trade law in public international law, intellectual property protection has also become a fully recognised part of public international law, no longer limited to a highly specialised community of lawyers and economists.

Today, intellectual property is an important and well-established ingredient of international economic law. There are no convincing reasons to question its basic incorporation into the trading system and, more recently, into the law of international investment protection. IPRs are essential prerequisites of international trade and investment. The absence of standards, as well as excessive standards, act as non-tariff barriers to international trade in an integrating world of global value chains and trade mainly in components.⁵ The allocation of exclusive rights per se is not in contradiction to free trade, but forms part of the overall legal framework, similar to contract law and property protection in general. IPRs make an important contribution to legal security and thus are an important prerequisite of social and economic development. Yet what rightly provokes debate and controversy is the scope of rights, levels of harmonisation and the overall balance with competition, public policy goals and non-trade concerns. Intellectual property is closely linked to the evolution of technology and changes in market structures, which are always occurring and call for ongoing review and realignment of the scope of rights and the balance with the interests of competitors, consumers and public policy goals. Such goals are not confined to the field itself, but may be found outside of it, in other areas of law, such as human rights, trade law, competition law, or the law of investment protection. In other words, they are found throughout the legal order and need to be taken into account.

This paper seeks to identify and discuss components of the legal order in which intellectual property protection is embedded and thus has to be respected as an established feature. These components potentially play an important role in seeking an appropriate balance of exclusive rights and public and third party interests beyond the narrow confines of intellectual property legislation and treaty law. The paper does not aspire to be complete. For example, it does not cover the role of private international law and contracts in assessing voluntary licensing, or the role of torts in assessing damages for violations of intellectual property rights. The focus is on general principles of law and other areas of public international law. It essentially concentrates on intellectual property as part of international economic law.

4 Jayashree Watal and Anthony Taubman (eds), *The Making of the TRIPS Agreement: Personal Insights from the Uruguay Round Negotiations* (Geneva: World Trade Organization, 2015).

5 Deborah K. Elms and Patrick Low (eds), *Global Value Chains in a Changing World* (Geneva: World Trade Organization, 2013); Benno Ferrarini and David Hummels (eds), *Asia and Global Production Networks: Implications for Trade, Incomes and Economic Vulnerability* (Cheltenham: Edward Elgar, 2014).

The paper seeks to explore the role of general principles of law and linkages to human rights provisions and the Sustainable Development Goals (SDGs) of the United Nations. It discusses the impact of rules relating to GATT and the movement of goods, combating economic protectionism and rent-seeking, and the implications of the General Agreement on Trade in Services (GATS). It looks into the role of anti-trust rules and unfair competition disciplines; addresses investment protection and the relationship to real property; and finally, it addresses the problem of special and differential treatment of developing countries and how graduation could be brought about.

All these areas form part of the context of intellectual property protection. They are relevant in the process of the interpretation and application of rules, and in guiding future treaty-making and lawmaking in the field. The purpose of the paper is to provide a broad overview of all these components and to encourage further detailed research in different overlapping fields.

2. The Quest for Balance

2.1 Within the TRIPS Agreement

The balance between intellectual property protection and the interests of competitors and public policy goals is primarily addressed within IP legislation and IP treaties. This is equally true for the TRIPS Agreement.⁶ In the context of the Uruguay Round, the agreement embodies key interests of industrialised countries in strengthening intellectual property protection worldwide. It essentially protects First World assets, and an overall balance was sought in combination with concessions in trade in agriculture and textiles prior to the accession of China in 2001.⁷ This is not to say that the TRIPS Agreement does not also show inherent balancing. Largely built upon Western concepts of IPRs and domestic legislation, and taking into account concerns and interests of developing countries, the balance of rights and obligations within the TRIPS Agreement inherently translates into defining the scope of rights and the duration of rights, the latter particularly in patents, copyright and designs. The provisions on enforcing intellectual property rights carefully balance the interests of right holders and alleged infringers in terms of legal remedies and compensation for violations and alleged violations.

A balancing of interests in substantive standards can be seen in Article 6 of the TRIPS Agreement, which leaves members ample policy space in defining parallel trade in IP-protected goods. It can be seen in broad objectives and principles such as Articles 7 and 8, and the recognition of policy space for the application of competition policies in Article 40. These objectives, however, are locked in by treaty law and language and bound to respect the essence of intellectual property rights. Article 8 of the TRIPS Agreement thus allows for measures necessary to protect public health and nutrition, "provided that such measures are consistent with the provisions of the Agreement." Likewise, recourse to fair use exemptions must preserve the essence of exclusivity. Article 13 TRIPS provides for a tight three-step test and confines exceptions "to certain special cases which do not conflict with a normal

6 For an account of the agreement see Thomas Cottier, "The Agreement on Trade-Related Aspects of Intellectual Property Rights," in *The World Trade Organization: Legal, Economic and Political Analysis*, vol. 1, ed. Patrick F. J. Macrory, Arthur E. Appleton and Michael G. Plummer (pp. 1041–1120) (New York: Springer, 2005); Anthony Taubman, *A Practical Guide to Working with TRIPS* (Oxford: Oxford University Press, 2011).

7 See Frederick M. Abbott, "Protecting First World Assets in the Third World: Intellectual Property Negotiations in the GATT Multilateral Framework," *Vanderbilt Journal of Transnational Law* 22, no. 4 (1989): 689–745; Thomas Cottier, "The Prospects for Intellectual Property in GATT," *Common Market Law Review* 28 (1991): 383–414.

exploitation of the work and do not unreasonably prejudice the legitimate interests of the right holder.”⁸ Article 17 provides that fair use exemptions to trademarks “take account of the legitimate interests of the owner of the trademark and of third parties.” Article 30 TRIPS Agreement provides that fair use exemptions to patent rights “do not unreasonably conflict with a normal exploitation of the patent and do not unreasonably prejudice the legitimate interests of the patent owner, taking account of the legitimate interests of third parties.” The same test applies to industrial designs in Article 26(2) of the agreement. Other forms of intellectual property, in particular geographical indications (GIs) and layout designs (topographies) and trade secrets, undisclosed information and test data do not offer fair use exemptions in the TRIPS Agreement and the Treaty on Intellectual Property in Respect of Integrated Circuits, as incorporated. Article 31 allows for compulsory licensing, prescribing in detail procedural requirements to be met. Finally, the TRIPS Agreement does not include a general exception other than national security in Article 73. There is no horizontal provision comparable to Article XX GATT and Article XIV GATS in the TRIPS Agreement.

The incorporation of the Paris Convention and the Berne Convention into a single instrument in WTO law is not without tensions created by norms representing different stages of legal development. Perhaps the best example here is the problem of local working requirements in patent law. While Article 27(1) of the TRIPS Agreement requires non-discriminatory treatment of patents irrespective of the place of invention, the field of technology and whether products are imported or locally produced, Article 5A(2) of the Paris Convention allows members to issue compulsory licences to prevent the abuse of intellectual property rights, which is legally defined to include the failure to work. The right of a government, frequently found in domestic legislation, to oblige a right holder to operate the patent within its own jurisdiction, and thus to contribute to job creation and transfer of knowledge and transfer of technology, seems to conflict with Article 27(1) TRIPS Agreement and its trade-related approach. Whether or not products under patent protection are imported or locally produced does not matter under this provision. It is in accordance with contemporary perceptions of global value chains and international trade mainly consisting of trade in components produced in different countries prior to the assembly of a product destined for consumers. Inaction to work a patent may thus be justified by legitimate reasons and compulsory licences should be refused under Article 5(A)(4) of the Paris Convention. The matter, however, is unresolved and controversial.⁹ It may be argued that working consists both of import and production, and an abuse merely arises if a patent is used defensively with the intention not to be used and not to serve a particular market either by imports or local production. At the heart of the issue is the problem of transfer of technology and know-how and job creation.

Issues arising in the initial phase and the first 20 years of the WTO allowed the TRIPS Agreement (including Paris and Berne standards) to be dealt with in a largely self-contained manner. General precepts of GATT and WTO jurisprudence, mainly developed under GATT, were influential, but the influence did not extend to other instruments addressing IPRs.¹⁰ The WTO has no jurisdiction over other IPR agreements. It is thus unable to develop a comprehensive jurisprudence beyond

8 See United States – Section 11(5) of the *US Copyright Act*, paras 6.71–74, WT/DS160R (15 June 2000).

9 Thomas Cottier, Shaheez Lalani and Michelangelo Temmerman, “Use It or Lose It: Assessing the Compatibility of the Paris Convention and TRIPS Agreement with Respect to Local Working Requirements,” *Journal of International Economic Law* 17 (2014): 437–471.

10 For an excellent account of the case law, see Matthew Kennedy, *The WTO Dispute Settlement and the TRIPS Agreement: Applying Intellectual Property Standards in a Trade Law Framework* (Cambridge: Cambridge University Press, 2016).

considering such other agreements in the process of interpretation under Article 31(3)(c) of the Vienna Convention on the Law of Treaties. Moreover, public policy goals, enshrined in Articles 7 and 8 of the TRIPS Agreement, have remained without much influence.¹¹ The focus of the WTO Appellate Body, less so in panels of first instance, was on textual interpretation of the operational standards of the TRIPS Agreement, including the substantive provisions of the Paris and Berne Conventions.¹²

2.2 The Impact of Preferential Agreements

The shift of forum from the WTO to preferential trade agreements and plurilateral fora during the last 20 years, in particular in negotiations on the Trans-Pacific Partnership Agreement (TPP) and the Transatlantic Trade and Investment Partnership (TTIP), has led to strengthening intellectual property rights.¹³ Partly, TRIPS-plus provisions are necessary to complete the TRIPS Agreement and render provisions operational. This is particularly true in defining periods of exclusivity of test data under the incomplete Article 39(3) of the TRIPS Agreement. The main issue here merely relates to the proper duration of exclusivity without which the provision cannot be properly applied. Partly, however, they go beyond existing levels of protection and reduce existing flexibilities, in particular in patent law and plant variety protection.¹⁴ One would expect that these free trade agreements would remove barriers inherent to the territoriality of IPRs, creating free trade zones. None of them, however, addresses international exhaustion fostering parallel trade and competition. Some even impose national exhaustion. For example, the US–Morocco Free Trade Agreement states in Article 15.9(4) that exclusive rights “shall not be limited by the sale or distribution of that product outside its territory,” effectively imposing a national exhaustion rule.¹⁵ It would seem that demands of interest groups of right holders in Western countries are readily translated into legal disciplines, without proper checks and balances and due regard to implications not only for social and economic development, but also for innovation.¹⁶ Against this backdrop, scholars have called for ceilings to levels of intellectual property protection, so far without success.¹⁷

11 Cf. e.g. *Canada – Patent Protection of Pharmaceutical Products*, WT/DS114/R (17 March 2000).

12 The incorporation of the Paris Convention is addressed in *United States – Section 211 Omnibus Appropriation Act*, WT/DS176/AB/R (2 January 2002).

13 See Josef Drexler, Henning Grosse Ruse-Khan and Souheir Nadde-Phlix (eds), *EU Bilateral Trade Agreements and Intellectual Property: For Better or Worse?* (Heidelberg: Springer, 2014).

14 For an account see Thomas Cottier, “Intellectual Property and Megaregional Agreements: Progress and Opportunities Missed,” in *Mega-Regional Agreements: CETA, TTIP, TiSA: New Orientations for EU External Economic Relations*, ed. Stefan Griller, Walter Obwexer and Erich Vranes (Oxford: Oxford University Press, 2017); Thomas Cottier, Dannie Jost and Michelle Schupp, “Setting the Scene: The Prospects of TRIPS-Plus Protection in Future Mega Regionals,” in *Mega-Regional Trade Agreements and the Future of International Trade and Investment Law*, ed. Thilo Rensmann (New York: Springer, 2017).

15 Morocco FTA, Final Text, <https://ustr.gov/trade-agreements/free-trade-agreements/morocco-fta/final-text>; see Sarah R. Wasserman Rajec, “Free Trade in Patent Goods: International Exhaustion for Patents,” *Berkeley Technology Law Journal* 29 (2014): 317–376, at 355–356; see generally Christopher Heath and Anselm Kamperman Sanders (eds), *Intellectual Property and Free Trade Agreements* (Oxford: Hart, 2007).

16 Katrina Moberg, “Private Industry’s Impact on US Trade Law and International Intellectual Property Law: A Study of Post-TRIPS US Bilateral Agreements and the Capture of the USTR,” *Journal of the Patent and Trademark Office Society* 96, no. 2 (2014): 228.

17 Annette Kur and Henning Grosse 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*, ed. Annette Kur (pp. 359–407) (Cheltenham: Edward Elgar, 2011).

Preferential trade agreements normally do not further develop public policy goals or refine exceptions and fair use standards. Public policy interests, such as health care or access to information, have not been further elaborated and detailed. Critical voices warning that excessive levels of protection have a negative impact on innovation, let alone on distributional effects, have been largely left unheard in the political process.¹⁸ While in hindsight the TRIPS Agreement can be considered to be reasonably balanced, recent development and trends have dismantled and distorted its balance to the benefit of right holders. Most governments, at the end of the day, are simply willing to accept higher levels in return for market access rights to important export markets. At the same time, they may limit public resources allocated to the enforcement of intellectual property rights and thus seek to maintain a de facto balance between enhanced standards of protection and the needs of a developing country economy to engage in imitation.

2.3 Towards Investment Protection and Market Segmentation

An increasing shift to market segmentation and investment protection is behind these developments, due to high costs in research and marketing of products in global value chains. As production of goods has shifted to developing and emerging economies, research, development and marketing amount to an important source of income for industrialised and service-based economies. Enhanced protection of intangible information in different forms of intellectual property either serves to promote research and innovation and cultural works (patents, undisclosed information, copyright, designs), or to distinguish products and to inform consumers accordingly (trademarks, geographical indications).

Despite legal justification by the needs of innovation and consumer welfare, intellectual property protection is in reality as much motivated by market segmentation and the promotion and protection of investment. These motives have increasingly influenced the application and interpretation of intellectual property rights. The classical distinction between discoveries and inventions in patent law is increasingly blurred. Existing genes are eligible for biotechnology patents protection if used in a different than natural context.¹⁹ These developments can mainly be explained by high levels of investment in research and development. In copyright, levels of creativity are increasingly lowered, reflecting the shift of copyright protection into information technology, equally dependent upon high levels of investment. In database protection, at least in Europe, minimum levels of creativity are no longer required.²⁰ It essentially follows the sweat of the brow doctrine, still refuted in the United

18 Cf. Keith E. Maskus and Jerome H. Reichman (eds), *International Public Goods and Transfer of Technology under a Globalized Intellectual Property Regime* (Cambridge: Cambridge University Press, 2005); the seminal work on the economics of IPRs by Keith Maskus, *Intellectual Property Rights in the Global Economy* (Washington, DC: Institute of International Economics, 2000); Keith Maskus, *Private Rights and Public Problems: The Global Economics in Intellectual Property in the 21st Century* (Washington, DC: Peterson Institute for International Economics, 2012); Christophe Geiger (ed.), *Research Handbook on Human Rights and Intellectual Property* (Cheltenham: Edward Elgar, 2015); Daniel Gervais, *International Intellectual Property: A Handbook of Contemporary Research* (Cheltenham: Edward Elgar 2015).

19 Howard Florey/Relaxin [1995] European Patent Office Rep. 541; for an analysis of the dichotomy, see Justine Pila, *The Requirement for an Invention in Patent Law* (Oxford: Oxford University Press, 2010), 221–224; for blurring lines, see also Michelangelo Temmerman, *Intellectual Property and Biodiversity: Rights to Animal Genetic Resources* (Alphen aan den Rijn: Wolters Kluwer, 2012); Geertrui van Overwalle, "Biotechnology and Patents: Global Standards, European Approaches and National Accents," in *Genetic Engineering and the World Trade System*, ed. Daniel Wüger and Thomas Cottier (pp. 77–108) (Cambridge: Cambridge University Press 2008).

20 Directive 96/9 EC of the European Parliament and of the Council of the EU of 11 March 1996 on the legal protection of

States.²¹ Much of trademark protection protects investment in marketing and advertising: at least as much as allowing the consumer to properly distinguish competing products. Recent developments see a shift of the IPR system to fostering the protection of investment and limiting competition by means of ever increasing levels of protection of IPRs.

It remains to be seen how these developments will affect welfare, growth and distribution in industrialised and developing countries alike. Yet it may be concluded at this stage that rebalancing can no longer be achieved within the system of intellectual property as such and on its own, but increasingly depends upon taking into account other areas of the law, both domestic and international. Increasing levels of protection render the embedding of intellectual property in the overall legal order more important than before. IPRs can no longer be dealt with in splendid isolation, but need to be construed and applied in the general context of law. This can best be achieved within the framework of domestic law under the umbrella of constitutional law and a uniform court system. It is more difficult to achieve in regional integration under preferential agreements, such as the North American Free Trade Agreement (NAFTA) and the European Union (EU). It is most difficult under the auspices of public international law—thus on the level where harnessing globalisation and effective checks and balances are most needed. The lack of a constitutional framework and the fragmentation of international law are major impediments in addressing balancing across different agreements.

2.4 The Impact of Fragmentation of Public International Law

The fragmentation of public international law in different fields and distinct fora renders the process of balancing more difficult.²² Unlike in domestic law and coherent legal systems, other areas of the law may not be taken into account on the international level due to limited and divided jurisdictions. Different institutions deal with the matter, and IPRs are far from being fully embedded in international law. The process is only at its beginnings, comparable to the early days of European Community law when IPRs—at the time a prerogative of member states—were found to interact with the principles and rules of competition law and the free movement of goods. The Court of Justice of the European Union (formerly the European Court of Justice) developed a fine balance between these different areas based upon a questionable distinction between the existence and the exercise of intellectual property rights.²³ Such exercise was subject to the prerogatives of free movement of goods, and resulted in particular in the doctrine of regional exhaustion and the need to increasingly harmonise intellectual property law.²⁴ Today, the EU enjoys full jurisdiction to enact legislative standards on intellectual property and balance exclusive rights and other parameters of

databases, OJ L. 077.

21 Feist Pubs., Inc. v. Rural Tel. Svc. Co., Inc., 499 U.S. 340 (1991).

22 Cf. International Law Commission, *Fragmentation of International Law: Difficulties Arising from the Diversification and Expansion of International Law*, Report of the Study Group of the International Law Commission, finalised by Martti Koskenniemi, UN General Assembly A/CN.4/L.682 (13 April 2006), http://legal.un.org/ilc/documentation/english/a_cn4_l682.pdf. For a comprehensive analysis of fragmentation and related theories, see Henning Grosse Ruse-Khan, *The Protection of Intellectual Property in International Law* (Oxford: Oxford University Press, 2016), 15–68.

23 See e.g. Paul Craig and Gráine de Búrca, *EC Law: Text, Cases, and Materials* (Oxford: Oxford University Press, 1997), 1027–1064, Case 56 and 58/64, Grundig/Consten, [1966] ECR 322; Case 119/75, Terrapin (Overseas) Ltd. v. Terranova Industrie C.A. Kupferer & Co [1976], ECR 1039.

24 See Ansgar Ohly and Justine Pila (eds), *The Europeanization of Intellectual Property Law: Towards a European Legal Methodology* (Oxford: Oxford University Press, 2013).

the legal order.²⁵ Traditional fragmentation has been overcome.

At the level of international law, the fragmentation persists also in the context of treaty-making. The TRIPS Agreement was designed as a minimum standard. It allows increasing levels of protection in domestic law and other international agreements. TRIPS-plus standards in preferential trade agreements add to these standards, but are legally independent. Due to national treatment and most favoured nation obligations under Articles 3 and 4 of the TRIPS Agreement, bilaterally and preferentially agreed standards deploy general spillover effects and increase levels of protection de facto beyond the parties to a specific bilateral agreement. They lift all the boats in the water, and with them general levels of protection, in particular when such standards are agreed to by states representing large markets. Typically for behind-the-border issues, states adopt regulations compatible with preferential agreements and apply such regulations to all states alike. A country will not operate a dual system with special IP rules for a particular partner. Rather, it will adjust its standards to the higher requirements of the preferential trade agreement and apply them across the board to all right holders alike. PTAs thus increase levels of protection and affect the overall balance of rights and obligations in a significant way for all countries alike. TRIPS and preferential agreements thus jointly form what may be called the common law of intellectual property protection.²⁶ Eventually, bilateral standards, due to such effects, may find their way through negotiation back into multilateral agreements, in particular the TRIPS Agreement. The process may be compared to the formation of the Paris and Berne Conventions in the nineteenth century. Both agreements multilateralised standards previously introduced by means of bilateral agreements having general effects on domestic legislation.

TRIPS-plus standards in PTAs are introduced in a self-contained manner, detached from other parts of the WTO agreements. They follow calls for enhanced protection, but fail to take into account implications for the overall multilateral system at hand and its different regulatory areas and disciplines. They are, in other words, not embedded in the overall order of international economic law, but lead a life of their own. It is here that further work is needed. As much as in domestic law and European law, intellectual property needs to be applied and construed in the context of the overall order. Some elements will be found in international law, others in domestic law. Embedding intellectual property protection in the overall legal order will partly reinforce the position of right holders. Partly, however, it will contribute to bringing about a better balance of interests.

The point is that the operation of intellectual property rights is not confined to specific statutes and treaty provisions, but needs to consider pertinent principles and rules relating to other areas of the law. This is true both in domestic and international law, both requiring the awareness that IPR rules are embedded in the legal order at large and cannot be considered in isolation. Depending on the specific facts of particular cases, lawyers and judges need to apply the law in context and develop the ability to go beyond the provinces of intellectual property rights properly speaking in bringing about a proper balance of rights and obligations. Partly, these principles can be integrated in relevant rules. Mostly, they will exist independently, and the art of lawyering will consist of bringing together all these elements.

25 Article 118 Treaty on the Functioning of the European Union.

26 Thomas Cottier, "The Common Law of International Trade and the Future of the World Trade Organization," *Journal of International Economic Law* 18 (2015): 3–20.

3. General Principles of Law

The operation of intellectual property is subject to general principles of law which apply in a domestic context but also form part of public international law under Article 38(1)(c) of the Statute of the International Court of Justice.²⁷ They form part of the body of law which applies both in domestic and international relations.²⁸ They provide coherence to different layers of government and are of importance for the theory of multilayered governance and Global Administrative Law.²⁹ Linkages between intellectual property and its specialised rules, and general principles of law have not been sufficiently developed so far.³⁰ These principles, applying to lacunae and assisting the interpretation of broadly textured norms, offer an important and additional avenue to achieving an appropriate balance between rights and obligations under the facts of a particular case.

3.1 Equity and Good Faith

The principle of equity essentially stands for the proposition of achieving a fair and just result under the facts of a particular case.³¹ While aspiring to broad precepts of justice in international relations, the operation of equity in law, mainly focusing on maritime boundary delimitation, developed a particular methodology which can also be applied to international economic law. Based upon broad principles derived from the concept of the continental shelf and the exclusive economic zone as extensions of land masses, equitable principles have been developed including the identification of pertinent factors to be taken into account in assessing the claims of parties. Recourse to equitable principles amounts to a particular legal methodology suitable for complex configurations entailing conflicting interests and the need to balance them appropriately.³² This topical methodology can be deployed whenever the law refers to equity, for example requiring fair and equitable treatment in investment law. It can also be applied implicitly as a general principle of law. It has great potential to be applied in the field of intellectual property protection, not only in assessing compensation for compulsory licensing, but also in defining and refining the scope of rights and exemptions. Equity is also of great importance in procedural terms. The maxims of equity, developed in English law, have been largely adopted in international arbitration and may be called upon also in intellectual property

27 "[T]he general principles of law recognized by civilized nations"; http://legal.un.org/avl/pdf/ha/sicj/icj_statute_e.pdf. For a discussion see Giorgio Gaja, "General Principles of Law," in *Encyclopedia of Public International Law*, vol. 4 (pp. 370–377) (Oxford: Oxford University Press, 2012).

28 Hersch Lauterpacht, *Private Law Sources and Analogies of International Law* (Hamden, CT: Archon Books, 1927).

29 Christian Joerges and Ernst-Ulrich Petersmann (eds), *Constitutionalism, Multilevel Trade Governance and International Economic Law* (Oxford: Hart, 2011); Benedict Kinsbury, Nico Krish and Richard B. Stewart, "The Emergence of Global Administrative Law," *Law and Contemporary Problems* 68 (2005): 15–61.

30 A first attempt was made in Frederick M. Abbott, Thomas Cottier and Francis Gurry, *The International Intellectual Property System: Commentary and Materials*, vol. 1 (Boston: Kluwer Law International, 1999), 494–501, and subsequent editions.

31 See Francesco Francioni, "Equity in International Law," in *Encyclopedia of Public International Law*, vol. 3 (pp. 632–642) (Oxford: Oxford University Press, 2012).

32 See Thomas Cottier, *Equitable Principles of Maritime Boundary Delimitation: The Quest for Distributive Justice in International Law* (Cambridge: Cambridge University Press, 2015).

disputes.³³ For example, the maxim of clean hands allows objection to frivolous claims and conduct ignoring ethical standards and good faith. It offers an important avenue in combating the abuse of formally exclusive rights.

The principle of protecting legitimate expectations, emanating from good faith, is an important ingredient in assessing whether policies and policy changes introduced unduly frustrate right holders or third parties. Good faith is a free-standing principle of international law and domestic law, essentially derived from equity and designed to secure justice under the facts of a particular configuration and case.³⁴ Estoppel deploys binding effects on unilateral promises made and conduct engaged in if alterations harm others.³⁵ In WTO law, good faith depicts the prohibition of abuse of rights. It amounts to the protection of legitimate expectations as to the conditions of competition, being part of the doctrine of nullification and impairment of benefits.³⁶

3.2 Proportionality

The principle of proportionality displays different components which do not all have the same standing in international law.³⁷ Necessity amounts, in our view, to a principle of customary international law which has been applied to many areas and thus may be relevant in the field of intellectual property. It states that means applied should not exceed what is necessary to achieve a particular and defined goal. Other components of proportionality address whether a measure is suitable and able to achieve a particular goal, and foremost, whether the impact of the measure taken is commensurate with the importance of the regulatory goals. The latter strongly depends upon the context of a particular case and also standards of review applied in adjudication. As a general principle of law, it also applies to issues of intellectual property rights, for example in assessing restrictions on the use of trademarks and the policy goal at hand.³⁸ Such considerations do not depend upon explicit reference to proportionality in the text but can be introduced by referring to proportionality as a general principle of law applicable to the interpretation and application of specific treaty and legislative provisions.

3.3 Other Legal Principles

The principle of non-retroactivity is a general principle of law and does not allow the retroactive application of new legislation and treaty provisions to completed factual settings. For example, and in line with Article 70 TRIPS Agreement, the extension of the duration of protection cannot

33 See C. Wilfred Jenks, *The Prospects of International Adjudication* (London: Stevens, 1964), 316–427.

34 See Jörg Paul Müller, *Vertrauensschutz im Völkerrecht* (Cologne: Carl Heymann, 1971).

35 See Thomas Cottier and Jörg Paul Müller, "Estoppel," in *Encyclopedia of Public International Law*, vol. 3 (pp. 671–677) (Oxford: Oxford University Press, 2012).

36 Marion Panizzon, *Good Faith in the Jurisprudence of the WTO: The Protection of Legitimate Expectations, Good Faith Interpretation and Fair Dispute Settlement* (Oxford: Hart, 2006); see section 6.1 below.

37 See Thomas Cottier, Roberto Echandi, Rachel Liechti, Tetyana Payosova and Charlotte Sieber-Gasser, "The Principle of Proportionality in International Law: Foundations and Variations," *Journal of World Investment and Trade* 18 (2017) (forthcoming).

38 Cf. *Philip Morris Brands Sàrl, Philip Morris Products S.A. and Abal Hermanos S.A. v. Oriental Republic of Uruguay*, ICSID Case No. ARB/10/7, 8 July 2016, <https://www.italaw.com/cases/460>; *Australia – Certain Measures Concerning Trademarks, Geographical Indications and Other Plain Packaging Requirements Applicable to Tobacco Products and Packaging* (WTO, DS 458, pending).

retroactively restore protection to information already in the public domain, which may thus be used by everybody. Article 18 of the Berne Convention as integrated into the TRIPS Agreement includes particular and limited exceptions to this principle in copyright. Yet, except for specific exceptions, the principle of non-retroactivity applies to all fields of IPRs, irrespective of whether this is positively stated in legislation.

The principle *ne bis in idem* does not allow an issue to be adjudicated twice. Once a matter is settled in court, it cannot be reopened unless new facts call for a revision of the ruling. Unless specific regulation allows reassessment and review of a case beyond the appeal mechanism, the principle provides for legal security. The principle also applies to intellectual property, both domestically and in international arbitration.

The principle of legality requires governmental action to be based upon law as a minimum standard.³⁹ It has hardly been called upon in the field of IPRs. Yet granting an exclusive and monopoly right requires a legal basis in domestic or international law (in monist countries). Administrative practices for the registration of rights short of a statutory basis may not meet legitimate expectations as to legal security.⁴⁰ Domestic law requirements may go beyond such minimum standards and require that a legal basis be found in acts passed by Parliament. Also, requirements as to the precision and density of the rule may exist. Loosely textured IPR norms restricting human rights may not suffice in certain jurisdictions. Such additional requirements do not (yet) exist in international law, but they influence the operation of IPRs under the constitutional law of individual countries.

More specific rules applicable to individual countries beyond international law may also apply under other provisions of constitutional law. It is recalled that the fundamental principle of free movement of goods significantly influences the exercise of intellectual property rights in the European Union and the European Economic Area under the Agreement on the European Economic Area (EEA). In federal states, commerce between states is subject to comparable rules, in particular the Interstate Commerce clause of the US Constitution or internal market regulation in Switzerland.⁴¹ Since intellectual property is mostly a matter of federal law, no particular restrictions and limitations on its exercise and enforcement generally are to be expected, but they cannot be excluded, in particular where restrictions are due to common law or particular state law, such as the protection from unfair competition which varies among different US states. Similar configurations also occur in other federations.

Finally, regulatory principles may influence the operation of intellectual property rights. The principle of transparency, also enshrined in Article 63 of the TRIPS Agreement, requires appropriate publication of laws, regulations and administrative and judicial rulings, or for them to be made otherwise available to right holders and third parties.⁴² Lack of publication may render the operation

39 Thomas Cottier, *Die Verfassung und das Erfordernis der gesetzlichen Grundlage*, 2nd edn (Diessenhofen: Rüegger, 1991).

40 Cf. in this context *India – Patent Protection for Pharmaceutical and Agricultural and Chemical Products*, WT/DS50/R (5 September 1997), WT DS50/AB/R (19 December 1997). While the ruling was based upon specific language of the TRIPS Agreement, the principle of legality may have offered an independent cause of action in this case.

41 See George Anderson (ed.), *Internal Markets and Multi-level Governance: The Experience of the European Union, Australia, Canada, Switzerland, and the United States* (Oxford: Oxford University Press, 2012).

42 Thomas Cottier and Michelangelo Temmerman, "Transparency and Intellectual Property Protection in International Law," in *Transparency in International Law*, ed. Andrea Bianchi and Anne Peters (pp. 197–220) (Cambridge: Cambridge University Press, 2013).

of the provision null and void, also violating the principle of legality discussed earlier. International agreements may provide for regulatory cooperation that also extends to the enforcement of intellectual property. In the European Union, this also entails harmonisation of intellectual property rights, and it will be interesting to see whether the approach will be extended to transatlantic relations under TTIP. Mutual recognition of rulings may exist under bilateral or multilateral agreements on administrative and judicial assistance. Parties to an agreement may agree to apply the principle of mutual recognition and equivalence not only to technical regulations and standards, but also to rules pertaining to intellectual property. This may entail the mutual or unilateral recognition of patents and trademarks issued by another state or international organisation, going beyond the rules of Article 4 and 4bis of the Paris Convention for the Protection of Industrial Property.

4. Human Rights

The fragmentation of public international law not only left trade outside of the core of public international law for decades, but also excluded closer interaction between trade and human rights.⁴³ The problem of securing drugs to combat human immunodeficiency virus and acquired immune deficiency syndrome (HIV/AIDS) in least developed countries in the wake of a spreading epidemic at the turn of the century triggered a lively debate on trade and human rights. It led to, and followed, the adoption of the 2001 Doha Declaration on the TRIPS Agreement and Public Health and its implementation mechanism based upon a waiver and subsequent amendment of Article 31(f) TRIPS Agreement which limits the granting of compulsory licensing essentially to the supply of the domestic market. The system adopted for pandemic drugs henceforth allows members to grant compulsory export licences under carefully circumscribed conditions.⁴⁴ While the system has only been applied once so far, it substantially increased the bargaining powers of governments in negotiating with original producers, which contributed to substantially lowering drug prices in the meantime. The issue of access to drugs induced extensive scholarly work in trade and human rights beyond the right to health.⁴⁵ It may have influenced WTO jurisprudence in invoking public morals in defence of non-trade concerns.⁴⁶ It prepared the ground for future invocation of labour standards and human rights. Particular and impressive scholarly efforts were made on human rights and intellectual property rights. The 2015 *Research Handbook* is an important milestone in this respect.⁴⁷

4.1 Substantive and Procedural Standards

43 Thomas Cottier, "Trade and Human Rights: A Relationship to Discover," *Journal of International Economic Law* 5 (2002): 111–132.

44 See e.g. Frederick M. Abbott and Jerome Reichman, "The Doha Round's Public Health Legacy: Strategies for the Production and Diffusion of Patented Medicines under the Amended TRIPS Provisions," *Journal of International Economic Law* 10 (2007): 921–987. For a detailed analysis and case studies on access to medicines, with a particular focus on Global Administrative Law, see Rochelle C. Dreyfuss and César Rodríguez-Garavito (eds), *Balancing Wealth and Health: The Battle over Intellectual Property and Access to Medicines in Latin America* (Oxford: Oxford University Press, 2014).

45 Frederick M. Abbott, Christine Breining-Kaufmann and Thomas Cottier (eds), *International Trade and Human Rights: Foundations and Conceptual Issues* (Ann Arbor: University of Michigan Press, 2006); Thomas Cottier, Joost Pauwelyn and Elisabeth Bürgi, *Human Rights and International Trade* (Oxford: Oxford University Press, 2005).

46 See *European Communities – Measures Prohibiting the Importation and Marketing of Seal Products*, WT/DS 400/AB/R, WT/DS401/AB/R (5 May 2014).

47 Geiger, *Research Handbook on Human Rights and Intellectual Property*.

In interpreting and applying disciplines on IPRs in WTO law and preferential trade agreements, social and economic human rights will continue to be of paramount importance. Besides the right to health, the right to food and the right to life in general are of importance in assessing the scope and limitations of patents in pharmaceuticals, chemicals and foodstuffs. These rights may limit patent protection or undisclosed information, or copyright in view of the right to education and the right to information. They may also foster protection to encourage research and development in genetic engineering, however, making available more efficient and drought-resistant crops with the capacity to overcome hunger and malnutrition, or countering disinformation in the internet age. The relationship of IPRs and human rights is not a one-way street but must be considered case by case on the merits of the issue at hand.

Procedural human rights of due process, enshrined in Article 6 of the European Convention on Human Rights and other instruments, are of importance in improving procedures granting patent, trademark and design protection. They serve the protection not only of right holders, but also of competitors and consumers. Due process, and in particular the right to be heard of those affected, are relevant ingredients in refining procedures and ensuring that all sides have their day in court and are not overlooked. Finally, human rights are critical in assessing unfair competition rules referred to earlier. Whether or not conduct of companies under obligations of corporate social responsibility (CSR) is protected by freedom of speech, or whether it amounts to commercial speech subject to unfair competition, depends upon the interpretation of guarantees of freedom of speech and information enshrined in human rights instruments and constitutional law.

4.2 Property and Human Rights

Embedding intellectual property also raises the question of the extent to which IPRs amount to human rights in their own right. Article 27(2) of the Universal Declaration of Human Rights⁴⁸ is echoed in Article 15 of the International Covenant on Economic, Social and Cultural Rights, which includes the right to "benefit from the protection of the moral and material interests resulting from any scientific, literary or artistic production of which he [or she] is the author."⁴⁹ The covenants, however, do not include the right to property as such. The right to property in Protocol (I) of the European Convention on Human Rights⁵⁰ was recognised and extended to IPRs, in particular trademark protection.⁵¹ It was argued that property rights form part of human rights.⁵² This translates into the need to balance the interests implied; this kind of balancing between IPRs and human rights is considered to be key. This approach actually dominates the interface of intellectual property and human rights in domestic and European Union case law.⁵³

48 "Everyone has the right to the protection of the moral and material interests resulting from any scientific, literary or artistic production of which he [or she] is the author"; <http://www.un.org/en/universal-declaration-human-rights/>.

49 See <http://www.ohchr.org/EN/ProfessionalInterest/Pages/CESCR.aspx>.

50 See <http://www.echr.coe.int/pages/home.aspx?p=basictexts>.

51 European Court of Human Rights, *Anheuser-Busch Inc. v. Portugal* [GC] no. 73049/01, 11 January 2007, paras 13–24, ECHR 2007-I.

52 See Petra Buck, *Geistiges Eigentum und Völkerrecht: Beiträge des Völkerrechts zur Fortentwicklung des Schutzes von geistigem Eigentum* (Berlin: Duncker & Humblot, 1994).

53 See Alexander Peukert, "The Fundamental Right to (Intellectual) Property and the Discretion of the Legislature," in Geiger, *Research Handbook on Human Rights and Intellectual Property* (pp. 132–148).

From a historical and functional point of view, however, IPRs respond to utilitarian concepts of enhancing the welfare of society at large, rather than primarily offering protection to individuals. Property, including IPRs, does not entail natural law (and thus characteristics pre-dating the state) which legislators need to respect and are unable to remove. They are, with David Hume, conventional in nature.⁵⁴ The protection of property in Protocol (I) of the European Convention on Human Rights presupposes the existence of a system of property created by legislation.⁵⁵ It is man-made. It does not reflect a human right to property entailed in natural law. In England, for example, the emergence of patent laws was a response to the granting of arbitrary royal privileges.⁵⁶ Rather, IPRs involve an obligation to seek and adjust a proper balance between conflicting interests in the course of never-ending technological developments. New forms of property protection may emerge, such as GIs, undisclosed information, integrated circuits, and in the future traditional knowledge. Others may disappear and be no longer used. Moreover, it would be difficult to generally assign human rights to juridical persons and multinational enterprises. They benefit from the protection of property as defined in legislation and case law, and they benefit from the procedural rights of Article 6 of the European Convention on Human Rights, which also applies to matters pertaining to intellectual property protection.

What then is the impact of Article 15 of the UN Covenant on Economic, Social and Cultural Rights? It is submitted that these rights are expressions of a right to personality, calling for the protection of interests closely relating to a particular natural person. They essentially translate into material and non-economic moral rights (recognised in copyright law), but also apply to rights of the personality in all forms of intellectual property protection. Statutory and conventional development of IPRs needs to take these elements into account, but may not exhaust the impact of Article 15. It is submitted that human rights are not linked to recognised right holders, but primarily protect the human dignity of individuals who have participated in the creative process. Human rights to creativity thus rebalance the rights of right holders (often juridical persons) with the interests of individuals who contributed in the creative process. Human rights, in other words, are important ingredients in defining the relationship of creative activity to right owners, and thus are in particular relevant in shaping the conditions of work for hire.

While IPRs thus are utilitarian and not based upon human rights, human rights are of paramount importance in providing goals and values which the overall IPR system should seek to implement. Human rights are one of the main components by which the legitimacy of the overall IP system should be assessed. They thus need to be taken into account in defining, interpreting and enforcing IPRs. Substantive and procedural rights define the benchmark by which outcomes are measured in terms of fairness, equity and justice. The right to life and health, the right to food, the right to education and other rights must play a key role in shaping and applying intellectual property rights. Partly, they overlap and are mutually supportive. Partly they conflict and intellectual property amounts to a restriction of human rights.

54 David Hume, *A Treatise of Human Nature* (1739); see "David Hume on Property as a Convention Which Gradually Emerges from Society," Online Library of Liberty, <http://oll.libertyfund.org/quotes/546>.

55 Peukert, "The Fundamental Right to (Intellectual) Property," 138.

56 Statute of Monopolies (1623), <http://www.legislation.gov.uk/aep/ja1/21/3>.

Importantly, in addressing such conflicts and tensions, human rights and property rights, as has been explained, are not on the same page and level. It is not simply a matter of balancing the two, but of adopting human rights as prime guidance in the process of shaping and applying intellectual property rights.⁵⁷ Rather, in case of conflict and diverging interests, it is a matter of making a legal justification for intellectual property rights which restrict human rights, calling for appropriate legal foundations, recognition of compelling public interests and respect for proportionality. This essentially amounts to a constitutional approach, requiring adequate legal foundations, public interest and the necessity (proportionality) of the regulation.⁵⁸

It is questionable whether the existing framework allows for sufficient flexibility to achieve this. Articles 7 and 8 of the TRIPS Agreement provide important doors of entry. However, the scope is limited as results must be compliant with the other provisions of the TRIPS Agreement. General exceptions allowing recourse to public morals do not exist as in the field of trade in goods and services. As levels of protection increase, it is important to consider these elements in future treaty-making and to provide for a clear basis which obliges legislators and adjudicators to consider human rights concerns in developing and assessing intellectual property standards and related procedures.

4.3 The Missing Pieces

In section 8, we shall briefly address real property in the context of investment protection, the main purpose of which is to protect foreign direct investment in real estate, translating into activities of resource extraction, or building industries in the production of goods and services. Other than that, it is striking to observe that public international law hardly deals with real estate.⁵⁹ Due to the principles of sovereignty over natural resources and territoriality, it is left to the nation-state. It is not protected in binding universal human rights agreements. Regulations under the umbrella of international law range from capitalist to socialist, even communist models of ownership of the means of production. Other than in the field of intellectual property, there are no transboundary transactions of real estate other than foreign direct investment.

At the same time, it should be recalled that the legal status of soil and real property plays an important role in international relations, ranging from fundamental geopolitical tensions to issues of social and economic development and thus private and official development assistance. Efforts to enhance the livelihood of rural populations and local farmers cannot be detached from real estate law. The lack of land titles prevents farmers and indigenous people from defending their core interests in land use and management. It bars them from mortgaging real property and soil and thus impedes investment. Resources spent in overseas development assistance on rural development may fail due to a lack of fundamentals, which, however, cannot be addressed in terms of international law. No binding international rules exist on land registration and zoning, and efforts to support countries in that respect all depend upon domestic law and voluntary compliance with development programmes. Climate change mitigation could be improved by binding land titles for indigenous peoples, beyond

57 See Lawrence R. Helfer, "Toward a Human Rights Framework for Intellectual Property," *UC Davis Law Review* 40 (2007): 971–1020. Cf. also Andrey R. Chapman, "The Human Rights Implications of Intellectual Property Rights," *Journal of International Economic Law* 5 (2002): 861–882.

58 See Peukert, "The Fundamental Right to (Intellectual) Property."

59 See Thomas Cottier, Katja Gehne and Maria Schultheiss, "The Protection of Property in International Law: The Missing Pieces," in *Coexistence, Cooperation and Solidarity: Liber Amicorum Rüdiger Wolfrum*, vol. 1, ed. Holger P. Hestermeyer et al. (pp. 367–396) (Leiden: Kluwer Law, 2012).

Article 26 of the 2007 UN Declaration on the Rights of Indigenous Peoples.⁶⁰ Finally, from the point of view of sustainable development and international trade in agricultural products, soil quality and care are of the utmost importance and an international concern. Countries depending upon food and feedstock imports have a stake and interest in sound soil management, preventing and remedying the deterioration of soil quality under principles of sustainable development. It hardly needs to be emphasised that the issue is of particular importance in the age of climate change and the need to cope with climate change adaptation mainly affecting agricultural production.

International law has a long way to go in developing a human right to personally used property, both real and movable. The discrepancy with the level of intellectual property protection is striking. Developing appropriate tools of international disciplines on domestic obligations, international cooperation and unilateral measures on soil and real property management under the emerging principle of common concern of humankind⁶¹ may also help to remedy some of the imbalances which are currently unsuccessfully addressed in agricultural trade and intellectual property protection relating to genetic resources for food and agriculture, the protection of traditional knowledge and the transfer of technology and know-how. We need to widen the options to avoid seeking solutions relating to property exclusively by using the tools of intellectual property. Efforts should not merely focus on plant variety protection, farmers' rights and genetic resources in patent law, onto GIs, labelling and trademark law and in the future to the protection of traditional knowledge. International law should also develop disciplines on land registration, sustainable soil management and the use of water resources in order to achieve an overall balance of the interests at stake. Disciplines on virtual water in international trade will assist in implementing and enforcing such disciplines.⁶²

5. Sustainable Development Goals

The 2015 Sustainable Development Goals, further developing the Millennium Development Goals, enshrine the basic philosophy of balancing economic, social and ecological goals in different walks of life important to developing countries and society at large. To a large extent, their content overlaps with social and economic human rights as enriched by environmental concerns not present when this generation of standards of justice and equity were drafted after World War II. The 2015 SDGs cover a wide field of human life and state ambitious goals: (1) No Poverty, (2) Zero Hunger, (3) Good Health and Well-Being, (4) Quality Education, (5) Gender Equality, (6) Clean Water and Sanitation, (7) Affordable Clean Energy, (8) Decent Work and Economic Growth, (9) Industry, Innovation and Infrastructure, (10) Reduced Inequalities, (11) Sustainable Cities and Communities, (12) Responsible Consumption and Production, (13) Climate Action, (14) Life below Water, (15) Life and Land, (16) Peace Justice and Institutions, (17) Partnership for the Goals.⁶³

The difference from human rights is essentially one of methodology and, partly, scope. While the

60 UNGA Res. 61/295 (13 September 2007), http://www.un.org/esa/socdev/unpfii/documents/DRIPS_en.pdf.

61 Cf. Thomas Cottier, Philipp Aerni, Barış Karapınar, Sofya Matteotti, Joëlle de Sépibus and Anirudh Shingal, "The Principle of Common Concern and Climate Change," *Archiv des Völkerrechts* 52 (2014): 293–324.

62 See Fitzgerald Temmerman, "Trade in Water in International Law: Bulk Fresh Water, Irrigation Subsidies and Virtual Water," PhD thesis, University of Bern, 2015.

63 Resolution adopted by the General Assembly on 25 September 2015: "Transforming our World: The 2030 Agenda for Sustainable Development," UNGA Res. 70/1 (21 October 2015), http://www.unfpa.org/sites/default/files/resource-pdf/Resolution_A_RES_70_1_EN.pdf.

implementation of political and civil rights mainly depends on courts, and social and economic rights primarily upon legislation and domestic programmes, sustainable development goals set out benchmarks and make available international tools making it possible to measure and quantify progress made and identify shortcomings.⁶⁴ SDGs are not only informed by the efforts of civil society and non-governmental organisations supporting human rights and environmental goals, in particular mitigating climate change and adapting to climate change. They are essentially informed by working methods of the World Bank, United Nations organisations and national development agencies funded by taxpayers. From the point of view of international law, SDGs amount to soft law instruments which need to be taken into account in the interpretation of law. Compliance will depend upon specific programmes and commitments made which may trigger legal obligations in good faith and the doctrine of estoppel. By and large, however, it will not be a matter for the courts to secure implementation, but the political branches of government, national administrations and specialised international organisations.

Similar to human rights, SDGs should be taken into account in shaping intellectual property rights, in the process of interpretation and compliance. SDGs today provide the most important contemporary standards of justice and equity in international economic law. Again, Articles 7 and 8 of the TRIPS Agreement provide the basis to take SDGs into account. However, these provisions do not provide a basis to justify deviations from existing standards and rules, and the lack of general exceptions in the TRIPS Agreement may limit the opportunity to effectively take SDGs into account. Agreements such as preferential trade agreements, amendments to the TRIPS Agreement, but also IPR Conventions should introduce appropriate foundations which allow SDGs and human rights to be taken into account in specific regulatory areas. This is of importance in several areas relating to health, food and education, and climate change. It goes beyond the scope of this paper to engage in a detailed analysis. It should be highlighted, however, that SDGs will be of the utmost importance in developing new and effective disciplines on transfer of knowledge and technology on the basis of Articles 7 and 66(2) of the TRIPS Agreement in support of attaining the benchmarks defined by SDGs. Many of their goals cannot be achieved without enhancing the effort, and new tools need to be developed, such as tax incentives and framework rules for the operation of public-private partnerships (PPPs). Addressing intellectual property rights and PPPs has been one of the most difficult issues and so far has been left to a case-by-case approach, offering no transparency and sharing of mutual experience.

6. The Impact of International Trade Regulation

The overall system of the WTO provides equal conditions of competition and market access. The rules of the GATT 1994 and its specialised agreements protect tariff bindings and non-tariff barriers. They prevent and remedy protectionist, rent-seeking barriers to international trade while recognising legitimate non-trade concerns, such as public health, public morals or environmental standards in the process of sustainable development. The same philosophy applies, partly with different techniques due to the absence of tariffs, in the field of services.

Within the multilateral trading system, intellectual property rights are part of the law of non-

64 Cf. Resolution adopted by the General Assembly on 29 July 2016: "Follow-up and Review of the 2030 Agenda for Sustainable Development on the Global Level," UNGA Res. 70/299 (18 August 2016), https://www.cbd.int/doc/meetings/mar/soiom-2016-01/other/soiom-2016-01-desa-unga-a-70a_res_70_299-en.pdf.

tariff measures and a prerequisite of fair trade. If properly shaped, calibrated and balanced, they encourage and reward innovation, which in turn translates into increasing levels of international trade in exchanging goods and services. They allow consumers to distinguish different brands. They assist in excluding fake and dangerous products and combating counterfeiting and piracy. Trademark protection is an important ingredient in combating fake and dangerous drugs, often traded on the internet and otherwise difficult to attach. Lack of protection, as well as excessive protection, amounts to a distorting trade barrier. Again, IPRs pertain to the core of international trade regulation. IPRs thus need to be considered and respected in the interpretation of trade rules on goods and services. But this also implies that rules on goods and services need to be taken into account in interpreting and applying intellectual property rights beyond the confines of the TRIPS Agreement and TRIPS-plus disciplines in other agreements, in particular preferential trade agreements.

6.1 Non-discrimination, Nullification and Impairment

The general body of international trade law of the GATT has had significant influence in interpreting the TRIPS Agreement, taking into account the fact that the subjects of protection are not goods and services, but right holders, and thus natural and juridical persons.⁶⁵ While the doctrine of legitimate expectations as to conditions of competition developed in the context of Article III GATT on national treatment was unduly rejected by the Appellate Body in the early case law of *India – Patents*,⁶⁶ the paramount importance of de facto discrimination was recognised in *EC – Geographical Indications*.⁶⁷ Members of the WTO cannot hide behind formal concepts of national treatment if the regulation in fact deploys discriminatory effects. This case resulted in reducing discriminatory and protectionist practices in granting protection to geographical indications issued by the European Union. It brought about equal protection for domestic and foreign right holders, and overall balanced the existing system of protection.

Non-violation nullification and impairment of benefits, however, were excluded for political reasons by a moratorium, the legal effects of which have remained unclear. A majority of the WTO membership is afraid that non-violation complaints could instigate harassment beyond existing legal obligations. Another reason for exclusion was that the concept of non-violation is being misunderstood and the potential impact exaggerated. Strict legal requirements applied to non-violation complaints, in particular the non-foreseeability of a measure following agreed regulation,⁶⁸ hardly qualify for application in the field of IPRs. Within the detailed legal framework of the TRIPS Agreement it is difficult to imagine configurations of valid non-violation complaints. Most angles are covered by law. Perhaps the increase of price controls for products such as pharmaceutical and chemicals in the aftermath of patent protection are an area suitable for non-violation. Yet, even here, it will be difficult to comply with the legal test of non-foreseeability of the measure at hand if price controls have been in operation and increases of price controls are to be expected within a given

65 See Kennedy, *The WTO Dispute Settlement and the TRIPS Agreement*.

66 *India – Patent Protection for Pharmaceutical and Agricultural Chemical Products*, WT/DS50/AB/R (19 December 1997); for a discussion, see Panizzon, *Good Faith in the Jurisprudence of the WTO*, 222–223.

67 *European Communities – Protection of Trademarks and Geographical Indications for Agricultural Products and Foodstuffs*, WT/DS290/R (15 March 2005).

68 See Thomas Cottier and Krista Nadakavukaren Schefer, “Non-Violation Complaints in WTO/GATT Dispute Settlement: Past, Present and Future,” in *International Trade Law and the GATT/WTO Dispute Settlement System*, ed. Ernst-Ulrich Petersmann (pp. 145–183) (Leiden: Kluwer 1997).

national health system.

6.2 Exhaustion of Rights and Parallel Trade

Exhaustion of rights amounts to the most important and unresolved areas of interfacing TRIPS and GATT rules. Regulation of parallel trade, that is, the competition of original products placed in different markets and subsequently traded internationally, fundamentally defines to what extent free trade prevails over market segmentation.⁶⁹ Article 6 of the TRIPS Agreement leaves the matter to domestic policy space, subject to obligations of non-discrimination. Members are free to adopt rules of exhaustion which best serve their interests and industries. They may even adopt different rules for different forms of protection. A member may operate national exhaustion in patent law and international exhaustion in trademarks. In trademark law, Article 16 of the TRIPS Agreement implies the doctrine of international exhaustion for like products placed on different markets by the same multinational corporation. The provision allows the presumption to be rebutted that the use of the same trademark for identical goods and services results in a likelihood of confusion. Apparently, no such confusion exists for like products of the same company, provided that these products are physically identical. Since the TRIPS Agreement is a minimum standard, however, members are allowed to operate more stringent standards than under Article 16 TRIPS. The doctrine of regional exhaustion operating within the European Union is thus compatible with the provision.⁷⁰

The question arises as to whether such policy space is safeguarded under the TRIPS Agreement or possibly limited under the purview of the GATT 1994. Parallel trade depends upon the origin of the good, quite independently of the nationality of the right holder. It follows that national exhaustion (or regional exhaustion in the case of the EU) translates into quantitative restrictions applied to products imported. National or regional exhaustion in relation to third countries thus amounts to a violation of Article XI GATT, prohibiting quantitative restrictions on goods or transboundary services. The provision applies in its own right, irrespective of Articles 6 and 16 TRIPS Agreement.⁷¹ The operation of national or regional exhaustion thus depends upon exceptions under Article XX GATT. Such restrictions need to be necessary and comply with the requirements of the chapeau of the provision.

It may be argued that necessity can be readily established by invoking existing rules and practices of national exhaustion and thus the protection of existing intellectual property rights. It may also be argued, however, that necessity relates to the policy goals behind exhaustion and thus is open to weighing and balancing the impact of the measure and the policy goals. The effect of quantitative restrictions, market segmentation and price differentiation for original like products, resulting in higher pricing, thus must be balanced against the needs of industries to fund innovation and of consumers to be protected from deception as to the quality of the product.⁷² In pharmaceuticals, for

69 For a comprehensive analysis, see Irene Calboli and Edward Lee, *Research Handbook on Intellectual Property Exhaustion and Parallel Imports* (Cheltenham: Edward Elgar, 2016); Thomas Cottier and Matthias Oesch, *International Trade Regulation: Law and Policy in the WTO, the European Union and Switzerland* (Bern: Stämpfli, 2005), 936–939, 948–951, 953–958.

70 See Christiane Freytag, *Parallelimporte nach EG- und WTO-Recht* (Berlin: Duncker & Humblot, 2001).

71 But see Marco C. E. J Bronckers, "The Exhaustion of Patent Rights under World Trade Organization Law," *Journal of World Trade* 32, no. 5 (1998): 137–159.

72 For an excellent discussion under US patent law see Brief of Amicus Curiae (Frederick M. Abbott) in Support of Petitioner, *Impression Products Inc. v. Lexmark International, Inc.*, on Writ of Certiorari to the United States Court of Appeals for the Federal Circuit, United States Supreme Court, No 15-1189 (filed January 20, 2017;) https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2906967. The US Supreme Court, in this case, essentially ruled on May 30, 2017 in favour of

example, it may be argued that price controls applicable to all products alike offer a viable and less intrusive alternative than quantitative restrictions imposed by right holders and enforced by states. In EU law, the rules on competition law and eventually of free movement of goods led to the finding that national exhaustion in intellectual property violates fundamental principles of EU law. Under GATT rules, the test may produce comparable results, although no concept of a common or internal market exists. The test may lead to different results in copyright, patents and trademarks, given possibly different motives for protection. National exhaustion in trademarks may not be considered a necessity to achieve the goal of product differentiation to the extent that original products effectively are the same. GATT may thus impose international exhaustion in this field. On the other hand, a price differential may be justified in patents in support of research and innovation and access to supplies by importing countries. Finally, national exhaustion needs to meet the standard of the chapeau of Article XX GATT, and avoid discriminatory treatment and disguised restrictions of trade.

In other words, the test applied to national exhaustion does not leave the matter entirely to members under Article 6 TRIPS. The two agreements are on a par, and TRIPS does not inherently prevail.⁷³ Both agreements need to be examined. Each of them applies in its own right and may impose stricter and thus under WTO law prevailing standards of protection than the other one. Applying GATT rules thus may lead to a more refined doctrine of exhaustion in the future, defining the parameters for patents and trademarks in their own ways. It may lead to a more refined balance of exclusive rights and market access in redefining the scope of intellectual property rights in the light of an open trading system. Members need to justify national exhaustion of rights, while under TRIPS they can freely choose to impose it and ban parallel imports from entering the market. Embedding the doctrine of exhaustion in the overall WTO framework may thus lead to different results than restricting considerations to the TRIPS Agreement and TRIPS-plus standards in preferential trade agreements. It may contribute to a better balance between exclusive rights and the interests of competitors and consumers.

Less is known about the impact of trade in services on the operation of IPRs. The structure of trade and the agreement is different from goods with the exception of transboundary mode 1 transactions, crossing borders. Unless the service produces a tangible good, it would seem that the doctrine of exhaustion has no role to play. The service and the provision of the service cannot be separated. Market access and non-discrimination are essentially defined by the schedules of commitment of each member. They may entail conditions and even quantitative restrictions under Article XVI. Article XIVbis GATS does not explicitly mention intellectual property in justifying exceptions, but it is included in legislation not incompatible with WTO law and measures necessary to prevent deceptive or fraudulent practices. Service-related patents (e.g. business models) and trademarks may thus justify restrictions on free movement of services and market access. The necessity test and proportionality, however, require recourse to the least intrusive measures and calibration which balances the impact and regulatory goals. In the absence of a particular case, the impact cannot be properly assessed. Overall it would seem that the GATS Agreement affects or modifies the operation of the TRIPS Agreement in a comparable manner to the potential effects of GATT on the operation

international exhaustion on the basis of the US Patent Act, https://www.supremecourt.gov/opinions/16pdf/15-1189_ebfj.pdf.

73 See *Canada – Certain Measures Concerning Periodicals*, WT/DS31/AB/R (30 June 1997); Cottier and Oesch, *International Trade Regulation*, 90–97.

of the exhaustion doctrine and on import restrictions.

7. Competition Law and Policy

7.1 Anti-trust Rules

Intellectual property rights amount to exclusive monopoly rights granted by the state to foster investment in research, development and marketing. They provide strong legal positions. They inherently restrict competition and market access of third parties. They create uneven playing fields in the process of negotiating voluntary licences. These effects may be excessive and even abusive. In domestic law, competition law is of importance in shaping the exercise of intellectual property rights. Abuses found may lead to damages or the granting of compulsory licensing, thus removing the exclusivity of intellectual property rights. Competition law, restricting freedom of contract and addressing cartels and the abuse of dominant positions as well as mergers and acquisitions, therefore amounts to an important check and balances IP rights and obligations. Article 8(2) of the TRIPS Agreement recognises the risk of abuse of rights and allows for appropriate remedies, provided that they are compatible with the provisions of the TRIPS Agreement. Article 40(1) more specifically recognises that "licensing practices or conditions pertaining to intellectual property rights which restrain competition may have adverse effects on trade and may impede the transfer and dissemination of technology."

Article 40(2) TRIPS Agreement explicitly allows members to adopt appropriate measures to prevent such practices. The agreement, by way of example, mentions exclusive grantback conditions, conditions preventing challenges to validity and coercive package licensing. The power also includes addressing the abuse of dominant positions. However, the provision requires that such measures are consistent with the other provisions of the TRIPS Agreement. While recourse to compulsory licensing under Article 31 TRIPS or exceptions under Article 30 TRIPS allow for adequate policy space, it is unclear to what extent other disciplines of competition policy may be restrained by Article 8(2) and Article 40 of the TRIPS Agreement.

The balance of intellectual property and competition is well developed in advanced jurisdictions, in particular in US and EU anti-trust rules. The US guidelines and EU regulations on block exemptions offer a certain amount of legal security in licensing intellectual property rights.⁷⁴ Important case law offers guidance as to the thresholds establishing an abuse of the dominant position granted by intellectual property rights.⁷⁵ Since the conclusion of the Uruguay Round, many countries have introduced disciplines on competition policy and may refer to such disciplines under the TRIPS Agreement. Issues relating to access to essential drugs were first addressed in South Africa, expounding the impact of competition law and policy.⁷⁶ Many countries, however, still lack adequate

74 US Department of Justice and Federal Trade Commission, "Antitrust Guidelines for the the Licensing of Intellectual Property" (1995), <https://www.justice.gov/atr/archived-1995-antitrust-guidelines-licensing-intellectual-property>; Commission Regulation (EC) No. 772/2004 of 27 April 2004 on the application of Article 81(3) of the Treaty to categories of technology transfer agreements, <http://www.wipo.int/wipolex/en/details.jsp?id=6390>; for a comprehensive analysis, see Andreas Heinemann, *Immaterialgüterschutz in der Wettbewerbsordnung* (Tübingen: Mohr Siebeck, 2002).

75 e.g. Case 241/91 and C-242/91 *Radio Telefis Eireann (RTE) and Independent Television Publications Ltd v. Commission* [1995] ECR I 743 (Magill).

76 See Frederick Abbott, Sean Flynn, Carlos Correa, Jonathan Berger and Natasha Nyak, *Using Competition Law to Promote Access to Health Technologies: A Guidebook for Low- and Middle-Income Countries* (New York: United Nations Development

disciplines and practices in order to bring about a proper balance. It should be recalled that the introduction and operation of anti-trust rules amounts to restricting freedom of contract and—other than intellectual property rights—is not generally supported by industries.

History shows that the introduction of effective disciplines on anti-trust often depends upon external pressures.⁷⁷ At the same time, large jurisdictions operating anti-trust rules with extraterritorial effects are not keen to engage international law disciplines. While part of the so-called Singapore issues, efforts to bring about such disciplines in the WTO have so far failed. Today, they are being pursued by the International Competition Network outside the WTO.⁷⁸ The Network has effectively supported countries in introducing legislation and developing expertise in the field. As many more countries have anti-trust rules today, the time has come to address binding common standards in the WTO. As countries develop their own anti-trust rules, regulatory cooperation and coherence may be warranted. The existence of extensive TRIPS and TRIPS-plus standards reinforces the need for effective tools balancing these rights, which, in international trade, depends upon effective international cooperation.⁷⁹ At the same time, developing countries may be worried that convergence will simply mean the adoption of US or European standards which may not sufficiently take into account the particular needs of developing countries. Evidently, WTO standards on competition policy cannot amount to simply copy-pasting existing domestic regulations, but must focus on core standards which allow countries to take appropriate measures to tame powerful positions based upon exclusive rights beyond the existing TRIPS Agreement. Moreover, it is necessary to develop mechanisms of mutual administrative and legal assistance in investigations, litigation and enforcement. Anti-trust investigations in a globalised economy strongly depend on mutual cooperation and law enforcement mechanisms.⁸⁰

Competition law thus amounts to an important ingredient in embedding intellectual property and to provide checks and balances. However, it cannot replace inherent and implied restrictions within IP law itself.⁸¹ It should be recalled that competition policy—with the exception of merger control—is reactive, costly and uncertain. It does not lend itself to defining and replacing the scope of IP rights in the first place.

7.2 The Need for Ceilings

The limited and ex post effects of competition law as a check on abuses of intellectual property are a main, but not exclusive, reason why international intellectual property agreements should not be limited to minimum standards, but also include maximum standards and thus ceilings of protection.⁸² The TRIPS Agreement states in its preamble that the agreement desires to ensure that

Programme, 2014), <http://www.undp.org/content/undp/en/home/librarypage/hiv-aids/using-competition-law-to-promote-access-to-medicine.html>.

77 Cf. David J. Gerber, *Law and Competition in the Twentieth Century Europe* (Oxford: Oxford University Press, 1998).

78 See <http://www.internationalcompetitionnetwork.org/>.

79 See David J. Gerber, *Global Competition: Law, Markets, and Globalization* (Oxford: Oxford University Press, 2012).

80 See Benoît Merkt, *Harmonisation internationale et entraide administrative internationale en droit de la concurrence* (Bern: Peter Lang, 2000).

81 See Eleanor Fox, "Can Antitrust Policy Protect the Global Commons from the Excesses of IPRs?" in *International Public Goods and Transfer of Technology under a Globalized Intellectual Property Regime*, ed. Keith E. Maskus and Jerome H. Reichman (pp. 758–773) (Cambridge: Cambridge University Press, 2005).

82 Kur and Grosse Ruse-Khan, "Enough Is Enough."

measures and procedures to enforce intellectual property rights not themselves become barriers to legitimate trade. The rules on enforcement in Articles 41–60 TRIPS thus partly contain such ceilings. To the extent that certain instruments are introduced, in particular on border measures, members are obliged to respect limitations which secure the balance of interests of right holders and importers affected by such measures. The agreement, however, does not go far enough, for example by clearly excluding the attachment of lawfully traded good in transit which potentially violate intellectual property rights in that market but are not likely to enter that market.⁸³ Moreover, the preamble in parallel does not recognise that substantive standards (other than for procedural standards) may amount to unnecessary barriers to trade. Instead, members of the WTO are free to adopt higher levels of protection unilaterally or as agreed in other agreements. It is necessary, with a view to establishing and maintaining a proper balance, to develop the idea that excessive protection may unduly restrict international trade and to contain levels of protection accordingly.

Unless the TRIPS Agreement is amended and introduces ceilings on substantive provisions, members may continue to increase levels of protection and TRIPS-plus provisions in bilateral and preferential agreements. These agreements are of equal standing and normally would not be questioned by the parties to them. Yet third parties may challenge domestic implementation of these standards in national legislation on the grounds that the standards due to ceilings are excessive and incompatible with the TRIPS Agreement. Violations found will give rise to withdrawal of concessions and thus may create incentives to suspend preferential agreements violating WTO law.

7.3 Unfair Competition Rules

Other than anti-trust rules, disciplines on unfair competition have established the principle of fairness in business dealings in relation to consumers and competitors. The concept imports moral and ethical standards into business law and practices. Given its vagueness and unpredictability, it has given rise to specific forms of intellectual property protection, the most recent additions explicitly referring to unfair competition being the protection of geographical indications and undisclosed information in Articles 22(2)(b) and 39(1) TRIPS Agreement. It is submitted that all forms of intellectual property protection, in particular patents, copyright and trademark protection operating on more specific rules than unfair competition, are conceptually rooted in this context and amount to *lex specialis* of unfair competition rules.

International law addresses unfair competition in Article 10bis of the Paris Convention as incorporated into the TRIPS Agreement.⁸⁴ Members are obliged to assure to nationals of other members effective protection from unfair competition. The general principle is stated in Article 10bis(2) of the Convention: "Any act of competition contrary to honest practices in industrial or commercial matters constitutes an act of unfair competition." The provision, in particular and in a non-exhaustive manner, addresses acts creating confusion, recourse to false allegations discrediting a competitor, and indications or allegations which are liable to mislead the public as to the nature, the manufacturing process and the properties of a product.

83 Grosse Ruse-Khan, *The Protection of Intellectual Property*, 288–299.

84 For a comprehensive analysis see Christian Riffel, *Protection against Unfair Competition in the WTO TRIPS Agreement: The Scope and Prospects of Article 10bis of the Paris Convention for the Protection of Industrial Property* (Leiden: Brill Nijhoff, 2016).

The potential of unfair competition rules has largely remained untapped so far in balancing intellectual property rights. Despite the fact that the evolution of different forms of IP protection is founded upon unfair competition, the two disciplines have been dealt with separately. The theory prevailed that the two fields were mutually exclusive: facts dealt with under specific IPR rules exclude recourse to the general precepts of unfair competition law. This approach developed by domestic courts and by scholarship is not inherent in international law. Conduct in line with intellectual property disciplines may still amount to a violation of the basic precepts of justice and fairness of unfair competition rules. The different provisions of the TRIPS and substantive provisions of the Paris Agreement are on a par and need to be applied in a mutually compatible manner. For example, in assessing the relationship of trademarks and geographical indications, the principle could be of importance in avoiding consumer deception. The operation of unfair competition rules thus may significantly contribute to balancing the overall system of IPRs.

The unfair competition rules of Article 10bis Paris Convention are not self-executing. Members are required to implement appropriate disciplines in domestic law. However, the principle of fairness should be applied on the basis of the doctrine of consistent interpretation and may thus also influence the operation of domestic intellectual property rights. For example, if domestic law does not protect traditional knowledge and indigenous rights, exclusive rights ignoring the contributions of holders of traditional knowledge can be challenged on the basis of unfair competition rules before domestic courts. To the extent that domestic law does not extend to such protection, it could be challenged before a panel and the Appellate Body of the World Trade Organization. Outside the realm of IPs, unfair competition rules may also serve to enforce commitments made by companies under the framework of corporate social responsibility.⁸⁵ The failure of a company to live up to conduct and business practices and labour relations promised in a CSR statement published by the company amounts to consumer deception. It also creates distortions in competition with companies adhering to and implementing such standards.⁸⁶ Both amount to violations of principles of unfair competition which members of the WTO are obliged to address under Article 10bis of the Paris Convention, as incorporated in the TRIPS Agreement and thus subject to WTO dispute settlement.

Disciplines on unfair competition, finally, serve as a foundation to introduce new forms of IP protection beyond adjudication. Emerging disciplines on traditional knowledge are based upon fairness. The work of WIPO's Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore is informed by unfair competition rules.⁸⁷ The idea of developing sui generis traditional knowledge rights is based upon unfair competition⁸⁸ and would add yet another new form of IP, along with the protection of GIs and undisclosed information. Future efforts may also relate to framing the enforcement of CSR standards, moving the field beyond soft law.

85 Thomas Cottier and Gabriela Wermelinger, "Implementing and Enforcing Corporate Social Responsibility: The Potential of Unfair Competition Rules in International Law," in *Corporate Social Responsibility: Verbindliche Standards des Wettbewerbsrechts*, ed. Reto M. Hilty and Frauke Henning-Bodewig (pp. 81–98) (Berlin: Springer, 2014).

86 Riffel, *Protection against Unfair Competition*, 107–133.

87 WIPO Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore, <http://www.wipo.int/tk/en/igcl/>.

88 Thomas Cottier, "The Protection of Genetic Resources and Traditional Knowledge: Towards More Specific Rights and Obligations in World Trade Law," *Journal of International Economic Law* 4 (1998): 555–584; Riffel, *Protection against Unfair Competition*, 134–259.

8. Investment Protection

Intellectual property, for a long time, did not figure prominently in international law of investment protection. Under customary law standards on compensation for lawful expropriation, it is unclear to what extent intellectual property forms part of protected property rights. In bilateral investment agreements, the issue is not dealt with uniformly. Some mention IPRs, some are silent and may or may not imply the inclusion of IPRs. For a long time, the issue was not addressed in private state arbitration.⁸⁹ Recent developments clearly see the explicit inclusion of IPRs in investment protection, commensurate with the implied shift to investment protection in IPR standards already discussed. Contemporary issues relate to the revocation of patents or strict limitations on trademark protection in the health sector. The Comprehensive Economic and Trade Agreement (CETA) explicitly addresses intellectual property rights and renders them subject to fair and equitable treatment, regulatory taking and expropriation newly defined within the agreement.⁹⁰ Moreover, these disciplines form part of the very same agreement which also contains rules on free trade and on intellectual property protection. The inclusion of all three areas raises interested issues of interaction. Should they be dealt with in isolation, or should the three components be applied and construed in combination, looking back and forth in the process of interpretation?

The CETA provides for a separate track in dispute settlement, and does not subject investment protection on IPRs to the dispute settlement system applicable to trade and IPR protection.⁹¹ The remedies are different. While investment protection addresses financial compensation for past unlawful acts, WTO law (and regional trade agreements) are forward looking and seek to adjust legislation and practices found to be incompatible with the treaty at hand. On substance, however, this does not exclude taking trade rules and IPR standards into account in adjudicating issues of fair and equitable treatment or regulatory takings. For example, in assessing restrictions on the use of trademark rights by governments, Article 20 TRIPS Agreement requires that the use of a trademark in the course of trade "shall not be unjustifiably encumbered by special requirements." This calls for taking into account standards developed on regulatory taking in investment protection. Conversely, assessing regulatory taking in investment protection arbitration requires taking into account Article 20 TRIPS. So far, this has not been the case in investment arbitration relating to plain packaging.⁹² It will be interesting to see to what extent WTO adjudication will establish the necessary bridges between trade and investment protection rules, also taking into account the increasing role of IPRs in fostering and protecting investment.⁹³ Linkages to investment protection in this context are likely to enhance the level of protection of IPRs. This shift makes it necessary to also enhance the role and impact of non-trade concerns, in particular the consideration of human rights and Sustainable Development Goals in the law of investment protection.

89 See Henning Grosse Ruse-Khan, "Investment Law and Intellectual Property Rights," in *International Investment Law: A Handbook*, ed. Marc Bungenberg, Jörn Griebel, Stephan Hobe and August Reinisch (pp. 1692–1713) (Oxford: Hart, 2015), 1709, note 22. See also *Journal of International Economic Law* 19 (2016): 87–277 (ed. Henning Grosse Ruse-Khan).

90 "CETA Chapter by Chapter": Chapter 8, Investment, <http://ec.europa.eu/trade/policy/in-focus/ceta/ceta-chapter-by-chapter/>.

91 "CETA Chapter by Chapter": Chapter 8, Investment.

92 See *Philip Morris Brands Sàrl, Philip Morris Products S.A. and Abal Hermanos S.A. v. Oriental Republic of Uruguay*.

93 See *Australia – Certain Measures Concerning Trademarks, Geographical Indications and Other Plain Packaging Requirements Applicable to Tobacco Products and Packaging*, WTO, DS 458, pending.

9. Progressive Regulation and Graduation of IPRs

Other than the rules on goods and services, which are subject to individual schedules defining market access rights, intellectual property rights establish standards and rules applying horizontally to all parties and members alike, irrespective of levels of social and economic development and integration of a country in the world economy. True, the TRIPS Agreement in Part VI provides for a number of provisions on special and differential treatment for developing and least developed countries. Waivers exist in the field of patenting pharmaceutical and chemical products for least developed countries, which have been extended. No such exceptions, however, exist in other core substantive and procedural obligations. The TRIPS Agreement, for such reasons, has remained one of the most contentious agreements in the WTO, much more so than the GATT and GATS or the plurilateral Government Procurement Agreement which countries are free to adhere to or abstain from. Minimum TRIPS standards have a harmonising effect. Moreover, TRIPS-plus standards in preferential agreements apply across the board and increase levels of protection and requirements de facto for all countries alike. The agreement does not provide for progressive regulation and differentiated commitments.

The new Trade Facilitation Agreement (TFA), which entered into force on 22 February 2017, provides for a number of options which countries may choose in making commitments.⁹⁴ While this approach leaves decisions on graduation to members, another approach would trigger obligations within the agreement on the basis of economic thresholds and factors as defined ex ante.⁹⁵ Other than under the TFA, members would automatically graduate and incur obligations once these thresholds are met, for example obligations to introduce patent protection for pharmaceuticals and chemicals, or an obligation to provide protection for integrated circuits, or geographical indications and designs. Article 11 TRIPS Agreement provides a model to this effect. The introduction of protection of rentals, at the time (and no longer relevant due to information technology and online rentals), depended upon significant market shares. It states: "A Member shall be excepted from this obligation in respect of cinematographic works unless such rental has led to the widespread copying of such works which is materially impairing the exclusive right of reproduction conferred in that Member on authors and their successors in title." The same idea can be found in Article 27(5) of the Agreement on Subsidies and Countervailing Measures, which includes defined thresholds for specific countries. The provision states: "A developing country Member which has reached export competitiveness in any given product shall phase out its export subsidies for such product(s) over a period of two years." Annex VII of the agreement defines the thresholds for least developed countries benefiting from a period of eight years. It lists a number of countries and establishes a threshold of gross national product of \$1,000 per capita per annum.

This approach could also be developed and deployed in defining the kicking in of specific provisions calling for the protection of intellectual property rights. It will be objected that negotiating such thresholds is complex. It is submitted that this is not more difficult than in other areas, such as agriculture. Progressive regulation in IPRs offers a predictable approach, for example in addressing

94 WTO, "Trade Facilitation," https://www.wto.org/english/tratop_e/tradfa_e/tradfa_e.htm.

95 Thomas Cottier, "From Progressive Liberalization to Progressive Regulation in WTO Law," *Journal of International Economic Law* 4 (2006): 779–821; Thomas Cottier, "International Economic Law in Transition from Trade Liberalization to Trade Regulation," *Journal of International Economic Law* 17 (2014): 671–677.

the complex issue of pharmaceutical patents,⁹⁶ while taking into account that the primary needs of developing countries are not in the field of intellectual property rights and will be building up over time—not so differently from the history of industrialised countries in the nineteenth and twentieth centuries.

10. Conclusions

The examination of pertinent GATT rules, competition policy, unfair competition law, human rights and Sustainable Development Goals in soft law, but also recourse to general principles of law and domestic constitutional law, shows that IPRs are embedded in a legal framework which partly allows a rebalancing of rights and obligations in the operation of intellectual property rights. Article 31(3)(c) of the Vienna Convention on the Law of Treaties obliges account to be taken of other principles and rules of public international law in force between the parties to a dispute. WTO jurisprudence also requires account to be taken of soft law principles which influence the interpretation of IPR treaties. As a consequence, lawyers can no longer specialise solely in IPRs but need to take into account the broader framework and plead accordingly. They need to work in teams comprising different fields of law. The method is highly case specific and is most suitable for litigation before international and domestic judicial fora. It depends on the particular facts of a case and results cannot be readily generalised. It does not provide legal certainty and strongly depends upon case law.

Embedding intellectual property rights in the general framework of law therefore cannot dispense with seeking to rebalance rights and obligations in IP treaties and legislation itself. First, it is a matter of transparency. Second, case law and adjudication cannot replace the political process and will not be able to bring about and secure adequate levels of protection and enforcement on their own. Ever increasing levels of protection are detrimental to research and development and undermine the legitimacy of the overall system. The elements discussed in this paper indicate the bridges which should be built and used in courts, and which of the elements could be explicitly taken into account in future treaty-making. This is the task of the political process, of international negotiations, treaty-making and legislation at home. Moving from fragmentation to coherence, modern IP treaties should address the need to properly balance different interests, having recourse to a topical approach developed under the principle of equity in international law. They should address linkages with other policy areas, in particular human rights and general principles of law, and including competition policy, develop unfair competition rules, develop a framework for technology transfer and PPPs, introduce ceilings and adopt an approach of progressive regulation and graduation. None of this has been sufficiently conceptualised and should be part of a broad research agenda. Perhaps, the impending failure to adopt mega-regional trade agreements limited to TRIPS-plus standards offers the option to further pursue the matter jointly in the WTO, WIPO and other specialised international fora.

96 See Monirul Azam, *Intellectual Property and Public Health in the Developing World* (Cambridge: Open Book, 2016), discussing the case of Bangladesh.