

The Quest for Balance in Intellectual Property Law: An Emerging Paradigm or a Fad?

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OUTLINE

- I. “Balance” – The New Buzzword in IP Law 1**
- II. Taking Stock on the Use of “Balance” in IP Law, Policy, and Enforcement 2**
 - a) “Balance” in IP Law 2
 - b) “Balance” in IP Enforcement 4
 - c) “Balance” in IP Policy 5
- III. “Balance” as Emerging Paradigm for IP Law 7**
 - a) “Balance” in Early Legal Research..... 7
 - b) “Balance” in Economic Theory 8
 - c) Exposing “Imbalances” in the International IP Law Regime..... 9
 - d) “Balance” Concepts in Legal Theory..... 11
- IV. Conclusion: The Quest for Balance Has Just Begun 13**

I. “Balance” – The New Buzzword in IP Law

The term “balance” is well qualified for the buzzword of intellectual property (IP) law of the current decade. This is due to the fact that recent years have seen a surge of research on the question of balance in IP law. At the same time, however, there is hardly any other term that is so much ridden with terminological obscurities as “balance”.

In view of these developments, this essay will analyze the term and concept of “balance” in IP law, policy, and enforcement as well as in the legal and economic theory of IP law in order to answer the question of whether the quest for balance in IP law is an emerging paradigm or a fad.

¹ All online references were last accessed on 26 August 2009.

II. Taking Stock on the Use of “Balance” in IP Law, Policy, and Enforcement

There are various definitions of the term “balance” depending on the field to which it is applied. All of these definitions, however, have in common that they describe a desirable equilibrium between at least two forces that is characterized by cancellation of all forces by equal opposing forces.² Building upon this common understanding, the term “balance” has increasingly been used in the IP law context. It should be noted that the term “equilibrium” has also at times been used in relation to IP law.³ However, there seems to be a tacit agreement that the term “balance” better reflects the polar geography of IP protection.⁴ The following section will introduce the usage of the term balance in IP law, policy, and enforcement.

a) “Balance” in IP Law

The term “balance” has not received mention in international IP treaties and legislation until very recently in the history of international IP law. None of the three earliest treaties, the 1883 *Paris Convention*,⁵ the 1886 *Berne Convention*,⁶ or the 1891 *Madrid Agreement*,⁷ explicitly uses the term “balance”. In fact, until 1996, none of the relevant WIPO-administered IP treaties had explicitly referred to “balance” in its wordings.⁸

The *TRIPS Agreement*⁹ is the first major international treaty to mention the term “balance” in Article 7 in the context of objectives of IP protection: “The protection and enforcement of intellectual property rights should contribute to the promotion of technological innovation and to the transfer and dissemination of technology, [...] in a manner conducive to a *balance* of rights and obligations.”¹⁰ While the *Declaration on the TRIPS Agreement and Public Health* –

² Cf. Paul Tipler, *Physik* 148 (1998).

³ See, for instance, M.K. Holt, *In Search of Equilibrium: Intellectual Property, Antitrust and the Personal Computer Industry*, in: *Software Law Journal*, Vol. 4, 577-595 (1989); Ana Maria Tetrel, *Law and Economics of Copyright and Author’s Rights, A Study of the Equilibrium Between Public and Private Interests*, *Revista la Propiedad Immaterial*, Nos. 10-11, 3-22 (2006-2007); see also Judith Chin & Gene M. Grossman, *Intellectual Property Rights and North-South Trade*, NBER Working Paper, No. 2769, 1(1991).

⁴ Antony S. Taubman, *TRIPS Jurisprudence in the Balance. Between the Realist Defense of Policy Space and a Shared Utilitarian Ethic*, in: Christian Lenk et al., *Ethics and Law of Intellectual Property, Current Problems in Politics, Science and Technology* 90-93 (2007); note also that “equilibrium” denotes a technical term in economics with a number of sub-terms (e.g. competitive equilibrium, static or dynamic equilibrium, Nash equilibrium), so that the use of the term “balance” rather than “equilibrium” avoids terminological inconsistencies or obscurities.

⁵ *Paris Convention for the Protection of Industrial Property* of 20 March 1883, 21 U.S.T. 1583, 828 U.N.T.S. 30.

⁶ *Berne Convention for the Protection of Literary and Artistic Works* of 9 September 1886, S. Treaty Doc. No. 99-27 (1986).

⁷ *The Madrid Agreement Concerning the International Registration of Marks* of 14 April 1891, 175 C.T.S. 57.

⁸ E.g. the *Patent Law Treaty*, concluded in Geneva on 1 June 2000, 39 I.L.M. 1047; see for further WIPO-administered treaties: <http://www.wipo.int/treaties/en/>.

⁹ *The Agreement on Trade-Related Aspects of Intellectual Property Rights*, adopted in Marrakesh *Agreement Establishing the World Trade Organization*, Annex 1C, 1869 U.N.T.S. 299, 33 I.L.M. 1197 (1994).

¹⁰ Article 7 of the *TRIPS Agreement*, *supra* note 9 (emphasis added), note the connection to the overriding objective of a proper balance of rights and obligations of the World Trade Organization (WTO) system, see Art. 3.5 of the *Understanding on Rules and Procedures Governing the Settlement of Disputes* (Dispute Settlement Understanding, DSU), Annex 2 of the WTO Agreement, adopted in Marrakesh on 15

the so-called *Doha Declaration*¹¹ – itself does not refer to “balance” as such, the Doha Ministerial Declaration does refer to the important role to be played by “balanced rules”¹² thereby recognizing the need for all peoples to benefit from the increased opportunities and welfare gains that intellectual property – as part of the multilateral trading system – can generate. The 2005 Decision of the General Council on the amendment of the TRIPS Agreement¹³ does also not refer to the term “balance”. However, it implicitly recognizes the need to strike a balance between right holder interests and humanitarian and development goals in the public health field.

Building upon the wording of the *TRIPS Agreement*,¹⁴ the 1996 *World Intellectual Property Organization Copyright Treaty* (WCT) recognizes “the need to maintain a *balance* between the rights of authors and the larger public interest, particularly education, research, and access to information.”¹⁵ In a similar vein, the 1996 *WIPO Performances and Phonograms Treaty* (WPPT) recognizes “the need to maintain a *balance* between the rights of performers and producers of phonograms and the larger public interest, particularly education, research, and access to information.”¹⁶

Not surprisingly, however, the term “balance” has not proliferated into bilateral agreements which are more targeted at preserving national interests. Out of the 17 United States (US)-FTAs there is only the US-Chile Free Trade Agreement that explicitly recognizes “the need to achieve a *balance* between the right of right holders and the legitimate interest of users and the community with regard to protected works.”¹⁷ None of the other agreements follows this recognition.¹⁸

It is striking, however, that the explicit mention that has been made of a balance in IP law treaties refers to either rights and obligations or authors’ rights and the larger public interest. It follows that – at first sight – the concept of balance embodied in current IP legislation seems to be of a bipolar kind – with the rider that the larger public interest is often regarded to

April 1994, 1869 U.N.T.S. 401, 33 I.L.M. 1226 (1994) which refers to the settlement of disputes as a means to preserve such a balance between WTO members, cf. Carlos M. Correa, *Trade Related Aspects of Intellectual Property Rights* 92 (2007); Article 7 is usually read together with Article 8.1 TRIPS which, however, does not explicitly mention the term “balance.”

¹¹ *Declaration on the TRIPS Agreement and Public Health*, adopted on 14 November 2001, WT/MIN(01)/DEC/W/2, full text available at:

http://www.wto.org/english/thewto_e/minist_e/min01_e/mindecl_trips_e.htm, note, however, that the declaration implicitly reaffirms the principle of balance IP protection by stating that TRIPS “can and should be interpreted and implemented in a manner supportive of WTO Members’ rights to protect public health and, in particular, to promote access to medicines for all”, and by reaffirming “the right of WTO Members to use, to the full, the provisions in the TRIPS Agreement, which provide flexibility for this purpose,” at para. 4.

¹² *Ministerial Declaration*, adopted on 14 November 2001, WT/MIN(01)/DEC/W/1, full text available at: http://www.wto.org/english/thewto_e/minist_e/min01_e/mindecl_e.htm.

¹³ General Council, *Amendment of the TRIPS Agreement*, Decision of 6 December 2005, WT/L/641, available at: http://www.wto.org/english/tratop_e/TRIPS_e/wtl641_e.htm.

¹⁴ *TRIPS Agreement*, *supra* note 9.

¹⁵ Preamble of the *World Intellectual Property Organization Copyright Treaty* (WCT), adopted in Geneva on 20 December 1996, S. Treaty Doc. No. 105-17 (1997), 36 I.L.M. 65 (1997) (emphasis added).

¹⁶ Preamble of the *WIPO Performances and Phonograms Treaty* (WPPT), adopted in Geneva on 20 December 1996, S. Treaty Doc. No. 105-17 (1997); 36 I.L.M. 76 (1997) (emphasis added).

¹⁷ See *Chapter 17, Intellectual Property Rights, Preamble*, of the *United States-Chile Free Trade Agreement* (emphasis added), available at:

http://www.ustr.gov/sites/default/files/uploads/agreements/fta/chile/asset_upload_file912_4011.pdf.

¹⁸ That is FTAs with Australia, Bahrain, CAFTA-DR, Colombia, Israel, Jordan (not touching IP), Korea, Morocco, NAFTA, Oman, Panama, Peru, Singapore (Side Letters on Intellectual Property), final texts available at: <http://www.ustr.gov/trade-agreements/free-trade-agreements/singapore-fta/final-text>.

comprise a variety of interests.¹⁹ Comments on²⁰ and court interpretations of said provisions, however, reflect a broader understanding of the balance stipulated in the above-cited laws, and in particular of Article 7 TRIPS.²¹

b) “Balance” in IP Enforcement

Since the adoption of the TRIPS Agreement and by 2009, there had been 25 dispute settlement cases on the TRIPS Agreement and its enforcement.²² Out of these 25 disputes, three disputes are still at the consultation stage,²³ 13 disputes were settled by a mutually agreed solution²⁴ while a panel report was issued in six disputes²⁵ and appellate body reports were issued in three cases.²⁶ Out of the six panel reports, there were only one appellate body report and three panel reports that explicitly referred to the term “balance” in an IP law context.

The appellate body report of *India – Patent Protection for Pharmaceutical and Agricultural Chemical Products* summarized the submission of the US which had argued in the context of Article 7.9 of the *TRIPS Agreement*²⁷ that the grant of “exclusive marketing rights protects the core *balance* of the *TRIPS Agreement* with respect to pharmaceutical and agricultural chemical product patents.”²⁸ The appellate body, however, did not explicitly refer to questions of balance in its reply to this submission.

In the panel report of *US – Section 110(5) of US Copyright Act* the panel stated in its general interpretative analysis of Section 110(5) of the US Copyright Act:²⁹ “we emphasize that a possible conflict with a normal exploitation of a particular exclusive right cannot be counter-balanced or justified by the mere fact of the absence of a conflict with a normal exploitation of another exclusive right (or the absence of any exception altogether with respect to that

¹⁹ See Christophe Geiger, *Der urheberrechtliche Interessensausgleich in der Informationsgesellschaft – Zur Rechtsnatur der Beschränkungen des Urheberrechts*, GRUR Int, No. 10, 815, 817 (2004).

²⁰ Commentators connect the general principles in Articles 7 and 8 of the TRIPS Agreement with the idea of balance: the ICTSD/UNCTAD, *Resource Book on TRIPS and Development*, Chapter 6 *Objectives and Principles*, 119 (2005) notes that “the elaboration of objectives and principles in Article 7 may well be viewed as a means to establish a *balancing of interests* at the multilateral level to substitute for the balancing traditionally undertaken at the national level” (emphasis added); cf. Correa, *supra* note 10, at 92, for a more detailed overview over comments on “balance” in IP, see *infra* A.III “Balance” as Emerging Paradigm for IP Law.

²¹ *TRIPS Agreement*, *supra* note 9.

²² Cf. *WTO Dispute Settlement Gateway*, available at: http://www.wto.org/english/tratop_e/dispu_e/dispu_e.htm.

²³ WT/DS224/1 (31 January 2001), WT/DS186/1 (12 January 2000), WT/DS153/1 (2 December 1998).

²⁴ WT/DS199/4 (19 July 2001), WT/DS196/4 (20 June 2002), WT/DS171/4 (20 June 2002), WT/DS125/4 (26 March 2001), WT/DS124/4 (26 March 2001), WT/DS115/4 (13 September 2002), WT/DS86/4 (11 December 1998), WT/DS83/4 (13 June 2001), WT/DS82/4 (13 September 2001), WT/DS42/4 (17 November 1997), WT/DS37/4 (8 October 1996), WT/DS36/4 (7 March 1997), WT/DS28/4 (5 February 1997).

²⁵ WT/DS362/R Report of the Panel (26 January 2009); WT/DS290/R Report of the Panel (17 March 2000); WT/DS174/R Report of the Panel (17 March 2000); WT/DS160/R Report of the Panel (17 March 2000); WT/DS114/R Report of the Panel (17 March 2000); WT/DS79/R Report of the Panel (17 March 2000).

²⁶ WT/DS176/AB/R (2 January 2002), WT/DS170/AB/R (28 February 2001), WT/DS50/AB/R (19 December 1997).

²⁷ *TRIPS Agreement*, *supra* note 9.

²⁸ WT/DS50/AB/R (19 December 1997), B. Appellee United States.

²⁹ *U.S. Copyright Act of 1976*, Pub. L. No. 94-553.

right), even if the exploitation of the latter right would generate more income.”³⁰ It thereby pointed to a copyright-intrinsic balance of different exclusive rights.

The most recent World Trade Organization (WTO) Panel report on the US complaint against China – *China – Measures affecting the Protection and Enforcement of Intellectual Property Rights*³¹ – only once refers to “balance” but stresses that TRIPS provisions themselves can constitute “an important provision in the *overall balance of rights and obligations* in Part II of the TRIPS Agreement.”³²

The most extensive discussion of balance in IP law can be found in *Canada – Patent Protection of Pharmaceutical Products Canada* in which it was argued that “one of the key goals of the TRIPS Agreement was a *balance* between the *intellectual property rights* created by the Agreement and *other important socio-economic policies* in question”³³ rather than a bipolar balance between rights and obligations. Such a broad view was also put forward by the European Union.³⁴ The panel, however, acknowledged that there was a “basic balance” in the Agreement but reserved any further discussion of content and implications of Articles 7 and 8.1 thereby leaving room for further interpretation.³⁵ Ensuing interpretations by developing countries have consistently focused on a broader understanding of Articles 7 and 8.1. and, thus, the objective to “benefit society as a whole” rather than aiming at “the mere protection of private rights.”³⁶

On a national level, one of the most comprehensive recognitions of balance in an IP context was provided by Kozinski in *White v. Samsung Electronics America, Inc.* where he stated: “intellectual property law is full of careful balances between what’s set aside for the owner and what’s left in the public domain for the rest of us: The relatively short life of patents; the longer, but finite, life of copyrights; copyright’s idea expression dichotomy; the fair use doctrine; the prohibition on copyrighting facts; the compulsory license of television broadcasts and musical compositions; federal preemption of overbroad state intellectual property laws; the nominative use doctrine in trademark law; the right to make soundalike recordings. All of these diminish an intellectual property owner’s rights. All let the public use something created by someone else. But all are necessary to maintain a free environment in which creative genius can flourish.”³⁷

c) “Balance” in IP Policy

The idea of a balanced IP law regime has also increasingly been resorted to both in IP policies and in IP-related policies by various fora.

In the realm of the WTO, the connection between IP protection and balance is both evident in comments on the *TRIPS Agreement*³⁸ itself and policy statements surrounding it. The

³⁰ WT/DS160/R Report of the Panel (17 March 2000), para. 6.172 (emphasis added), the panel also refers to the “negotiated balance of rights and obligations” of WTO rules, note 207.

³¹ WT/DS362/R, Report of the Panel (26 January 2009).

³² Ibidem, at para. 7.594 (emphasis added).

³³ WT/DS114/R, Report of the Panel (17 March 2000), para. 7.24.

³⁴ Ibidem, at para. 7.24.

³⁵ Ibidem, at para. 7.62.

³⁶ Cf. submission to the Council of TRIPS by the African Group, Barbados, Bolivia, Brazil, Dominican Republic, Ecuador, Honduras, India, Indonesia, Jamaica, Pakistan, Paraguay, Philippines, Peru, Sri Lanka, Thailand, and Venezuela, IP/C/W/296, 19 June 2001.

³⁷ 989 F.2d 1512, 1516 (9th Circ. 1993) (dissenting).

³⁸ *TRIPS Agreement*, supra note 9.

inclusion of objectives and principles into the *TRIPS Agreement*³⁹ was said to reflect the intention of policy-makers to provide guidance for the interpreter of the Agreement, “emphasizing that it is designed to strike a *balance* among desirable objectives [...] that more widely promotes social and economic welfare.”⁴⁰ Policy statements supported this approach by stressing that “TRIPS attempts to strike a *balance* between the long term social objective of providing incentives for future inventions and creations, and the short term objective of allowing people to use existing inventions and creations.”⁴¹ This balance was further set out to work in three ways: first, invention and creativity in themselves provided social and technological benefits; second, the protection of IP as such could serve social goals; third, the flexibilities provided by the TRIPS Agreement was meant to allow governments the fine-tuning of protection in order to meet social goals.⁴² More specifically in a public health context, it was argued that “intellectual property rights are a necessary part of finding that *balance*”⁴³ – meaning an appropriate balance between sharing the high costs associated with research and development activities, and at the same time, sharing the results of these activities, in terms of access to new drugs to treat the diseases prevalent in different countries. In view of the numerous policy statements issued by the WTO,⁴⁴ however, it was recognized in 2002 by the then WTO Director-General Panitchpakdi: “It is difficult at the national level to establish in the field of intellectual property a proper *balance* conducive to public welfare and development and even more difficult at the multilateral level.”⁴⁵

Comparably, the World Bank recognizes the need for IP regimes to “*balance* the private incentives for creation of knowledge against the social benefits of dissemination”⁴⁶ though the concept of a balanced IP law regime is not represented in the World Bank’s Knowledge Assessment Methodology indices.⁴⁷ It also recognizes the necessity to strike a balance between “the incentives necessary to encourage future innovations [...] against the desire to provide wide access to those products in a competitive market.”⁴⁸

Even more pronounced, the World Health Organization (WHO) has adopted a balanced approach to IP protection in its policies. In its bulletin *Globalization, TRIPS and Access to Pharmaceuticals*, *WHO Policy Perspectives on Medicine* the WHO supports the use of the

³⁹ *TRIPS Agreement*, *supra* note 9.

⁴⁰ ICTSD/UNCTAD, *supra* note 20, at 126.

⁴¹ WTO, *Fact Sheet: TRIPS and Pharmaceutical Patents, Philosophy: TRIPS Attempts to Strike a Balance* (September 2006), available at: http://www.wto.org/english/tratop_e/trips_e/factsheet_pharm01_e.htm (emphasis added).

⁴² WTO, *Fact Sheet: TRIPS and Pharmaceutical Patents, Philosophy: TRIPS Attempts to Strike a Balance* (September 2006), available at: http://www.wto.org/english/tratop_e/trips_e/factsheet_pharm01_e.htm.

⁴³ WTO News, *An “Appropriate Balance” For Public Health* (11 October 2000), available at: http://www.wto.org/english/news_e/news00_e/tn_rodrig_sep00_e.htm (emphasis added).

⁴⁴ A search for “intellectual property” and “balance” on the WTO website 2420 results on this particular combination, available at: (accessed 30 August 2009).

⁴⁵ WTO News, *Commission Report Is Food For Thought on Intellectual Property – Supachai*, 16 September 2002, available at: http://www.wto.org/english/news_e/news02_e/com_report_intel_prop_17sep02_e.htm (emphasis added).

⁴⁶ World Bank, *World Development Report 1998/1999*, 146 (1999) (emphasis added).

⁴⁷ Cf. the 2008 KAM (Knowledge Assessment Methodology) of The World Bank, an interactive benchmarking tool to help countries identify the challenges and opportunities during transition to a knowledge-based economy, at: <http://web.worldbank.org/WBSITE/EXTERNAL/WBI/WBIPROGRAMS/KFDLP/EXTUNIKAM/0,,menuPK:1414738~pagePK:64168427~piPK:64168435~theSitePK:1414721,00.html>; see also: Lea Bishop Shaver, *Defining and Measuring A2K: A Blueprint for an Index of Access to Knowledge*, 45 I/S: J. L. & Pol’y for Info. Soc’y 235, FN52 (2008).

⁴⁸ World Bank, *Intellectual Property: Balancing Incentives with Competitive Access*, Chapter 5, available at: <http://siteresources.worldbank.org/INTGEP2002/Resources/05--Ch5--128-151.pdf>.

full spectrum of “safeguards” that TRIPS makes available.⁴⁹ From an analysis of WHO policies it becomes further evident that developing countries and public health non-governmental organizations (NGOs) have used the WHO as a forum for advocating the use of flexibilities embedded within TRIPS rather than as a venue for rolling back IP protection.⁵⁰

The balance concept in IP protection was also resorted to in relation to human rights policies. Thus, an official statement by the ICESCR⁵¹ Committee stresses that IPRs “must be *balanced* with the right to take part in cultural life and to enjoy the benefits of science progress and its applications.”⁵²

In summary, from the above analysis of the term “balance” in IP law and policy it follows that policy makers in the international IP law regime and those responsible for its enforcement have recognized the need for balanced rules in the area of intellectual property. The need for balanced rules is reflected in the ever-increasing resort to the term “balance” as such, but also implicitly in the relevant laws and policy measures.

III. “Balance” as Emerging Paradigm for IP Law

The increasing resort to the term “balance” in IP law, IP enforcement, and IP policy has also spilled over into legal and economic research. Reference to the term “balance” has in particular become a rather prominent occurrence in those circles that focus on the interrelationship between IP protection, trade, and development. However, sketching the development of the use of “balance” in legal and economic theory exposes a tendency from the use of the term “balance” in a truly narrow IP context over the exposition of more general imbalances in the international IP law regime towards attempts to define what “balance” should be in an IP law context. The following section will expose this development while showing that it reflects the use of balance ideas as emerging paradigm for IP law rather than a simple fad.

a) “Balance” in Early Legal Research

If classical or early legal IP law research did refer to the term “balance” at all, it was characterized by a rather narrow understanding of balance concepts in an IP law realm. Even today, the majority of lawyers is as of yet “unaccustomed to thinking about balance in the

⁴⁹ World Health Organization, *Globalization, TRIPs and Access to Pharmaceuticals, WHO Policy Perspectives on Medicines*, No. 3, WHO Doc. WHO/EDM/2001.2 (March 2001), available at: <http://apps.who.int/medicinedocs/en/d/Js2240e/>; a similarly balanced approach appears in two recent resolutions of the World Health Assembly, *Scaling Up the Response to HIV/AIDS*, Res. WHA54.10, World Health Assembly, para. 1(10) (2001), and the World Health Assembly, *WHO Medicines Strategy*, Res. WHA54.11, World Health Assembly, para. 1(5) (2001).

⁵⁰ Cf. Laurence R. Helfer, *Regime Shifting: The TRIPS Agreement and New Dynamics of International Intellectual Property Lawmaking*, 29 *Yale J. Int'l L.* 1, 29, 45 (2004).

⁵¹ *The International Covenant on Economic, Social and Cultural Rights* (ICESCR) is a multilateral treaty adopted by the UN General Assembly on 16 December 1996, and in force from 3 January 1976; GA res. 2200A (XXI), 21 UN GAOR Supp. (No. 16) at 49, UN Doc. A/6316 (1966); 993 U.N.T.S. 3; 6 I.L.M. 368 (1967).

⁵² ICESCR Committee, *Substantive Issues Arising in the Implementation of the International Covenant on Economic, Social and Cultural Rights – Follow-Up to the Day of General Discussion on Article 15.1(c), Statement on Human Rights and Intellectual Property*, U.N. ESCOR Comm. on Econ., Soc., & Cultural Rts., 27th Sess., Agenda Item 4, paras. 4, 11, U.N. Doc. E/C.12/2001/15 (2001) (emphasis added).

global intellectual property context”⁵³ as it was rightly put forward by Barbosa, Chon, and von Hase. It was also noted that the term “balance” is most frequently applied to issues of IP protection in the context of industrialized countries while developing countries are associated with ideas of development.⁵⁴

In consequence, balance was initially applied in a truly narrow context by connecting the idea of balance to very specific aspects of the IP law regime. It was claimed that WIPO documents merely speak of balance in terms of a balance between producers and consumers, or developed and developing nations.⁵⁵ Further, there has been extensive discussion on balancing exercises such as the “equitable sharing of benefits and costs,”⁵⁶ “balancing profit maximization and public access to technology,”⁵⁷ “the foundational balance in intellectual property between rights to exclude and access to a robust public domain,”⁵⁸ and the “reconciliation of interests in copyright law.”⁵⁹ In the area of protection of pharmaceutical innovations, WIPO also uses the expression “striking a balance,”⁶⁰ thereby referring to the tension between patent protection and access to drugs and health care. Comparably narrow understandings of balance in an IP law context is extensively reflected in early legal research.⁶¹

It follows that the majority of early legal theory has narrowed the concept of balance in IP law to very specific issues of IP protection without referring to the overall balance of the international IP law regime.⁶²

b) “Balance” in Economic Theory

Economic research has applied concepts of balance in rather narrow contexts albeit in a rather different sense than early legal research. This is due to the fact that a number of commentators perceive IP protection as a matter of efficiency only, and thus, a matter of getting the incentives right, while ignoring the distributive values of the IP system.⁶³ Another reason for this rather narrow understanding of balance in an IP law context was provided by Gervais arguing that a theoretical balance analysis would be “complex, inter alia, because of the many sectors of intellectual property.”⁶⁴

⁵³ Denis Borges Barbosa et al., *Slouching Towards Development in International Intellectual Property*, 2007 Mich. St L. Rev 71, 74 (2007).

⁵⁴ European Patent Office, *Scenarios for the Future* (2007) (a forecast of four global scenarios of IP balance across countries with different levels of development).

⁵⁵ Robert Boyle, *A Manifesto on WIPO and the Future of Intellectual Property*, Duke L. & Tech. Rev. 9, 8 (2004).

⁵⁶ Commission on IPRs, *Integrating Intellectual Property Rights and Development Policy* 7 (2002).

⁵⁷ Cf. Andrew Beckerman-Rodeau, *Patent Law – Balancing Profit Maximization and Public Access to Technology*, 4 Columbia Science & Tech. L. Rev. 1 (2002).

⁵⁸ Barbosa et al., *supra* note 53, at 75, see also Boyle, *supra* note 55, at 8: “Intellectual property policy must maintain a balance between the realm of protected material and the public domain.”

⁵⁹ Cf. Reto M. Hilty & Alexander Peukert, *Interessenausgleich im Urheberrecht* (2004).

⁶⁰ WIPO, *Striking a Balance, The Patent System and Access to Drugs and Health Care*, available at: http://www.wipo.int/freepublications/en/patents/491/wipo_pub_491.pdf.

⁶¹ See, for instance, Jessica Ugucioni, *New Media and the Creative Industries’ Report: Bias over Balance in Copyright Reform?* Journal of Intellectual Property Law and Practice, Vol. 2, No. 9, 626-628 (2007).

⁶² See further, for instance, Federal Trade Commission, *To Promote Innovation: The Proper Balance of Competition and Patent Law and Policy. Executive Summary*, 19 Berkeley Tech L.J. 861 (2004).

⁶³ Peter M. Gerhart, *The Tragedy of TRIPS*, 1007 Mich. St. L. Rev. 143, 183 (2007).

⁶⁴ Daniel J. Gervais, *TRIPS and Development*, in: Daniel J. Gervais (ed.), *Intellectual Property, Trade and Development. Strategies to Optimize Economic Development in a TRIPS-Plus Era* 50 (2007).

Thus, Maskus and Wong have striven for balance in the narrow context of business model patents arguing that the “patent system is imbalanced in favor of inventors to the detriment of the public good.”⁶⁵ Arora, Fosfuri, and Gambardella, by contrast, apply balance concepts to the question of external technology acquisition versus in-house development of technologies.⁶⁶ Barfield and Groombridge focus on “cost imbalances”⁶⁷ occurring as a result of public-good aspects of copyright industries, if creativity is left entirely to market forces. Comparably narrow understandings of balance in an IP law context is extensively reflected in economic research.⁶⁸

Nevertheless, there are some economists that have applied a more holistic balance approach to IP law. Foremost amongst them is Gerhart who promotes a two-dimensional balance model with access and incentives constituting the two opposing poles.⁶⁹ Doing so he argues that an “appropriate balance”⁷⁰ of IP law requires that “access to the knowledge goods be in the control of the property owner up to the point at which the last dollar of return to the innovator from the right to exclude others just equals the marginal value of innovation that would not otherwise be undertaken.”⁷¹ In essence, he argues that the finding of a proper balance between incentives and access requires determining what proportion of the external benefits from an investment should be internalized and what proportion of the benefits need not be internalized.⁷² This finding of a proper balance essentially means “maximiz[ing] the external benefits of innovation consistent with generating enough reward for the producers of knowledge goods to stimulate investment that would not otherwise take place.”⁷³ Gerhart concludes that the present institutional design for international policymaking is inapt to achieve a balance through distributive decisions.

On balance, economic analysis of IP protection has resorted to “balance” terminology in rather narrow contexts with some commentators breaking out of this pattern by adopting more holistic view on the international IP law regime.

c) *Exposing “Imbalances” in the International IP Law Regime*

It is only most recent legal research that has focused on the idea of a balanced IP law regime on a more general and systematic level.⁷⁴ This most recent legal research is characterized by a

⁶⁵ Keith E. Maskus & Eina Vivian Wong, *Searching for Economic Balance in Business Method Patents*, 8 Wash U. J. L. & Pol’y 289, 293 (2002).

⁶⁶ Ashish Arora et al., *Markets for Technology and their Implications for Corporate Strategy*, Industrial and Corporate Change, Vol. 10. No. 2, 419, 429 (2001).

⁶⁷ Claude E. Barfield & Mark A. Groombridge, *The Economic Case for Copyright Owner Control over Parallel Imports*, 1 Journal of World Intellectual Property 903, 914 (1998).

⁶⁸ See, for instance, Fabrizio Cesaroni & Paola Giuri, *Intellectual Property Rights and Market Dynamics* 1 (2005); Howard F. Chang, *Patent Scope, Antitrust Policy, and Cumulative Innovation*, The Rand Journal of Economics 26, 34, 51 (1995).

⁶⁹ Gerhart, *supra* note 63, at 143.

⁷⁰ Gerhart, *supra* note 63, at 149.

⁷¹ Gerhart, *supra* note 63, at 157.

⁷² Gerhart, *supra* note 63, at 163-164 (noting that not all external benefits must be internalized if appropriate incentives are to be given, and noting that the existence of external benefits does not necessarily discourage investment); note that an “external benefit” is “an uncompensated benefit that an individual or firm confers on others, also known as positive externalities,” cf. Paul Krugman et al., *Economics*, European Edition G-5 (2008).

⁷³ Gerhart, *supra* note 63, at 163-164.

⁷⁴ Daniel Gervais, *The Changing Landscape of International Intellectual Property*, Journal of Intellectual Property Law & Practice, Vol. 1, No. 4 249, 251 (2006), see also Jayashree Watal, *The TRIPS Agreement*

normative approach that takes concepts of development and trade into account whilst acknowledging development as a function of innovation.⁷⁵

The starting point for this research has been criticism of the imposition of strict IP rules throughout the world that has – according to Joseph Stiglitz – ultimately led to a dangerous “IP imbalance.”⁷⁶ The main fault found by Joseph Stiglitz is a disregard of wider societal interests, especially of those in developing and least-developed countries (LDCs), in the Uruguay round of negotiations that led to the adoption of the TRIPS Agreement.⁷⁷ In a similar vein, Abbott argued: “The problem is rooted in an *imbalance* in political and economic power, not in the language of the TRIPS Agreement.”⁷⁸ Likewise, G77⁷⁹ characterized in its Declaration of the Group of 77 and China on the Fourth WTO Ministerial Conference at Doha, Qatar, the TRIPS Agreement as containing “inherent asymmetries and *imbalances*.”⁸⁰

In the wake of the TRIPS Agreement,⁸¹ numerous contributions have exposed imbalances in relation to the international IP law regime.⁸² Boyle, for instance, noted in the context of a maximalist rights culture: “As intellectual property protection has expanded exponentially in breadth, scope and term over the last 30 years, the fundamental principle of *balance* between the public domain and the realm of property seems to have been lost.”⁸³ Chon argued: “The net result [of the TRIPS Agreement] is an intellectual property *balance* that has become increasingly lopsided in favor of producer interests, possibly to the detriment of overall global social welfare and clearly to the detriment of the most vulnerable populations.”⁸⁴ Helfer finds that many developing countries and NGOs perceive in particular “*imbalances* in TRIPS”⁸⁵ in relation to the protection of traditional knowledge of indigenous communities and the provision of information about the origin of genetic resources. Comparable comments were made by a number of researchers that culminated in the proposition that “lawmakers can, at best, achieve only a rather *indelicat*e *imbalance* of those private interests that get a spot at the legislative table.”⁸⁶

In addition to existing imbalance, commentators are afraid of the rise of new imbalances in WIPO treaty-making efforts. Thus, it was argued that one of the most serious intellectual

and Developing Countries – Strong, Weak or Balanced Protection? Journal of World Intellectual Property Protection, Vol. 1(2) 281, 281-307 (1998).

⁷⁵ Barbosa et al., *supra* note 53, at 74.

⁷⁶ Joseph Stiglitz, *How to Fix the IP Imbalances*, Managing IP 28, 28 (2004) (emphasis added).

⁷⁷ Joseph Stiglitz, *Unfaire Verteilung*, Financial Times Deutschland, 23 August (2005).

⁷⁸ Frederick M. Abbott, *Are the Competition Rules in the WTO TRIPS Agreement Adequate?* Journal of International Economic Law 7(3), 698-703 (2004) (emphasis added); see also Erik Alsegard, *Global Pharmaceutical Patents after the Doha Declaration – What lies in the Future?* SCRIPT-ed, Vol.1, No. 1 (2004), (stating at 6: “there was an *imbalance* of power between the net exporters and the net importers of IPRs”) (emphasis added).

⁷⁹ G77 was established on 15 June 1964 by 77 developing countries signatories of the *Joint Declaration of the Seventy-Seven Countries*, issued at the United Nations Conference on Trade and Development, available at: <http://www.g77.org/doc/Joint%20Declaration.html> in order to promote their collective economic interests.

⁸⁰ 22 October 2001, available at: <http://www.g77.org/Docs/Doha.htm> (emphasis added).

⁸¹ Joseph Stiglitz, *Unfaire Verteilung*, Financial Times Deutschland, 23 August (2005).

⁸² See even the criticism within a (neo)liberal framework by Peter Drahos & John Braithwaite, *Information Feudalism: Who Owns the Knowledge Economy* 196-197 (2003).

⁸³ Boyle, *supra* note 55, at 3 (emphasis added).

⁸⁴ Margaret Chon, *Intellectual Property and the Development Divide*, Cardozo L. Rev., Vol. 27, 2826 (2006).

⁸⁵ Helfer, *supra* 50, note at 29.

⁸⁶ Tom W. Bell, *The Great Debate on Intellectual Property*, Cato Policy Report, January/February 2002 (emphasis added).

property-related threats to balance in the international IP regime was now occurring at WIPO-level due to the fact that the US, the EU, and Japan were pressing forward with negotiations for a new Substantive Patent Law Treaty.⁸⁷

It follows that it is now widely recognized in legal research that the international IP law regime is out of balance indicating that discussions about a balanced IP law regime are more than a simple fad. Few researchers, however, have ventured into a definition of how balance in IP should be conceptualized.

d) “Balance” Concepts in Legal Theory

Recent years have witnessed a growing number of attempts to conceptualize balance in a rather more holistic approach to IP protection that takes concepts of sustainable development, economic welfare, and trade into account.

The quest for balance was, first, characterized as an “elusive balance,”⁸⁸ an “uncertain balance,”⁸⁹ and even a “Yin-Yang balance,”⁹⁰ while demands were voiced for the “correct balance,”⁹¹ a “just balance of interests,”⁹² a “development-oriented balance,”⁹³ and a “fair balance of rights and interests between the different categories of right holders, as well as between the different categories of rights holders and users.”⁹⁴ These broad characterizations of balance were then followed by attempts to contribute to a definition of balance in IP law.

As Chon has rightly put forward,⁹⁵ the first body of scholarship was created by Okediji and Reichman. Both researchers have long focused upon the difficulties arising out of two distinct balances: first, the domestic welfare balance between the producers and users of intellectual property, and second, the global welfare balance between developing and developed countries. According to both researchers, the biggest challenge of IP globalization is the protection of the domestic balance from being corrupted from undue pressures by globalized trade regimes.⁹⁶

Building upon this first body of scholarship, a clear – and rather holistic – conceptualization was provided by Dinwoodie who recognizes three balances in the international intellectual property context: first, a balance intrinsic to IP law, secondly, a balance between universal

⁸⁷ See WIPO for more information on substantive patent law harmonization, available at: <http://www.wipo.int/patent-law/en/harmonization.htm>.

⁸⁸ Peter J. Gardner, *US Intellectual Property Law and the Biotech Challenge: Searching for an Elusive Balance*, 29 Vermont Bar Journal 28 (2003).

⁸⁹ Thorsten Klein, *The Uncertain Balance between Parody and Trademark Rights*, 12 J. Contemp. L. Issues 356 (2001).

⁹⁰ Barbosa et al., *supra* note 53, at 91, (referring to seemingly disjunct or opposing forces that are interconnected and interdependent in the natural world but give rise to each other in turn).

⁹¹ Boyle, *supra* note 55, at 3 (emphasis added).

⁹² Christophe Geiger, *The Constitutional Dimension of Intellectual Property*, in: Paul L.C. Torremans (Ed.), *Intellectual Property and Human Rights* 104 (2008).

⁹³ Margaret Chon, *Towards a Development-Oriented International Intellectual Property Balance*, draft prepared for the Berkeley IPSC 2006 Conference (August 2006).

⁹⁴ Preamble (31) of the *Directive 2001/29/EC of the European Parliament and of the Council of 22 May 2001 on the Harmonization of Certain Aspects of Copyright and Related Rights in the Information Society*, Official Journal L 167/10, 22/06/2001, pp0001-0019.

⁹⁵ Chon, *supra* note 84, at 2842.

⁹⁶ Ruth L. Okediji, *Copyright and Public Welfare in Global Perspective*, 7 Ind. J. Global Legal Stud. 117 (1999); Jerome H. Reichman, *The TRIPs Agreement Comes of Age: Conflict or Cooperation with the Developing Countries?* 32 Case W. Res. J. Int’l L. 441 (2000); Ruth L. Okediji, *Public Welfare and the Role of the WTO: Reconsidering the TRIPs Agreement*, 17 Emory Int’l L. Rev. 819 (2003).

standards versus national autonomy, and thirdly, a balance of IPRs and other tools of economic development – with the latter being introduced by the TRIPS Agreement.⁹⁷

A somewhat narrower conceptualization was put forward by YU and Helfer who embrace the human rights dimension of IP protection. YU has developed a human rights framework for intellectual property and argues for the consideration of a state's human rights obligations in the development of a balanced IP system⁹⁸ while another human rights balancing exercise was undertaken by Helfer. Helfer has not only developed a tripartite framework to analyze the *European Court of Human Rights* (ECHR) IP case law under Article 1 of Protocol 1 of the *Convention for the Protection of Human Rights and Fundamental Freedoms* (European Convention)⁹⁹ but also a recommendation for the resolution of future human rights disputes relating to intellectual property.¹⁰⁰

As opposed to both this rather narrow conceptualization and the two balances put forward by Okediji and Reichman and the three balances put forward by Dinwoodie, the most comprehensive work on questions of “balance” in IP law was provided by Barbosa, Chon, and von Hase who worked their way towards a “development-oriented international intellectual property balance.”¹⁰¹ In view of the previous scholarship, their starting point was the recognition that “none so far has put forth a consistent method for intellectual property to break out of its insularity in order to engage with development objectives within its own paradigm”¹⁰² as well as the recognition that “no new principle of substantive equality within intellectual property itself is proposed”¹⁰³ Based on these recognitions, Barbosa, Chon, and von Hase seek to inject development into international IP along a framework of a development as “freedom model.”¹⁰⁴ In this model, the innovation mandate of intellectual property is balanced and weighted with what Cottier has termed “different, equally legitimate and democratically defined ... policy goals ... to promote liberty and welfare in a broad sense.”¹⁰⁵ It is argued that this balancing framework must occur in a way that ensures that the most vulnerable populations benefit from intellectual property.

While a growing number of researchers are suggesting approaches to balance concepts in IP law, criticism has been voiced as to the feasibility of their implementation. Thus, Gerhart argued that bargaining by nation-states over international intellectual property can never achieve the balance that any IP system requires, since “in an international arena, countries do not seek balance; they seek to advance their national welfare, usually in the form of

⁹⁷ Graeme B. Dinwoodie, cited in: Barbosa et al., *supra* note 53, at 90.

⁹⁸ Peter K. Yu, *Reconceptualizing Intellectual Property Interests in a Human Rights Framework*, U.C. Davis Law Review, Vol. 40 1039 (2007), see also Paul L.C. Torremans, *International Property and Human Rights* (2008) and therein, in particular, Chapter I by Daniel J. Gervais, *Intellectual Property and Human Rights: Learning to Live Together*, at 13 (Copyright's Internal Balance in the Mirror of Human Rights); Chapter 4 by Christophe Geiger, *The Constitutional Dimension of Intellectual Property*, at 104 (Constitutionalizing IP Law: A Way to Secure a just Balance of Involved Interests); Chapter 6 by Henning Grosse Ruse-Khan, *Proportionality and Balancing within the Objectives for Intellectual Property Protection*, at 169 (TRIPS Objectives as Normative Input for the Balancing Exercise).

⁹⁹ *Convention for the Protection of Human Rights and Fundamental Freedoms*, 4 November 1950, 213 U.N.T.S. 222.

¹⁰⁰ Laurence R. Helfer, *The New Innovation Frontier? Intellectual Property and the European Court of Human Rights*, 49 Harv. Int'l L.J. 1, 46 (2008); see also: Laurence R. Helfer, *Human Rights and Intellectual Property: Conflict or Coexistence?*, 5 Minn. Intell. Prop. Rev. 47-61 (2003).

¹⁰¹ Chon, *supra* note 93.

¹⁰² Chon, *supra* note 84, at 2850.

¹⁰³ Chon, *supra* note 84, at 2850.

¹⁰⁴ Barbosa et al., *supra* note 53, at 141.

¹⁰⁵ Thomas Cottier, *Limits to International Trade: The Constitutional Challenge*, 94 AM. SOC'Y. INT'L L. PROCS. 220, 221 (2000).

wealth.”¹⁰⁶ Gerhart further resorts to economic theory to justify his scepticism about the attainment of an intellectual property balance. He then sets forth three variables for a balanced IP law system, first, the incentive variable (getting the right incentive for the efficient investment in innovation), second the access variable (not unduly restricting access by overprotecting the intellectual property), and third, the distributive variable (determining how to distribute the burden of paying for the innovation among potential users).¹⁰⁷ How the struggles between these variables are, however, to be solved is not resolved by said researcher.

It follows from this analysis of balance in legal and economic theory of IP law that balance is a rather complex concept that commentators have had difficulties to exhaustively describe and define. Despite these difficulties, however, researchers have started to venture out so as to develop new paradigms for IP protection. In summary, it is thus safe to conclude that “balance” seems to be an emerging paradigm for IP law rather than a simple fad. At the same time, however, it is also safe to conclude that the quest for balance in IP law has just begun.

IV. Conclusion: The Quest for Balance Has Just Begun

As set out above, the quest for balance in IP law has just begun. Rather than a fad, the quest for balance seems to be an emerging paradigm that is yet to be filled with life; extensive conceptual work is needed. Criteria are required to define the characteristics of a balanced IP regime while two fundamental questions are yet to be answered: What balance should we be searching for? And will the quest for balance ever be crowned with success?

In view of the well-recognized imbalances of the international IP law regime¹⁰⁸ – and even more so in view of the “tremendous material inequality among developed and developing countries”¹⁰⁹ – it is well accepted that the quest for balance is a worthwhile undertaking while there is less so an understanding of what balance we should be searching for.

The integration of IP law and policy into international economic law through international conventions and – most notably – the *TRIPS Agreement*¹¹⁰ has set IP law into a larger context of objectives. There are the TRIPS objectives and principles as such which serve as normative input for design of a balanced IP law system.¹¹¹ As Annex to the *Marrakesh Agreement Establishing the World Trade Organization*,¹¹² however, the TRIPS Agreement is also subject to Article 3.1 DSU and, thus, needs to be interpreted “in accordance with customary rules of interpretation of public international law.”¹¹³ WTO jurisprudence requires a treaty

¹⁰⁶ Gerhart, *supra* note 63, at 155.

¹⁰⁷ Gerhart, *supra* note 63, at 153.

¹⁰⁸ See *supra* II.c) Exposing “Imbalance” in the International IP Law Regime.

¹⁰⁹ Cited in: Chon, *supra* note 84, at 2850.

¹¹⁰ *TRIPS Agreement*, *supra* note 9.

¹¹¹ Cf. the Preamble, Articles 7 and 8 of the *TRIPS Agreement*, *supra* note 9, see on the interpretation of TRIPS also the conclusion of the first TRIPS panel decision *India – Patent Protection for Pharmaceutical and Agricultural Chemical Products* WT/DS50/R, WTO Panel and Appellate Body Report (5 September 1997) para. 7.22: “the TRIPS Agreement must be interpreted in good faith in light of (i) the ordinary meaning of its terms; (ii) the context; and (iii) its object and purpose.” See also the Appellate Body decision *India – Patent Protection for Pharmaceutical and Agricultural Chemical Products* WT/DS50/AB/R, Appellate Body Report (19 December 1997), which concludes that “the legitimate expectations of Members and private rights holders concerning conditions of competition must always be taken into account in interpreting the TRIPS Agreement” (emphasis in the original).

¹¹² Signed in Marrakesh, Morocco on 15 April 1994, 1867 U.N.T.S. 154; 33 I.L.M. 1144 (1994).

¹¹³ *Supra* note 10.

interpretation in accordance with Articles 31 and 32 of the *Vienna Convention on the Law of Treaties* (VCLT)¹¹⁴ and, therefore, a good faith ordinary meaning analysis with regard to the context, object, and purpose of the respective treaty.¹¹⁵ This reference to context, object, and purpose requires resort to the larger social and economic interests of WTO Members which connects back to sustainable development objectives. In consequence, IP property regulations need to be brought in balance with other economic development tools and development objectives.¹¹⁶ It follows that the introduction of IP law into the world trading system requires not only a balancing exercise intrinsic to the system but a balancing exercise that weighs the objectives of IP law against larger societal, economic welfare, and sustainable development interests.

The complexity of the issues involved suggests that it will be impossible to state with complete confidence that an ideal balance in IP law will ever be struck at a given moment in time.¹¹⁷ The quest for balance will possibly expose that any ideal balance will be highly context and time specific, since one size has never fit all and will never do so.¹¹⁸ The quest for balance will possibly expose that there is not one ideal balance to be struck but several balances along the lines of, *inter alia*: IP-intrinsic interests of producers, consumers, and the science and research communities;¹¹⁹ efficiency-promoting and incentive-promoting aspects to intellectual property law;¹²⁰ interests of public and private right holders in IPRs;¹²¹ interests of right holders and societal welfare;¹²² interests of developing and developed countries; interests in national autonomy versus interests in universal standards; the demand for the freedom of trade and an increased protection of IPRs;¹²³ and the aptitude of IP regulation versus other tools of economic development. Thus, while the quest for balance has just begun, it seems doubtful whether it will ever be successful in view of the various IP balances that are to be struck.

However, despite the vastness of the tasks ahead, optimism should be retained: In the interest of sustainable development it is indispensable to strive towards the various IP balances that take economic development, environmental conservation, and social equity into account so as

¹¹⁴ May 23, 1969, 1155 U.N.T.S. 331; 8 I.L.M. 679 (1969).

¹¹⁵ *United States – Countervailing Duties on Certain Corrosion-Resistant Carbon Steel Flat Products from Germany* WT/DS214/AB/R, Appellate Body Report (28 November 2002), paras. 61-62; *WT/DS50/AB/R supra* note 111, para. 46; *United States – Standards for Reformulated and Conventional Gasoline* WT/DS2/AB/R, Appellate Body Report (29 April 1996), 3 at 16, see also Henning Grosse Ruse-Khan in: Paul L.C. Torremans, *International Property and Human Rights* (2008).

¹¹⁶ See Ernst-Ulrich Petersmann, *Constitutionalism and the Regulation of International Markets: How to Define the “Development Objectives” of the World Trading System?* EUI Working Paper Law No. 2007/23 (2007) for an attempt to define the “development objectives” of the World Trading System.

¹¹⁷ See Julia D. Mahoney, *Lawrence Lessig’s Dystopian Vision*, 90 Va. L. Rev. 2305, 2332-33 (2004).

¹¹⁸ Boyle, *supra* note 55, at 8 (2004).

¹¹⁹ See also: Frederick M. Abbott, *The Enduring Enigma of TRIPS: A Challenge for the World Economic System*, Editorial, in: J. Int’l Econ. L., Vol. 1, No. 4, 498 (1998).

¹²⁰ James Boyle, *A Politics of Intellectual Property: Environmentalism for the Net?* Duke Law Journal, Vol. 47 No. 1 87, 97 (1997).

¹²¹ Frederick M. Abbott, *WTO TRIPS Agreement and Its Implications for Access to Medicine in Developing Countries*, Commission on Intellectual Property Rights Study Paper 2a 57 (2002).

¹²² *Ibidem* at 24.

¹²³ Marco C.E.J. Bronckers, *The Exhaustion of Patent Rights under WTO Law*, Journal of World Trade (32(5) 137, 144 (1998).

to approximate to the problem of *what* an overall IP balance should be and *when* it should be drawn.¹²⁴

¹²⁴ See also the approach currently taken by the Chinese government as explained in: Xiaomei E, *China's WTO Accession and Sustainable Development: Challenges and Policy Responses*, Journal of World Trade Law 43, No. 3 541, 569 (2009).