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Intellectual Property Law in the P.R. China: A Powerful Economic Tool for Innovation and Development

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ABSTRACT

In contemporary economies, knowledge assets and intellectual capital have superseded land, labour and capital as leading factors of production. Given the outstanding importance of knowledge industries for innovation and economic development, intellectual property law and policy have become the most crucial tools to regulate the key economic resource of the future. With the awakening of the P.R. China to the global economy, the world has thus witnessed a gradual re-orientation of Chinese intellectual property policy towards a better protection of national and economic interests for the promotion of domestic innovation and development.

This gradual re-orientation of Chinese intellectual property policy, however, is embedded into the larger context of a rethinking of the purposes and rationales of intellectual property rights. The world has not only witnessed the progressive internationalization of intellectual property law since the early days of industrialization but also the progressive digitization and technization of civilization. These global developments have exerted external pressures on the intellectual property regime thereby challenging the right to existence of intellectual property protection. At the same time, the gradual re-orientation of Chinese intellectual property policy is also embedded into the larger context of the political economy of international intellectual property protection. The marketization of intellectual property law has been accompanied by the conscious use and misuse of intellectual property protection as public policy tool in the international trade arena. The Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) both introduces intellectual property law into the multilateral trading system and reflects the culmination of the battle of national and international, public and corporate, economic and political interests surrounding intellectual property protection. With its accession to the World Trade Organization, the P.R. China has not only entered the international intellectual property battleground but has also made great strides towards the use of intellectual property law as powerful economic tool for the promotion of innovation and economic development.

In summary, this paper provides an introduction to the purposes of international intellectual property protection by looking at intellectual property protection in historical perspective, by analyzing today's intellectual property law and policy as integral part of international trade policy, and by elaborating upon the future of intellectual property rationales. The second part looks at the political economy of intellectual property protection through both an analysis of the economics and politics of intellectual property protection and an analysis of the interrelationship of intellectual property protection and economic development in the P.R. China. The final part of the paper discusses three phases of modern Chinese intellectual property policy in the light of the international intellectual property development. It is argued that Chinese modern and proactive intellectual property policy will eventually contribute to the emergence of the P.R. China as a potent force in reshaping the global intellectual property landscape.

Keywords: intellectual property, knowledge industries, TRIPS Agreement, innovation, intellectual property policy, China

OUTLINE

I. Introduction

In contemporary economies, knowledge assets and intellectual capital have superseded land, labour and capital as leading factors of production.[1] Given the outstanding importance of knowledge industries for innovation and economic development,[2] intellectual property (IP) law and policy have become the most crucial tools to regulate the key economic resources of the future. With the awakening of the People's Republic of China (China) to the global economy, the world has thus witnessed a gradual re-orientation of Chinese IP policy towards a better protection of national and economic interests for the promotion of domestic innovation and development.

This gradual re-orientation of Chinese IP policy however is embedded into the larger context of a rethinking of the purposes and rationales of intellectual property rights (IPRs).[3] The world has not only witnessed the progressive internationalization of IP law since the early days of industrialization but also the progressive digitization and technization of civilization. These global developments have exerted external pressures on the IP regime thereby challenging the right to existence of IP protection. At the same time, the gradual re-orientation of Chinese IP policy is also embedded into the larger context of the political economy of international IP protection.[4] The marketization of IP law has been accompanied by the conscious use and misuse of IP protection as public policy tool in the international trade arena. The Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS)[5] both introduces IP law into the multilateral trading system and reflects the culmination of the battle of national and international, public and corporate, economic, social and political interests surrounding IP protection.[6] With its accession to the World

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1 OECD, Science, Technology and Industry Outlook 150 (2006).

2 See ZENG/WANG, China and the Knowledge Economy: Challenges and Opportunities (2007) for an analysis of the strengths, weaknesses, opportunities and threats (SWOT) of the knowledge economy in the P.R. China.

3 See DEAZLEY, Rethinking Copyright (2006); PERITZ, Rethinking U.S. Antitrust and Intellectual Property Rights (2005); HILTY/PEUKERT, Interessenausgleich im Urheberrecht (2004); MCGEVERAN in: Iowa Law Review, Vol. 94 (2008) for attempts to rethink the structure and boundaries of IP protection.

4 See MERTHA, The Politics of Piracy 4 (2004); LANDES/POSNER, The Political Economy of Intellectual Property Law (2004); SHADLEN, Patent Politics: The Political Economy of Intellectual Property Rights in Latin America (2004); SHADLEN/SCHRANK/KURTZ, The Political Economy of Intellectual Property Protection: The Case of Software (2003); SCOTCHMER, The Political Economy of Intellectual Property Treaties (2001); BETTIG, Copyrighting Cultures: The Political Economy of Intellectual Property (1996) for various analyses of the political economy surrounding IP protection.

5 The Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS), adopted in Marrakesh on April 15, 1994, 33 ILM 81 (1994).

6 See CORREA, Trade Related Aspects of Intellectual Property Rights. A Commentary on the TRIPS Agreement (2007) for a detailed legal analysis of the provisions of the TRIPS Agreement, the jurisprudence relating to the TRIPS Agreement, and a critical commentary on the TRIPS Agreement itself.

Trade Organization (WTO), China has not only entered the international IP battleground but has also made great strides towards the use of intellectual property law as powerful economic tool for the promotion of innovation and economic development.

In summary, this paper provides an overview over and an evaluation of the Chinese approach to IP law and policy in the light of the ongoing rethinking of the international IP order and in the light of the political economy of IP protection. It therefore provides a brief introduction to the purposes of international IP protection by looking at IP protection in historical perspective, by analyzing today's IP law and policy as integral part of international trade policy, and by elaborating upon the future of IP protection rationales. The second part looks at the political economy of IP protection through both an analysis of the economics and politics of IP protection and an analysis of the interrelationship of IP protection and economic development in China. The final part of the paper discusses three phases of modern Chinese IP policy in the light of the international IP law development. It is argued that Chinese modern and proactive IP policy not only strives for the promotion of domestic innovation and development but will eventually contribute to the emergence of China as a potent force in reshaping the global IP landscape.

II. The Changing Purposes of and Rationales for International IP Protection

In historical perspective, the purposes of and rationales for IP protection have evolved since their very first inception in the early 13th century[7] and have been based on a common consensus until very recently in the history of IP law. However, with the IP system not only entering a new scientific epoch with a daunting array of technological challenges but also the international trade arena, the purposes of and rationales for IP protection have become violently contested.[8] With the current IP law regime being under severe criticism, the future of the system has also become the subject of extensive speculation.[9] These developments and speculations constitute the framework to the ever-increasing pro-active Chinese stance towards IP law and policy that has emerged over the last decade. The following chapter is, therefore, devoted to an analysis of the changing purposes and rationales of IP protection to set the ground for more China-specific analyses.

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7 See BAINBRIDGE, Intellectual Property, 6th ed. (2007) for a brief account of the history of copyright law (pp. 29-32), of patent law (pp. 345-347), and trademark law (pp.586-587).

8 See, for instance, REICHMAN/DREYFUSS, in: Duke Law Journal, Vol. 57, No. 1 (2007) for a discussion of the lack of consensus on international patent law standards that touches upon the needs of different technologies, sectors, and countries in relation to IP protection. See also MAY/SELL, Intellectual Property Rights 12 (2006), CHON, in: Cardozo L. Rev., Vol. 27 (2006), and GERVAIS, in: Journal of Intellectual Property Law & Practice (2006).

9 See the manifesto of Professor Boyle in which he claims that there are systematic errors in contemporary IP policy and where he assigns the World Intellectual Property Organisation (WIPO) a special role in future corrections of the system: BOYLE, in: Duke L. & Tech. Rev. (2004); see also: YU, in: MSU Legal Studies Research Paper No. 03-28 (2007), DINWOODIE, in: Marquette Intellectual Property Law Review (2006), SOLUM, in: Texas Law Review, Vol. 83 (2005), YU, in: Loyola of Los Angeles Law Review, Vol. 38 (2004).

1. *Purposes of and Rationales for IP Protection in Historical Perspective*

For the most part, the purposes of and rationales for IP protection are the product of historical developments driven by political considerations.[10] The purposes of and rationales for each kind of IP right have undergone divergent developments not only in themselves but also depending on the legal systems in which these developments have taken place. However, with the increasing influence of the Anglo-American legal tradition[11] as well as the marketization of IP protection all of these rationales have been subjected to utilitarian pressures that emphasize the contribution of IP law to overall utility.[12] In addition, economic justifications for IP law with wealth maximizations as underlying ethical system for IP protection have increased since the early beginnings of the law and economics movement.[13] Together with the technological revolution of the late 20th and early 21st centuries these external pressures have not only led to a rethinking of the purposes of and rationales for IP protection but corroborated policy-driven attempts on both the international and national level to employ IP protection as innovation policy tool for growth and development. These attempts in themselves might eventually be apt to influence the evolution and refinement of IP protection rationales.

An analysis of the historical evolution, the current trends and the future refinement of IP protection rationales, however, requires a brief introduction and definition of intellectual property and its protection. Intellectual property is generally defined as property of the human mind or intellect that is intangible in nature and characterized by non-excludability in production and non-rivalry in

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[10] BEIER, in: GRUR Int, No. 3 (1978); DITTRICH (Ed.), Die Notwendigkeit des Urheberrechtsschutzes im Lichte seiner Geschichte (1991); see, however, also SILBEY, in: Legal Studies Research Paper Series, Research Paper 07-30 (2007) for a critical account of the origin of the IP law regime in view of the inherent uncertainty about the origins of human creation.

[11] See GLAESER/SHLEIFER, in: The Quarterly Journal of Economics (2002) for an analysis of the origins of civil law and common law traditions; see WISE, in: The American Journal of Comparative Law, Vol. 38 (1990) for a more comprehensive analysis of the transplant of legal patterns.

[12] See generally EWING, in: Ethics, Vol. 58, No. 2 (1948) and BERNSTEIN, in: Ethics, Vol. 89, No. 2 (1979) for an introduction of the concept of utilitarianism in a legal context; see also the "Intellectual Property Clause" in the U.S. Constitution, Article 1, Section 8, Claus 8, which enumerates the power "[t]o promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries;" cf. OLIAR, in: Georgetown Law Journal, Vol. 94 (2006).

[13] See POSNER, in: The Journal of Legal Studies, Vol. 8, No. 1 (1979) for the proposition of a clear distinction between utilitarianism and wealth maximization as normative analysis, and also: MERCURO/MEDEMA, Economics and the Law (2006); BACKHAUS (ED.), The Elgar Companion to Law and Economics, 2nd ed. (2005); MICELI, The Economic Approach to Law (2004); GRANSTRAND (ED.), Economics, Law and Intellectual Property (2003); POSNER (ED.), Law and Economics, Second Series (2001).

consumption, like a public, or collective, good.[14] It may thus be some kind of information or knowledge, or some product of creativity and artistry or even of commercial endeavours. It may also be some kind of commercial reputation or goodwill. Most laws do not even define intellectual property in an abstract manner.[15] Rather, they refer to "categories of intellectual property"[16] that are worthy of protection. The types of intellectual property that are protected are subsequently defined through the availability of protection for different kinds of subject matters. Even if the law, such as the Berne Convention for the Protection of Literary and Artistic Works (Berne Convention),[17] gives more specific examples of the kinds of intellectual property that are concerned, such lists are never exhaustive. The law thus reflects one of the characteristics of intellectual property: the ever-increasing number of types of intellectual property.

This ever-increasing number of types of intellectual property serves as one explanation for the changing purposes of and divergent rationales for IP protection. These changing purposes of and divergent rationales for IP protection, however, are also driven by the broad definition of IP law which lumps together completely disparate areas of law such as patent law, copyright law, and trademark law which differ in their subject matter, extent of protection, and field of application. The public policy issues and, thus, the rationales they raise are often unrelated. Current technological and industrial developments are blurring the distinctions between different categories of intellectual property. The emergence of hybrid "sui generic" systems serves to reinforce this development even further by adding another category to the well-accepted classification of IPRs: the category sui-generis protection to the long-existing categories industrial property,[18] literary and artistic property,

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[14] ARROW, Economic Welfare and the Allocation of Resources for Invention, pp609-619 in: NELSON (ED.), Rate and Direction of Inventive Activity (1962); CHON, *supra* note 8, at 2878; the global public goods theory has roots dating back at least as far back as the Middle Ages in Europe, MEGHNAD DESAI, Public Goods: A Historical Perspective, in Global Public Goods: International Cooperation in the 21st Century, 66 (1999), economist SAMUELSON is widely credited with introducing the concept of "public goods" in 1954. Id. at 64, 76 (citing SAMUELSON, in: 36 Rev. Econ. & Stat. 387, 387-89 (1954)).

[15] Note, however, the Convention Establishing the World Intellectual Property Organization, signed at Stockholm on July 14, 1967, and as amended on September 28, 1979, available at: http://www.wipo.int/treaties/en/convention/trtdocs_wo029.html (Status August 15, 2008) which stipulates in Article 2 that "intellectual property" shall "include the rights relating to: literary, artistic and scientific works, performances of performing artists, phonograms, and broadcasts, inventions in all fields of human endeavour, scientific discoveries, industrial designs, trademarks, service marks, and commercial names and designations, protection against unfair competition, and all other rights resulting from intellectual activity in the industrial, scientific, literary or artistic field."

[16] See Article 1(2) of the TRIPS Agreement, *supra* note 5.

[17] The Berne Convention for the Protection of Literary and Artistic Works of September 9, 1886, completed at Paris on May 4, 1896, revised at Berlin on November 13, 1908, completed at Berne on March 20, 1914, revised at Rome on June 2, 1928, at Brussels on June 26, 1928, at Brussels on June 26, 1948, at Stockholm on July 14, 1967, and at Paris on July 24, 1971 and amended on September 28, 1979, 331 U.N.T.S. 217.

[18] The term "industrial property" dates back to the Paris Convention for the Protection of Industrial Property of 1883 (Paris Convention): The Paris Convention for the Protection of Industrial Property of March 20, 1883, as revised at Brussels on December 14, 1900, at Washington on June 2, 1911, at The Hague on November 6, 1925, at London on

and trade secrets.[19] Within these categories, the following analysis will focus exclusively on the evolution and development of the rationales for patent law and copyright law that are most closely interlinked with questions of innovation and economic development.[20]

In the category of industrial property, the patent is the form of intellectual property par excellence that has extensively been harmonized on an international level.[21] A patent may be granted for any invention that satisfies more or less rigorous standards[22] of novelty, non-obviousness, and utility[23] or industrial applicability.[24] Upon satisfaction of these standards, a patent may be granted for both products and for processes. A patent is an exclusive right that prevents others from making, offering for sale, selling, importing, or using an invention without license or authorization. This exclusive right is granted for a fixed period of time with TRIPS stipulating a minimum of 20 years from the filing date.[25] In addition to a limited term of protection, there are further controls on the monopoly status conferred upon proprietors of patent rights. For instance, compulsory licenses may be available under exceptional circumstances.[26] This brief introduction of the nature of a patent shall serve as basis for a historical survey of the purposes of and rationales for patent protection.

June 2, 1934, at Lisbon on October 31, 1958, and at Stockholm on July 14, 1967, and as amended on September 28, 1979, 21 U.S.T. 1583, 828 U.N.T.S. 305.

[19] Cf. BRAGA/FINK/SEPULVEDA, in: Worldbank, TechNet Working Papers 1, 4 (1998): industrial property includes patents and utility models (new, non-obvious inventions capable of industrial application), industrial design (ornamental design), trademarks (signs or symbols to identify goods and services), geographical indications (product names related to a specific region or country); literary and artistic property includes copyright and neighbouring rights (original works of authorship); sui-generis protection includes plant breeders' rights (new, stable homogenous, distinguishable plant varieties), database protection (electronic databases), protection for integrated circuits (original layout designs of semiconductors); and trade secrets (secret business information).

[20] Even though there has been extensive economic analysis of the economics of trademarks, those findings mostly stipulate that the law is trying to promote economic efficiency, rather than innovation or economic development, cf. LANDES/POSNER, in: Journal of Law and Economics, Vol. 30, No. 2, 266 (1987). Furthermore, trade secrets have also been subjected to rigorous economic analysis (cf. FRIEDMAN/LANDES/POSNER, in: The Journal of Economic Perspectives, Vol. 5, No. 1 (1991)) yet will also be disregarded for the purposes of this paper.

[21] Patent law has been harmonized on an international level by a number of international conventions and agreements: harmonization was, inter alia, achieved through the Paris Convention; the TRIPS Agreement; the Patent Cooperation Treaty (PCT) done at Washington on June 19, 1970, 28 U.S.T. 7645, 1160 U.N.T.S. 231; the Patent Law Treaty (PLT) concluded in Geneva on June 1, 2000; the Budapest Treaty on the International Recognition of the Deposit of Microorganisms for the Purposes of Patent Procedure (Budapest Treaty) signed in Budapest on April 28, 1977; and the Strasbourg Agreement Concerning the International Patent Classification (IPC Agreement) signed in Strasbourg on March 24, 1971 (Status August 15, 2008).

[22] Cf. Article 27(1) of the TRIPS Agreement, *supra* note 5.

[23] As used in the U.S.; cf. 35 United States Code (U.S.C) § 101 and 35 U.S.C. § 112.

[24] As used in Europe; cf. Article 57 of the Convention on the Grant of European Patents (European Patent Convention, EPC) of 5 October 1963, or in the TRIPS Agreement; cf. Article 27(1) of the TRIPS Agreement, *supra* note 5.

[25] Cf. Article 33 of the TRIPS Agreement, *supra* note 5.

[26] See Articles 27(1), 28, 33, 30 and 31 of the TRIPS Agreement, *supra* note 5.

A historical survey of the purposes of and rationales for patent protection needs to set out in England where not only the first major steps towards an industrial society were taken but also where the first mould for patent rights was set internationally.[27] The origins of patent law are considered to be emerging from the so-called "letters patent" in the 14th century, i.e. open letters with the King's Great Seal on the bottom granting rights, often to foreign craftsmen, allowing them to practise their trade thereby overcoming the competition suppression imposed by guild regulations.[28] The rationale for granting letter patents were to be found in the encouragement of the establishment of new forms of industry and commerce thereby allowing the Crown control over trade.[29] Thus, the original rationale for letters patent is closely connected with subsequently developed justifications for patent rights that were meant to address the prevention of unfair competition through a monopoly system.[30] The monopoly system was justified by English rather utilitarian philosophers through the reward for inventors and investors for their time, work, and risk of capital by the grant of a strong, though limited, monopoly in return for disclosure of an invention to the public.[31] The monopoly system was, thus, meant to foster innovation and development through the recoupment guarantee for research and development (R&D) investments, the publication of the invention, and the diffusion of the innovation after the protection period. At the same time, however, the rationales for patent protection were linked to the natural rights view of philosophers, such as John Locke, who promoted the individual's right of property in their own ideas.[32] Yet, the Industrial Revolution greatly pressurized the patent system leading to the dismantling of patent law in Switzerland and the Netherlands thereby demonstrating that the rationales for patent law had already substantially been challenged towards the end of the 19th century.[33] Nevertheless, a growing consensus on the rationales of patent law had developed by the early 20th century in the Western legal tradition that was based on the contract theory, the reward theory, the incentive theory, and the natural/moral

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27 BAINBRIDGE, *supra* note 7, at 345.

28 See BAINBRIDGE, *supra* note 7, at 345; for a recount of the early beginnings of the patent law system, see DAVENPORT, The United Kingdom Patent System: A Brief History (1979), THORLEY/MILLER//BURKILL/BIRSS, Terrell on the Law of Patents (16th ed.) (2005).

29 Cf. GOODMAN, in: 19 I.P.J. 297, 300 (2006); MOSSOFF, in: 52 Hastings L.J. 1255, 1255 (2991); WALTERSCHEID, in: 77 J. Pat & Trademark Off. Soc'y 771, 784 (1995); WALTERSCHEID, in: 76 J. Pat & Trademark Off. Soc'y 849, 850 (1994).

30 See BAINBRIDGE, *supra* note 7, at 346 who stipulates that the patent monopoly system developed in England under the reign of Elizabeth I.

31 This utilitarian approach was supported by English philosophers such as Jeremy Bentham, and also John Stuart Mill, who strongly supported the patent system, cf. BAINBRIDGE, *supra* note 7, at 348.

32 DRAHOS, A Philosophy of Intellectual Property 42 (1996); see also: WALTERSCHEID, in: 76 J. Pat & Trademark off. Soc'y 697 (1994); BRACHA, in 38 Loy. L.A. L. Rev. 177 (2004).

33 See DUTTON, The Patent System and Inventive Activity during the Industrial Revolution, 1750-1852, Chapter I (1984), and BAINBRIDGE, *supra* note 7, at 349.

rights theory.[34] This growing consensus, however, has been subjected to severe criticism in the late 20th century and is still so subjected to critical voices that focus on the inability of a "one-size-fits-all"[35] patent law to deal with new and emerging technologies,[36] on the inability of patent law to strike a balance between needs of developing countries and the industrialized world,[37] and on the inability of patent law to distinguish between different industries, type of knowledge and type of inventors.[38] It follows that – even though there is a common understanding of the important interrelationship between patent law and innovation – the current patent law system is not regarded to be the most efficient system for the promotion of innovation and economic development.

The above-described development of the purposes of and rationales for patent protection in the Western hemisphere stand in stark contrast to the Chinese historical approach to rationales for patent law. Even though Chinese technological discoveries and inventions were far more advanced than those in Europe in the 15th century,[39] China has not been the instigator to any revolution in science ever since. It is, therefore, not surprising that China has not proven to be the promoter of patent law or any other intellectual property for the most part of its history.[40] It was only in the most recent history of China that the necessity of patent law and its rationales, albeit socialist ones, were extensively discussed in Chinese politics.[41] During the Maoist era, China had explicitly committed itself to the development of science and technology (S&T).[42] However, due to the ideological grounding of the Chinese Communist Party (CCP) in Marxism-Leninism, this commitment to science and technology has never translated into endeavours to enact a modern patent law rooted in Western rationales.[43] Rather, commercial profits were scorned by socialist and Confucian tradition

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[34] See BAINBRIDGE, Intellectual Property 349 (2007) for a more detailed explanation of the arguments for the retention and support of the patent system. See also the following papers for an analysis of the transplant of the idea of patent law to the U.S.: WALTERSCHEID, *supra* note 32, WALTERSCHEID, in: 2 J. Intell. Prorp. L. 1 (1994); MESHBESHER, in: 78 J Pat & Trademark Off. Soc'y 594 (1996); MOSSOFF, in: 92 Cornell L. Rev. 953 (2007).

[35] See overall motto of the 2008 ATRIP congress "Can one size fit all?"; see also: GRANSTAND, in: E.I.P.R. 27(2), 82, 83 (2995); GRANSTAND, Economics, Law and Intellectual Property (2005).

[36] Such as software (see ABID, in: 23 J. Marshall J. Computer & Info. L. 815 (2005)), genetic engineering (see BLUNT, in: 48 SYRLR 1365 (1998)), information technology (see HUMPHREYS, in: 22-APR Pa. Law 54 (2000)).

[37] Cf. IMAM, in: IIC, No. 3, 245-259 (2006); HEATH, in: GRUR Int., No. 12, 1169 (1996) though also note STRAUS, in: 6 J. Marshall Rev. Intell. Prop. L. 1, 14 (2006).

[38] BAINBRIDGE, *supra* note 7, at 350.

[39] NEEDHAM, Science and Civilization in China 4 (1965)

[40] It has been argued that Chinese tradition – though insisting on Confucian traditions – has ignored science and technology while stressing humanities and politics which has proven inimical to the development of patent law, see WANG, in: 14 Nw. J. Int'l Bus. 15, 16 (1993).

[41] SIDEL, in: 21 TXIL 259, 278 (1986).

[42] GOLDMAN/SIMOn, The Onset of China's New Technological Revolution, in: Science and Technology in Post-Mao China 7 (1989).

[43] SIDEL, *supra* note 41, at 278.

and morality so that patent law degenerated into an instrument for state control over patents without providing adequate non-material or financial awards to inventors.[44] Article 23 of the Regulations on Awards for Inventions, issued in November 1963 by the Chinese government reflects this approach by providing that "all inventions are the property of the state, and no one or unit may claim monopoly over them. All units throughout the country (including collectively owned units) may make use of the inventions essential to them."[45] It was only with the accession of China to the WTO, that these socialist justifications for patent law were gradually replaced by Western, capitalist, economic, and utilitarian perceptions of IP protection.[46]

As opposed to patent rights, copyright is a property right that subsists in a number of types of works, such as literary and artistic works, dramatic and choreographic works, musical compositions, sound recordings, films and broadcasts, computer programs, and compilations of data.[47] Copyright, however, does not protect ideas; it only protects the expression of an idea.[48] Unlike patent or trademark entitlements, copyright protection begins without formalities, with the creation of the work.[49] It gives the owner the economic right to, inter alia, reproduction, public performance, recording, broadcasting, translation, or adaptation, and allows the collection of royalties for authorized use.[50] In almost all countries with membership in the Berne Convention, authors may also claim moral rights,[51] such as the authorship of the work or the right to object to any distortions of his work that would be prejudicial to his honor or reputation. Copyright lasts at least throughout the life of the author and fifty years after his death.[52] Copyright is often cited in tandem with neighboring rights, or related rights.[53] Like industrial property rights, copyright law and related

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44 WANG/ZHANG, Introduction to Chinese Law 448 (1997).

45 HSIA/HAUN, Laws of the People's Republic of China on Industrial and Intellectual Property, in: 38 Law & Contemp. Probs., 274, 276-277 (1973).

46 See *infra* A.IV, The Chinese Approach to IP Policy in the Light of International IP Law Developments.

47 See Articles 2 of the Berne Convention, *supra* note 17.

48 Cf. Article 9(2) of the TRIPS Agreement, *supra* note 5.

49 Id est, copyright "subsists" in certain specified types of work, cf. BAINBRIDGE, *supra* note 7, at 27.

50 See Articles 8-17 of the Berne Convention, *supra* note 17, and Article 9(1) of the TRIPS Agreement, *supra* note 5.

51 For an analysis of the origins of moral rights in Europe see: KELLERHALS, in: GRUR Int, No. 5 (2001); originally, the concept of copyright law as "ius personalissimum" goes back to Immanuel Kant cf. KANT, Von der Unrechtmäßigkeit des Büchernachdrucks 137 (1785), UFITA 106 (1987), see also: HUBMANN, Immanuel Kants Urheberrechtstheorie, UFITA 106, 146, 151 (1987) and Article 6bis of the Berne Convention, *supra* note 17.

52 See Article 10 and 9 of the TRIPS Agreement, *supra* note 5; and Articles 2(1), 6bis and 7 of the Berne Convention, *supra* note 17. Note, however, that the majority of industrialized countries has opted for an extension of copyright protection to seventy in recent years, see PNG/WANG, in: Working Paper (2006).

53 In English or United States (U.S.) law, related rights are also considered to be copyrights. In civil-law societies, by contrast, related rights are rights that are comparable to author's rights but not connected with the actual author of the work. Thus, related rights mostly consist of the rights of performers, phonogram producers, broadcasting

rights have also benefited from international harmonization efforts.[54] This brief introduction of the nature of a copyright shall serve as basis for a historical survey of the purposes of and rationales for copyright protection.

As in patent law, a historical survey of the purposes of and rationales for copyright protection needs to set out in England.[55] Even though it was already considered contemptible to falsely claim a work as one's own in ancient times, ideas of economic rights to control intellectual property were not particularly well established in those times. It was eventually the invention of the printing press that necessitated a system of printing privileges and thereby marked the birth of copyright law.[56] With the year 1518 seeing the first issuance of a printing privilege in England, the royal motivation for printing privileges was not only the treatment of copyright law as trade regulation but also, firstly, the restriction and control of political and religious books in England; secondly, the protection of authors, printers, and publishers as a quasi craft guild against copyright pirates; and thirdly, the encouragement of dissemination of information.[57] It was explicitly recognized that piracy was highly detrimental, if not ruinous, to authors and proprietors of books and writings.[58] These initial historical justifications for copyright law still hold true for the most part and are, as such, reflected in the Berne Convention.[59] However, it is to be noted that the fundamentally different natures of Anglo-American copyright law and the continental legal tradition have led to divergent emphases on the different aspects of copyright protection rationales. To the present day, the United Kingdom (U.K.) concept of copyright law focuses on the achievement of public good through reliance on the pursuit of private interests following the economic theory of Adam Smith.[60] By contrast, the U.S.-American system emphasizes the attainment of progress through the system of copyright laws with

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organizations and database creators. It is, however, noteworthy that related rights are not covered by the Berne Convention.

[54] Harmonization was, inter alia, achieved through the TRIPS Agreement; the Berne Convention; the World Intellectual Property Organization Copyright Treaty (WCT) adopted in Geneva on December 20, 1996; the WIPO Performances and Phonograms Treaty (WPPT) adopted in Geneva on December 20, 1996; the International Convention for the Protection of Performers, Producers of Phonograms and Broadcasting Organizations (Rome Convention) done at Rome on October 26, 1961; the Convention Relating to the Distribution of Programme-Carrying Signals Transmitted by Satellite (Brussels Convention) adopted at Brussels on May 21, 1974; the Treaty on the International Registration of Audiovisual Works (Film Register Treaty) adopted at Geneva on April 20, 1989; the Convention for the Protection of Producers of Phonograms against Unauthorized Duplication of their Phonograms of October 29, 1971 (Status August 15, 2008).

[55] BAINBRIDGE, *supra* note 7, at 29, though the Statutes of the University of Paris in 1223 also regulated the duplication of texts for use within the university – an early form of a fair use exception.

[56] DIETZ, in: GRUR Int., No. 1, 1-9 (2006); BIRNHACK, in: 1 Buff. Intell. Prop. L.J: 3, 23 (2001).

[57] BIRNHACK, *supra* note 56, at 33.

[58] BAINBRIDGE, *supra* note 7, at 29-32.

[59] *Supra* note 17.

[60] SMITH, Wealth of Nations 376 (1991), see also: SCHRICKER, in: GRUR Int., No. 4, 242, 243 (1992).

the subject matter of that progress being knowledge.[61] This is clearly reflected in the constitutionalization of American copyright law in the intellectual property clause of the United States (U.S.) Constitution[62] as well as in the U.S. copyright jurisprudence.[63] The continental system, however, stresses the natural rights justifications for copyright law and the influence of enlightenment on copyright law rationales with growing concern about the future justification of authors' moral rights.[64] Despite these differing rationales for copyright protection in Western legal traditions, it holds true for all these Western legal traditions that copyright law results from "deliberate interventions by political authorities rather than … a spontaneously evolved continental legal tradition."[65]

The development of copyright law in the Western legal tradition, however, stands in stark contrast to the development of rationales for copyright law in China. Comparably to the Chinese approach to patent law, copyright law was not high on the agenda of Chinese civilization until very recently in history.[66] It was only the desires of Chinese emperors to control the dissemination of information from the fourth century onwards that may be compared to the origin of copyright law in Western society.[67] Thus, emperors, beginning with the Wenzong Emperor in Anno Domini (A.D.) 835, prohibited the unauthorized reproduction of items that could be used for prognostication, heterodox items and materials under the exclusive control of the state and – after the invention of the printing press – even required private printers to submit works to government officials for prepublication review.[68] Apart from this parallel in the development of Chinese and Western copyright law, however, the concept of having a property in one's work had no counterpart in China.[69]

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61 BIRNHACK, *supra* note 56, at 35.

62 *Supra* note 12.

63 See *Mazer v. Stein*, 347 U.S. 201, 219 (1954) (Citing *United States v. Paramount Pictures*, 334 U.S. 131, 158, 68 S. Ct. 915, 929, 92 L. Ed 1260 (1948), citing also *Washingtonian Pub. Co. v. Pearson*, 306 U.S. 30, 36, 59 S. Ct. 397, 400, 83 L. Ed. 470 (1939)), *Feist Publ'ns, Inc. v. Rural Tel. Serv. Co.*, 499 U.S. 340, 351 (1991) and *Sony Corp. v. Universal City Studios, Inc.*, 464 U.S. 417, 429 (1984).

64 GEIGER, in: GRUR Int., No. 10, 815, 816 (2004), see also: LUF, Philosophische Strömungen in der Aufklärung und ihr Einfluss auf das Urheberrecht, in: DITTRICH (Ed.), Woher kommt das Urheberrecht und wohin geht es? 9 (1988); LADD, in: GRUR Int., No. 2, 77-80 (1985); LEISTNER/HANSEN, in: GRUR Int., No. 6, 479-490 (2008); Stallberg, Urheberrecht und moralische Rechtfertigung (2006).

65 MAY/SELL, *supra* note 8, at 4.

66 See ZHENG/PENDLETON, Chinese Intellectual Property and Technology Transfer Law 89 (1987); ZHENG/PENDLETON, Copyright Law in China 17 (1991), discussing the enactment of China's first official copyright law in 1910; see also ALFORD, in: 7 J. Chinese L. 3, 7-34 (1993) on the development of China's system of copyright through its imperial history, and ALFORD, To Steal a Book is an Elegant Offense: Intellectual Property Law in Chinese Civilization 69 (1995).

67 PLOMAN/HAMILTON, Copyright: Intellectual Property in the Information Age 9 (1980).

68 See ALFORD, *supra* note 66, at 13-17 (1995), see also WEI, Der Urheberrechtsschutz in China 1-2 (1994) for a historical account of copyright and the invention of the printing press in China.

69 PLOMAN/HAMILTON, *supra* note 67, at 11.

Furthermore, it is to be noted that none of the other types of IP law seem so closely interrelated with culture[70] and society, including race, ethnicity, language, history, and culture, as copyright is so that, by nature, the influence of Chinese culture, society, and politics on the Chinese copyright law development is quite substantial.[71] Finally, the first formal copyright law in China was enacted in 1910 just one year before the overthrow of the Qing Dynasty with the consequence that it was never fully implemented.[72] Even though both the warlords government and the subsequent Guomindang government the statute in 1915 and 1928, respectively, the said statute never sufficed to induce the Chinese domestic awareness for copyright law issues.[73] For this reason as well as for ideological reasons, it was, thus, not surprising that the Communist party overturned all existing copyright and publication laws.[74] Since then, MAO Zedong stipulated that the creation of cultural expression was to serve the overall interest of society:

[Our purpose is] to ensure that literature and art fit well into the whole revolutionary machine as a component part, that they operate as a powerful weapon for uniting and educating the people and for attacking and destroying the enemy, and that they help the people fight the enemy with one heart and one mind.[75]

For a number of decades, the rationales for Chinese copyright law were grounded in Marxism-Leninism before all administrative orders and internal regulations governing plagiarism and remuneration were abolished in the Cultural Revolution.[76] Thereafter, until the Open Door policy of the 1980s, Chinese politics and culture acted as barriers to copyright protection. Subsequently, the discussions leading up to the first Chinese copyright law in the post-Maoist era clearly reflects the tensions inherent in the varying rationales for copyright protection in the Western hemisphere. Although Chinese law refers to the term 著作权 (zhuzuoquan), which literally means "authors's right", rather than 版权 (banquan), which literally means "print right/publisher's right", Article 56 of the Chinese Copyright Law[77] clearly states that both terms are to be used synonymously.[78] With

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70 *Supra* note 123.

71 Note the argument by Lee who offers a complete elaboration of the cultural dimension of copyright law in relation to the Korean and U.S. copyright systems, see LEE, in: 79 WAULQ 1103 (2001).

72 ZHENG/PENDLETON, *supra* note 66, at 17; SCHULZE/XU, in: GRUR Int., No. 7, 548, 548 (1995), see WEI, *supra* note 68, at 4-5, for the main points of the first Chinese Copyright Law.

73 LAZAR, in: 27 Law & Pol'y Int'l Bus. 1185, 1187 (1996).

74 See LÖBER, in: GRUR Int., No. 8, 388, 389 (1976); see also GUO in: GRUR Int., No. 12, 949, 955 (1997) for a detailed account of the post-1949 copyright law development in China.

75 MAO, Quotations from Chairman Mao Tse-Tung 23 (1967).

76 See LAZAR, *supra* note 73, at 1187.

77 中华人民共和国著作权法, adopted at the Fifteenth Session of the Standing Committee of the Seventh National People's Congress (NPC) on 7 September 1990, and revised in accordance with the Decision on the Amendment of the Copyright Law of the People's Republic of China adopted at the 24th Session of the Standing Committee of the

the accession of China to the WTO socialist rationales were replaced by new and emerging rationales for copyright protection that are strongly influenced by international trends and tendencies. Furthermore, it is noteworthy that the close interrelationship between innovation and IP protection has recently found entry into the rationales for Chinese copyright law thereby, in turn, challenging some Western rationales for copyright protection.

In summary, the above analysis of the purposes of and rationales for IP protection in historical perspective has demonstrated that both patent law and copyright law constitute the product of both historical evolution and deliberate interventions by political authorities in Western legal tradition. It has also demonstrated that the rationales for patent and copyright protection have developed rather differently from each other depending on the interest perspectives and goals involved in each area of law. In relation to China, the above analysis has demonstrated that the Chinese IP tradition has neither followed the Western rationales, nor has it developed its own rationales for IP protection until very recently in Chinese history. The cultural and political influences that are discernable, however, have rather hampered than promoted the development of copyright law and patent law in China. These findings shall set the ground for an analysis of more recent developments in international and Chinese IP law, such as the growing tendency to employ IP protection as innovation policy tool for growth and development. They shall also set the ground for predictions on how these recent developments in Chinese law might impact upon the larger global developments of IP protection and its rationales.

2. *International IP Law as Integral Part of Trade Policy*

In the last 20 years the above-described development of the purposes of and rationales for IP protection has most strongly been influenced by the integration of international IP law into international trade policy. The formal linkage of IP protection with trade has founds its expression in the multilateral TRIPS Agreement[79] and most recently in a wave of bilateralism consisting of the so-called multilateral and bilateral Free Trade Agreements (FTAs)[80], the so-called Bilateral

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Ninth NPC on 27 October 2001, in: Gazette of the State Council (国务院公报) 2001, No. 33, p10; English translation published in: China Patents and Trademarks (Hong Kong) No 1, 83 (2002); German Translation in: GRUR Int., No. 1, 23-30 (2002); This section corresponds to Article 51 of the first Chinese Copyright Law of 1990, see DIETZ, in: GRUR Int., No. 12, 905, 906 (1990).

78 See DIETZ, *supra* note 77, at 906 for a discussion of the meaning of terminology in Chinese copyright law.

79 *Supra* note 5.

80 Especially, the U.S. has been very active in the last decade in relation to the conclusion of FTAs that include IP issues, see the following website of the Office of the United States Trade Representative (USTR) for more information on the U.S. strategy on market-opening initiatives: http://www.ustr.gov/Trade_Agreements/Section_Index.html (Status August 15, 2008).

Investment Treaties (BITs)[81], and the so-called Economic Partnership Agreements (EPAs)[82] of the European Union (EU). The importance of this understanding of IP law as integral part of trade policy lies in the limitation of policy space available for the respective countries and, thus, also the limitation of the space for development of protection rationales.[83] This limitation of policy space applies in particular to China whose recent emergence on the international IP stage was closely directed and determined by international IP law harmonization efforts that left little policy space for a rather distinct "Chinese Way". The following section is, therefore, devoted to an analysis of the gradual integration of IP law into international trade policy and its impact on Chinese IP policy and rationales.

Given the nature and significance of IPRs in international trade, IP protection is by nature trade-related. However, it is only with the integration of IP protection into the TRIPS Agreement[84] that this aspect has been stressed both in form and content, indicating that justifications for the restriction of national policy space were sought.[85] Up to the adoption of the Paris Convention[86] in 1883 and the Berne Convention[87] in 1886, countries were largely unhindered in the tailoring of their IP protection regimes. IPRs were mostly tailored to national economic circumstances and needs. Even though the advent of international IP protection conventions in the late 19th century heralded the harmonization of IP law, countries were left with a number of flexibilities, such as the option to exclude certain fields of technology from protection by the Paris Convention.[88] The adoption of the TRIPS Agreement not only removed these flexibilities, but also explicitly eliminated discrimination in the grant of patent protection in respect of different fields of technology.[89] The minimum TRIPS standards are now applicable to 151 members of the WTO.[90] By contrast, there were only 10 initial

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[81] See the information of the USTR on BITs for the protection of private investment, the development of market-oriented policies in partner countries, and the promotion of U.S. exports at: http://www.ustr.gov/Trade_Agreements/BIT/Section_Index.html (Status August 15, 2008).

[82] See the website of the European Commission, Bilateral Trade Relations, for more information at: http://ec.europa.eu/trade/issues/bilateral/regions/acp/epas.htm (Status August 15, 2008).

[83] See GROSSE RUSE-KHAN, in: Journal of International Economic Law, Vol. 11, Issue 2, 313-364 (2008) on the function of the suspension of TRIPS obligations as the temporary creation of policy space for designing domestic IP law regimes; see also TAUBMAN, TRIPS Jurisprudence in the Balance: Between the Realist Defense of Policy Space and a Shared Utilitarian Ethic 9 (2008) on the role of TRIPS in constraining and defending domestic policy space.

[84] *Supra* note 5.

[85] See RYAN, Knowledge Diplomacy 8 (1998), MATTHEWS, in: CSGR Working Paper No. 99/02 (2002) on the negotiations leading up to the TRIPS Agreement.

[86] *Supra* note 18.

[87] *Supra* note 17.

[88] COMMISSION ON IPRS, Integrating Intellectual Property Rights and Development Policy 18 (2002).

[89] Articles 27-38 in conjunction with Articles 65 and 66 of the TRIPS Agreement, *supra* note 5.

[90] Cf. Members and observers of the WTO on July 27, 2007, available at: http://www.wto.org/english/thewto_e/whatis_e/tif_e/org6_e.htm (Status August 15, 2008).

signatories to the Paris Convention at the time of its entry into force in 1884[91] and eight initial signatories to the Berne Convention in 1887.[92] Thus, within a century the geographical scope of IP protection has more than decupled, now reaching 79% of the total 192 countries in the world.[93] It follows that the trade-relatedness of IP protection and its integration into the WTO regulation framework has considerably reduced the policy space of most of the countries in the world – including China. This is due to the fact that – unlike in previous regulation regimes under the aegis of the World Intellectual Property Organization (WIPO)[94] – minimum standards of IP protection have become so inextricably linked with the international free trade architecture that they combined have become a "take-it-or-leave-it" package especially for developing countries.

This "take-it-or-leave-it" nature also applies to the FTAs which are often based on outraging imbalances of bargaining power between developed and developing countries.[95] For instance, Chile and Singapore were pressurized into the adoption of the provisions of the Digital Millennium Copyright Act[96] in their free trade agreements;[97] Australia and Singapore had to include provisions on the copyright term extension while essential public interest safeguards, such as the fair use privilege in U.S. copyright law, did not find entry into the FTAs.[98] Comparably, the EPAs of the EU cover IP issues and the respect for IP protection in bilateral trade relations.[99] In consequence, a number of IP protection standards which do not necessarily benefit the innovation and economic development of a particular country are adopted by smaller countries with less bargaining power

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91 Belgium, Brazil, France, Italy, the Netherlands, Portugal, Spain, Switzerland, Tunisia, the United Kingdom; cf. contracting parties to the Paris Convention, available at: http://www.wto.org/english/thewto_e/whatis_e/tif_e/org6_e.htm (Status August 15, 2008), *supra* note 18.

92 Belgium, France, Germany, Italy, Spain, Switzerland, Tunisia, the United Kingdom; cf. contracting parties to the Berne Convention, available at: http://www.wipo.int/treaties/en/ShowResults.jsp?lang=en&treaty_id=15 (Status August 15, 2008), *supra* note 17.

93 Member countries of the United Nations, available at: http://www.un.org/members/list.shtml (Status August 15, 2008).

94 *Supra* note 9.

95 See FANDL, in: Virginia Bar Journal, 36-46 (2007) on negotiation imbalances, FERNANDEZ, in: World Bank Policy Research Working Paper No. 1816, 22-23 (1997) on bargaining power in bilateral trade negotiations; see also: YU, in: 38 Loy. L.A. L. Rev. 323, 386 (2004), also s*upra* note 9.

96 Pub. L. No. 105-204, 112 Stat. 2860 (1998) (codified as amended in scattered sections of 17 U.S.C.).

97 YU, in: 38 Loy. L.A. L. Rev. 323, 387 (2004), also s*upra* note 9.

98 EMMA CAINE ET AL., Copyright 'Harmony' Profits U.S. Firms, in: Austl. Fin. Rev., Nov. 20, 71 (2003), cf. Sonny Bono Copyright Term Extension Act of 1998, Pub. L. No. 105-298 (1998), where the copyright protection term of has been extended from 28 years under the 1909 Copyright Act to 70 years after the death of the author, or 95 years from publication.

99 See, for instance, Chapter 2 on "Innovation and Intellectual Property" and in particular Articles 131 and 139-164 on detailed regulations of IP matters and IP enforcement in the Economic Partnership Agreement between the Cariforum States, of the one Part, and the European Community and its Member States, of the other Part, available at: http://trade.ec.europa.eu/doclib/docs/2008/february/tradoc_137971.pdf (Status August 15, 2008).

since they receive tangible benefits in other trade areas in return. It follows that the policy space for IP policy, and thus also the space for the development of protection rationales, of smaller countries with less bargaining power is deliberately reduced through the imposition of FTAs or EPAs, respectively.

China has a particular position in this battle for the integration of IP protection standards into the global free trade arena. Due to its size and expected economic power[100] China does not lend itself to the conclusion of standardized FTAs, BITs or EPAs. Rather it has proven to be the "single most important challenge for EU trade policy"[101] and, comparably, a huge challenge for U.S. policy.[102] Consequently, an analysis of U.S. China trade policy relating to IP protection demonstrates a highly individualized bilateral trade relationship that was first characterized by the initial pressuring of U.S. trade policy towards U.S.-Chinese bilateral trade agreements between 1979 and 2001.[103] This initial phase was then followed by the close monitoring of China's integration into the global trading system from 2001 to 2005.[104] Since the passing of the deadline for the phase-in of China's WTO obligations, the U.S.–China trade policy challenges are now moving "beyond monitoring compliance with a discrete set of obligations to an increasingly complex and dynamic relationship."[105] Especially in the field of IP protection, such a shift of policy seems well founded since previous patterns of U.S. control over Chinese IP policy are not proving successful anymore. Even though the TRIPS Agreement has, to a large extent, reduced Chinese policy space to regulate IP matters, Chinese proactive IP policies and lack of IP enforcement undermine U.S. and Western attempts, such as WTO action against China,[106] to pressurize China into IP protection compliance.

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[100] Since 1978 it has become the world's fourth largest economy and the fourth largest trading nation in the world, cf. DEUTSCHE BOTSCHAFT PEKING, Wirtschaftsdaten kompakt 1 (2004).

[101] See issuance of the European Commission on bilateral trade relations with China, External Trade, at: http://ec.europa.eu/trade/issues/bilateral/countries/china/index_en.htm (Status August 15, 2008).

[102] SHARPE, China's Economic Future: Challenges to U.S. Policy (1997), see also remarks by John. D. Negroponte, Deputy Secretary of State, on July 28, 2008 where he stresses the U.S. policy objective "to integrate China into East Asia and the global community as a responsible, constructive power", available at: http://www.state.gov/s/d/2008/107500.htm (Status August 15, 2008).

[103] See KHERALLAH/BEGHIN, in: American Journal of Agricultural Economics, Vol. 80, No. 1 (1998) on U.S. trade wars and agreements under U.S. trade law section 301; see also: HUSISIAN/ROSEN, in: Int. T.L.R. 1(2), 54-58 (1995) on how the U.S. moved to protect American intellectual property rights in China; and WRASE, in: 19 Dick. J. Int'l L. 245 (2000) for a critical review ("intellectual property rights murder" at 267) of the effectiveness of bilateral U.S. China trade agreements for the protection of IPRs.

[104] TIEFER, in: 34 Cornell Int'l L.J. 55, 61 (2001).

[105] UNITED STATES REPRESENTATIVE, U.S.- China Trade Relations: Entering a New Phase of Greater Accountability and Enforcement, Top-to-Bottom Review, 11 (2006), available at: http://www.ustr.gov/assets/Document_Library/Reports_Publications/2006/asset_upload_file921_8938.pdf (Status August 15, 2008).

[106] See DS632 complaint by the U.S. against China on measures affecting the protection and enforcement of intellectual property rights filed on April 10, 2007, see WTO dispute settlements for more information: http://www.wto.org/english/tratop_e/dispu_e/cases_e/ds362_e.htm (Status August 15, 2008).

The case of China thus demonstrates that – due to China's sheer size but also due to its growing economic and political importance – China is to some extent defying the limitation of policy space in the field of IP protection through integration of this area into international trade policy.

In summary, it follows that the integration of IP protection into international trade policy has both through bilateral and multilateral trade agreements reduced the policy space of the international community to regulate IP protection in line with national goals. This, in turn, necessitates a rethinking to what extent the policy space of sovereign states shall and may be reduced. This rethinking also entails a reconsideration of whether the setting of minimum standards, such as minimum IP protection standards in the TRIPS Agreement, also requires the setting of maximum standards in order to preserve national policy space both in bilateral and multilateral settings.[107] In relation to China, however, it is to be noted that both China's proactive IP policies and recent policy shifts by the international community have demonstrated that China somewhat defies the limitation of its policy space in the field of IP protection. The Chinese example may thus serve as a reminder for the preservation of national policy space despite international free trade regulations.

3. The Internationl IP Protection Regime: Trends and Future

The future of IP protection purposes and rationales is widely open. Unchallengeable, however, is the importance of IPRs in an industrialized and globalized world. It has already been claimed that IPRs are now every bit as important in the global economy as energy sources such as oil.[108] However, even if such a drastic view is not adopted, IPRs are clearly related to a number of important aspects of modern life that are not merely trade-related. They touch on, inter alia, education, health, nutrition, defence, energy, and the environment. It seems as if intellectual property has become so inextricably interlinked with almost all aspects of modern life that trends in and the future of the international IP protection regime deserve detailed attention. With special regard to China and its requirements for IP protection, the following analysis will, therefore, single out some selected discussions on IP protection that are based on the recognition of the "one-size-fits-all" problem[109]: first, the discussion on country-specific IPRs, and secondly, the discussion on industry-specific IPRs.

A number of trends have influenced the most recent discussions in IP law. Peter Yu has singled out five disharmonizing trends in the international IP regime: the inclusion of reciprocity provisions in national laws, the demands for diversification, the use of bilateral and plurilateral agreements, the

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[107] See DINWOODIE/DREYFUSS, Patenting Science: Protecting the Domain of Accessible Knowledge, 191-221, in GUIBAULT/HUGENHOLTZ, The Future of the Public Domain: Identifying the Commons in Information Law (2006) advocating the term "substantive maxima" to preserve an international public domain of knowledge; see also HELFER, in: 5 Minn. Intell. Prop. Rev. 47, 58 (2003), and YU, in: 10 Marq. Intell. Prop. L. Rev. 369, 401 (2006).

[108] PERLEMAN in: Monthly Review 1, 6 (2003).

[109] *Supra* note 35.

creation of non-national systems as a response to Internet disputes, and the reliance by alternative measures by right holders.[110] Furthermore, Annette Kur has identified some complementary trends such as the further legal harmonization of IP in the EU, the erosion of the territoriality principle, and a number of legal issues of a horizontal character relating, for instance, to the IP and competition interface.[111] All of these trends in conjunction with the progressive digitization and technization of civilization impact on the future development of the IP law regime thereby posing enormous challenges to future law makers. However, these challenges entail not only the gradual adaptation of the existing IP law regime to external conditions, but also a fundamental rethinking of the IP protection system in terms of structure, content, and application.[112] In this vein, discussions on country-specific and industry-specific IPRs take the recognition of certain trends in IP protection further by speculating about the restructuring and diversification of IP law.

The origin of the discussion on country-specific IPRs lies in the recognition of the boundaries of the benefits of harmonization, such as the facilitation of economies of scale in administration and governance,[113] such as the internalization of positive externalities associated with the creative process,[114] such as the safeguarding against destructive protectionism,[115] and such as the reduction of transaction costs in international trade.[116] The recognition of the boundaries of the benefits of harmonization goes hand in hand with the recognition of the diversity of countries, their individual needs, and the benefits of allowing for the development of differing legal traditions and interjurisdictional competition.[117] The benefits of diversification are recognized by the TRIPS Agreement that – to some extent – allows for the tailoring of protection to its own needs and interests.[118] Nevertheless, the aftermath of the TRIPS Agreement was marked by calls for even

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[110] YU, *supra* note 9.

[111] KUR in: IIC Vol. 1, 1, 2-17 (2004).

[112] See *supra* note 3.

[113] Economies of scale defined as situation in which average cost decreases as output goes up, cf. BESANKO/BRAEUTIGAM, Microeconomics 288 (2002); see also: DUFFY, in: 17 Berkeley Tech. L.J. 685, 700 (2002).

[114] DUFFY, *supra* note 113, at 693.

[115] *See* SYKES, in: The University of Chicago Law Review, Vol. 66, No. 1, 1, 6 (1999) for an explanation why regulatory protectionism is economically inefficient at 6 and for an introduction to the welfare economics of regulatory protectionism at 8-12; *see* also DUFFY, *supra* note 113, at 702-703.

[116] Based on the assumption that protectionism reduces overall social welfare, see: MCGINNIS/MOVSESIAN, in: 114 Harv. L. Rev. 511, 524-26 (2000) reviewing the evidence that protectionism decreases social welfare, and YU, *supra* note 9, at 6.

[117] See LOEW, in: 9 Vand. J. Ent. & Tech. L. 171 (2006) who is suggesting a three-pronged solution for the reform of IP law that respects the vast knowledge gap, institutional capacity, and unique industries and values in developing countries all over the world.

[118] For instance, the TRIPs Agreement leaves policy space to its member states of whether to adopt a "first to file" or "first to invent" system in patent law; Article 6 of the TRIPs Agreement also allows for individual treatment of the question of exhaustion of intellectual property rights, *supra* note 5. In addition to this individual diversification, the

more diversification that were triggered by concerns about public health in developing and less developed countries.[119] These concerns were grounded in the fact that the negotiations on IPRs in the Uruguay Round (1986-1993) leading up to the TRIPS Agreement were so intertwined with questions of lower tariffs on textiles and agriculture as well as the benefit of a mandatory settlement process that the optimal level of IP protection for each country was not the issue.[120] In recent years, these concerns were further spurred by a growing understanding by developing countries of the importance of IP protection in today's knowledge-based economy[121] and by the advocacy undertaken by some heavyweights, such as China, Brazil, and India.[122] As a consequence, a number of countries have demanded diversification of IPRs that takes into consideration the very specific interest of countries in sectors such as agriculture, health, environment, education, culture,[123] and democracy.[124] Though China might not share many of the characteristics of less developed countries, it certainly finds itself in the stage of a pirate country, where copying is used as strategy for leapfrogging technological and industrial developments.[125] However, it is this leapfrogging strategy that China is deprived of through the harmonized international IP law system. It follows that discussions on the diversification of IP protection will not stop until it has convincingly proven that IP protection contributes to industrial progress and economic prosperity in all countries.

The origin of the discussion of industry-specific IPRs lies also in the recognition of the boundaries of the benefits of harmonization for various industry branches. With IP having emerged as the leading factor of production, it has become widely recognized that the relevance of copyright,

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TRIPs Agreement also allows for group diversification, cf. Article 65 of the TRIPs Agreement on transitional periods for developing and transition countries, *supra* note 5, see also: YU, *supra* note 9, at 8.

[119] DRAHOS, in: Annals of the American Academy of Political and Social Science, Vol. 592, Hope, Power and Governance, 18, 24-30 (2004); LERNER, in: 34 Am. J.L. & Med. 257 (2008); SELL, in: 77 Temp. L. Rev. 363 (2004); note also the Declaration on the TRIPs Agreement and Public Health adopted in the Fourth WTO Ministerial Conference in Doha in November 2001, WT/MIN(01)DEC/2, 41 I.L.M. 755 (2002).

[120] THELEN, in: 24. Temp. J. Sci. Tech. & Envtl. L. 519 (2005), REICHMAN, in: 32 Case W. Res. J. Int'l L. 441 (2000), ABBOTT, in: 18 Berkeley J. Int'l L. 165 (2000).

[121] See LANOSZKA, in: Revue internationale de science politique, Vol. 24, No. 2, 181, 193 (2003); THUROW, in: Annals of the American Academy of Political and Social Science, Vol. 570, Dimensions of Globalization, pp19-31, 2000.

[122] YU, *supra* note 9, at 10-11.

[123] See CLT-2005/Convention Diversite-Cult Rev., UNESCO Convention on the Protection and Promotion of the Diversity of Cultural Expressions 2005, adopted in Paris, October 20, 2005: Article 20 of the Convention deals with the relationship to other treaties stipulating mutual supportiveness between the Convention and the TRIPS Agreement while requiring the taking into account the relevant provisions of the Convention when interpreting and applying the other treaties, such as the TRIPS Agreement.

[124] BIRD, in: 43 Am. Bus. L.J. 317 (2006) for an account of the varying policy interests in protecting IPRs in Brazil, Russia, India and China, the so-called BRIC economies; see also Yu, in: 34 Am. J.L. & Med. 345 (2008) for an account of the role that BRICS coalitions or partial BRICS alliances can play in the international IP regime in Part IV.

[125] YU, *supra* note 9, at 13-14.

trademark, or patent protection depends on the kind of industry branch and its products.[126] Industry branches have, thus, increasingly been clustered into a "copyright sector," a "patent sector," and a "trademark sector," depending on the kind of protection that appertains to their respective products.[127] But even within these sectors protection requirements are widely different. Thus, it has been argued by Bruce Abramson that four analytic stages need be gone through for the investigation of whether or not an IP regime will promote innovation in a given industry: first, the characterization of the industry, second, the definition of the protective regime ranging from length, breadth to depth of the protection regime, third, the calculation of the potential return on private investment, and fourth, a consideration of societal costs and benefits.[128] It is submitted that the value of this approach lies in the highlighting of the differences among industries as well as in the determination of whether or not a given IP law regime serves societal welfare.[129] With regard to China, this approach could have guaranteed a much better adjustment of the IP law regime to the readiness of Chinese IP industries for the international IP protection regime.[130]

In summary, there are a number of trends in relation to the future development of IP law. Most prominently, questions of diversification have been stressed that trigger debates on a country- or industry-specific restructuring of the international IP law regime. Such debates are of great value for countries such as China that are undergoing rapid economic, technological, and societal developments that demand very specific protection regimes for maximum innovation and economic welfare. In essence, these debates demonstrate the need for substantial policy space for individual countries that allow for intelligent and informed policy making in the area of IP protection.

III. The Political Economy of IP Protection

Throughout the history of IP protection, IP policy has been used and misused as economic policy tool for innovation and development. This is due to the fact that the different types of IP protection mechanisms demonstrate some underlying economic mechanisms that impact upon innovation and economic and societal welfare. Thus, given the role and relevance of IP protection and given its economic impact, it is not surprising that IP protection has increasingly become a bargaining chip in international trade. The following section therefore discusses the economics of IP protection to set

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[126] *See*, for instance, the following contributions for industry-specific analyses: ABRAMSON, in: 8 B.U. J. Sci. & Tech. L. 75, 109-110 (2002) for the software industry, RAUSTIALA/SPRIGMAN, in: 92 Va. L. Rev. 1687 (2006) for the fashion industry.

[127] CHARLES, The Importance of Intellectual Property Industries in the Canadian Economy 1, 5, 22, 35 (2007).

[128] ABRAMSON, supra note 126, at 109-110.

[129] See FRISCHMANN, in: 107 Colum. L. Rev. 257 (2007) for a demonstration that internalization through property rights can lead to a net loss in social welfare.

[130] LI, in: 20 UCLA Pac. Basin L.J. 77 (2002) (analysis of the preparedness of China's IP industries for WTO accession).

the ground for an analysis of the politics of IP protection, and – specifically in relation to China – the interrelationship between IP protection and economic development.

1. The Economics of IP Protection

Though history has provided a variety of justifications and rationales for the existence of IPRs,[131] economic theory has come to dominate discussions on the rationales for IP law in recent years. Rights to rewards were thus regarded as reflecting the pronounced social need for technology and progress, and the need to secure future wealth.[132] Alongside the growing need for IP protection, law and economics together with utilitarian approaches to IP law began to offer strong rationales for IP protection.[133] Economic theories began to emerge in relation to patent law,[134] copyright law,[135] and trademark law.[136] Especially from the 1970s onwards, economic analyses were used not only to appraise the effects of legal rules on the economic system, but also to attain a more complete understanding of the legal system.[137] Today, the theory of law and economics is based on a variety of methodological, normative, and philosophical underpinnings. Based on the common assumption of the majority of law-and-economics approaches that human beings respond rationally to changes in the legal system as exogenous constraints because they are "rational maximizers of their utility, wealth or well-being,"[138] there are now three distinct schools of thought in law and economics. All of these schools have attempted, and still do so, to assess the economic impact of IP protection as well as the optimal scope of protection, such as the length of copyright law[139] and patent law,[140] through theoretical modelling and empirical analysis. Due to the complexity of the subject-matter concerned, these research efforts are still ongoing. The following section will, thus, introduce the current state of economic analysis of patent and copyright law.

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[131] *Supra* A.II.1.

[132] MAY/SELL, *supra* note 8, at 12.

[133] Cf. BENTHAM, An Introduction to the Principles of Morals and Legislation (1996).

[134] Cf. BAINBRIDGE, *supra* note 7, at 324; MERTHA, *supra* note 4, at 17; and MASKUS in: 32 Case W. Res. J. Int`l L. 471, 473 (2000).

[135] Cf. SCOTCHMER, Innovation and Incentives 98 (2004).

[136] BAINBRIDGE, *supra* note 7, at 524.

[137] PARISI, in: European Journal of Law and Economics, Vol. 18, No. 3, 1, 3 (2004).

[138] Ibid, at 7.

[139] See POLLOCK, in: Cambridge University Working Paper (2007) for an attempt to find the optimal copyright term.

[140] See LEMLY, in: AIPLA Quaterly Journal, Vol. 22, No. 3&4, 369-402 (1994) for an empirical analysis of the twenty-year term in patent law.

In patent law as in copyright law, one of the most prominent motivations for the assignment of property rights to intellectual property is constituted by perceived market failures.[141] The inability of markets to deal with intellectual property as non-excludable and non-rivalrous goods is one of the most prominent rationales for IP protection so as to enable the just distribution of benefit and wealth in the context of intellectual property.[142] This inability of markets is countered by the grant of IPRs as monopolies for a limited period of time. As monopolies, IPRs change the nature of competition by removing protected intellectual property from the threat of competition, thereby allowing for elevated profits. This is of particular importance since IP industries are characterized by low variable costs and high fixed costs.[143] Intellectual property is thus particularly vulnerable to reproduction, since reproduction costs are often trivial. In summary, it follows that the necessity to undermine competition policies by IP law due to market inabilities serves as one of the earliest and lasting economic explanation for the relevance of IP protection.

The economic analysis of patent law constitutes the most advanced analysis of all intellectual property rights. Based on the perception of market failure, the concept of patent law is closely interlinked with the creation of incentives.[144] As instruments of market regulation they significantly alter the competitive configuration of markets by offering the incentive and prospect of temporary supraprofits.[145] Even though a rising amount of literature criticizes this focus on short-run profit-maximization goals of firms in view of the more desirable welfare maximization goals,[146] the majority of commentators rely on the assumption that the patent law regime enhances the competitiveness of markets through the grant of legal monopolies.[147] At the same time, however, the grant of legal monopolies deprives society of the benefits from the use of the idea thereby causing welfare losses.[148] Nevertheless, the welfare loss through the grant of patents is generally

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[141] Market failures meaning that sellers cease to become passive price takers and are able to raise prices above what they would be in a competitive market, i.e. imperfect markets, cf. HARRISON, Law and Economics 23 (2007)

[142] The inability of markets to deal with intellectual property stems from the public good characteristics of intellectual property, i.e. non-excludability and non-rivalry, see PIGOU, The Economics of Welfare (1924) who first considered the structure and nature of the public good problem.

[143] BESANKO/BRAEUTIGAM, *supra* note 113, at 287: fixed costs do not vary depending on production or sales levels; marginal costs are subject to change in relation to the activity of a business.

[144] RAMELLO, in: BACKHAUS (ED.) The Elgar Companion to Law and Economics, 2nd ed., 130-134 (2005).

[145] BESEN/RASKIND, in: The Journal of Economic Perspectives, Vol. 5, No. 1, 5 (1991); RAMELLO, in: BACKHAUS (ED.) *supra* note 144, at 135.

[146] DASGUPTA/DAVID, in: Research Policy, 23, 487-532 (1994); ARORA/GAMBARDELLA, in: Revue d'Èconomie Industrielle, 79, 63-75 (1997); SCOTCHMER, in: NEWMAN (ED.), The New Palgrave Dictionary of Economics and the Law, vol. 2, 273-277 (1998).

[147] RAMELLO, in: BACKHAUS (ED.) *supra* note 144, at 135; MICELI, *supra* note 13, at 201.

[148] See DEARDORFF, in: Economica, New Series, Vol. 59, No. 233, 50 (1992) for the argument that the very poorest countries should be exempted from any new agreement that is made to extend patent protection based on welfare analyses.

justified by the fact that a competitive outcome would result in no invention at all, thus, zero consumer surplus, since the competitive prices would not cover the initial, now sunk, costs of creating an idea or invention.[149] In order to minimize these undesirable welfare losses the law limits the grant of patent law through the imposition of time limits and other restrictions such as scope.[150] As yet, the economic analysis of patent law, however, has not been able to provide definite answers for the optimal design of patent law that accounts not only for the normative questions of IP protection but also for innovation-based economic development processes such as explained by Joseph Schumpeter.[151]

In copyright law, the underlying question for economic analysis is the appropriate balance between access to information and incentives to innovate.[152] Consequently, William Landes and Richard Posner postulated the following goal for copyright law: to "maximize the benefits from creating additional works minus both the losses from limiting access and the costs of administering copyright protection."[153] At the same time, however, it was stressed by Stanley Besen and Leo Raskind that IP protection also serves the objective of the creation of incentives that "maximize the difference between the value of intellectual property that is created and used and the social costs of administering the system".[154] It follows that – comparably to the economic analysis of patent law – the economic analysis of copyright law proves a complex undertaking which pursues the goal of determining the necessary level of copyright protection to ensure appropriate returns from innovation. In particular, recent empirical and methodological studies from innovation economics have demonstrated that the appropriability problem is much more sophisticated than neoclassical economics had suggested.[155] There is, however, agreement on the fact that copyright law subsumes various subject matters of protection that deserve separate treatment in terms of an economic analysis.[156] In a similar vein, there is also agreement on the need for further research on the interrelationship between innovation and IP protection.

In summary, it follows that the economic analysis of IP law has found some common denominators both on the relevance of IP protection for innovation and economic development and on the

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[149] MICELI, *supra* note 13, at 200.

[150] MCFETRIDGE/RAFIQUZZAMAN, in: Research in Law & Economics, 8, 91-120 (1986).

[151] SCHUMPETER, Theorie der wirtschaftlichen Entwicklung 95 (reprinted 1964).

[152] See LUNNEY, in: 49 Vand. L. Rev. 483 (1996) for an analysis of the incentive-access paradigm.

[153] LANDES/POSNER, in: POSNER (ED.), *supra* note 13, at 102 (2001).

[154] BESEN/RASKIND, *supra* note 145, at 5.

[155] MANSFIELD/SCHWARTZ/WAGNER, in: The Economic Journal, Vol. 91, No. 364, 907 (1981) on appropriability; COHEN/NELSON/WALSH, Working Paper 75652, (2000) on appropriability; note, however, that most studies have focused on patent law, since patent-related measures are more readily available.

[156] BESEN/RASKIND, *supra* note 145, at 17 on computer operating systems and interface standards. BAKELS/REINIER/HUGENHOLTZ, in: European Parliament, DG for Research, Working Paper JURI 107 (2002); BESSEN/JAMES/MASKIN, in: Working Paper (2004).

interrelationship of IP protection and economic and societal welfare. This finding explains the continued use and misuse of IP protection in national and international trade policy which will further be elaborated in the next chapter of this paper.[157] However, research has also exposed open issues relating to rights-specific, industry-specific, and country-specific economic mechanisms that require further analysis. Consequently, the last section of this paper will be devoted to the analysis of the interrelationship of IP protection and economic development in China. After all, though economic theory describes a number of mechanisms by which IPRs affect the creation of innovation, it still owes the world an answer on whether the global introduction of TRIPS standards will improve or worsen welfare or growth prospects in specific regions.

2. *The Politics of IP Protection*

As a result of the above described economic importance of IP protection and its role and relevance in the present-day knowledge-based economy, it is not surprising that a battle of interests has evolved around IP policy, in which IP protection is not only used as national economic policy tool but also as bargaining chip in international trade. This battle of interests on an international scale is the logical continuation of the use of IP policy as national economic policy tool since the very first inception of IP protection. The use of IP policy as national economic policy tool has, thus, eventually translated into the delicate politics of IP protection on an international scale.

A number of lessons can be learnt from American and European history regarding the politics of IP protection and the role of governmental IP policy-making. Taking the U.S. as an example, it is economic and utilitarian philosophy that is at the heart of modern U.S. IP policy.[158] Historical developments in U.S. IP law demonstrate this utilitarian, if not power-political, approach to IP protection. Like most industrialized countries, the U.S. has changed its IP regime at different stages of its economic development. Between 1790 and 1836, for instance, the U.S. restricted the issue of patents to its own citizens and residents, motivated by its status as net importer of technology.[159] Likewise, the history of the Paris Convention[160] reflects the accommodation of protectionist policies by the most advanced countries at that time, and so does the Berne Convention.[161] Economic interests still dominate the somewhat pragmatic U.S. approach to IP law. The greatly extended

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[157] See *infra* A.III.2.

[158] FISHER, Theories of Intellectual Property 168, in: MUNZER (ED.), New Essays in the Legal and Political Theory of Property (2001); See also POSNER, *supra* note 13 (1979) for a definition of utilitarian approaches and economic approaches to law; see also LEMLEY, in: 83 Tex. L. Rev. 1031, 1039 (2006); see also *supra* note 12..

[159] COMMISSION ON IPRS, *supra* note 88, at 18.

[160] *Supra* note 18.

[161] DUTFIELD/SUTHERSANEN, in: Introductory Paper for the ESRC Seminar Series, 21 (2004), *supra* note 17.

terms of protection under U.S. copyright law[162] bear little relation to the original intent to provide incentives for the artists, creators, or inventors.[163] Furthermore, it has been argued by Daren Acemoglu and James Robinson in the framework of the "political-loser hypothesis"[164]that those who have political power and fear losing it have incentives to block innovation and technology diffusion in upcoming competitor countries such as China. This theory well explains the mien of the U.S. in IP policy on the international stage in recent years.

On an international level, it is increasingly recognized by academic writers that the TRIPS Agreement can be regarded as an emanation and exercise of state power in the contemporary global capitalist system. The supranational and hegemonic institution WTO is thereby regarded as instrument for this exercise of state power.[165] Yet, even before the TRIPS Agreement did international negotiations on issues of IP protection reflect the battle of national interests on an international stage. In the international negotiations to revise the Paris Convention[166], for instance, it was in particular state interests of the U.S. and developed countries, on the one hand, and India plus the Andean pact countries, on the other hand, that surfaced.[167] Whilst the U.S. and developed countries adhered to the standards set by the Paris Convention[168], certain activist countries in Latin America and India bemoaned these standards as preventing them from adopting development provisions in their national laws. This tension of interests has aptly been termed the "North-South politics of intellectual property."[169] This tension of interests is still evident in the international IP law regime today.

In the aftermath of the TRIPS Agreement, a number of developing countries complained about the effect of the TRIPS Agreement on the availability of life-saving drugs in their territories. The Declaration on the TRIPS Agreement and Public Health (Doha Declaration)[170] is the direct outcome of these health concerns of developing countries recognizing the need for implementation in a

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[162] 70 years after the death of the author, or 95 years from publication, under the Sonny Bono Copyright Term Extension Act of 1998.

[163] SEGAL, in: 7 San Diego Int'l L.J. 523, 545 (2006).

[164] ACEMOGLU/ROBINSON in: The American Economic Review 126, 126 (2000).

[165] RICHARDS, Intellectual Property Rights and Global Capitalism 93 (2004).

[166] *Supra* note 18.

[167] See SELL, Power and Ideas 107-140 (1998) for a detailed account of the negotiations to revise the Paris Convention.

[168] *Supra* note 18.

[169] See subtitle of SELL, *supra* note 167; note also the first attempt of the international community to address the "North-South Divide" in IP policy in Stockholm 1967 in relation to copyright rules and their effect on mass education in developing countries, see DRAHOS, Developing Countries and International Intellectual Property Standard-setting, in: Study Paper 8, 9 (2002); effects of this attempt can be seen in the integration of the Appendix to the Berne Convention, "Special Provisions Regarding Developing Countries", Article I-VI, in Paris 1971, *supra* note 17.

[170] Declaration on the TRIPS Agreement and Public Health, adopted in Doha on November 14, 2001.

manner supportive of public health and the need for promoting both access to existing and R&D into new medicines.[171] The Doha Declaration reflects not only the growing importance of IPRs in developing countries but even more so the growing awareness of the importance of IP policy in developing countries.[172] This awareness goes far beyond the avoidance of complaints under the WTO's dispute settlement system and is aimed at maximizing the benefits of IP protection in developing countries. Therefore, the international stage is experiencing an ever-growing number of developing countries that wish to get involved in the politics of IP protection.

In summary, it follows that battles of interests relating to IP protection have marked national and international IP policy since the very first inception of the IP law regime. It was, thus, only a matter of time until developing countries would begin to focus on their own national development issues that are more relevant to the development of the domestic market rather than the international trade environment. From an international perspective, China cannot help but learn from these examples that IP policy is a powerful economic tool that can be employed to further national interests and societal welfare.

3. IP and Economic Development in China

In view of the economic rationales for IP protection and in view of the historic and present use and misuse of IP protection as policy tool for innovation and development, the economic impact of IP protection on the Chinese market deserves closer analysis. The question of the economic impact of IP protection on the Chinese market is closely related to discussions about the impact of patent and copyright protection on economic development in developing countries which have surged in the aftermath of the TRIPS Agreement.[173] This surge of discussions over the past 20 years has led to a common consensus that IP protection – and in particular patent protection – contributes to positive economic development.[174] However, a number of critical voices have emerged over the last couple of years demonstrating that the state of research on the interrelationship of IP protection and economic development remains unsatisfactory.[175]

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[171] GERVAIS, *supra* note 8, at 250.

[172] PRIMO BRAGA/FINK, in: Journal of International Economic Law, 537-553 (1998), for an account of the importance of IP and IP policies for developing countries.

[173] As stated above, this analysis disregards trademarks since trademark-related findings mostly stipulate that the law is trying to promote economic efficiency, rather than innovation or economic development, *supra* note 20.

[174] IIPA, Initial Survey of the Contribution of the Copyright Industries to Economic Development 1 (2005).

[175] See MASKUS, Intellectual Property Rights in the Global Economy (2000) for an extensive overview over existing studies in this area.

A positive account of IP protection, however, is most noticeably rendered by Keith Maskus who has argued that strengthened IP protection leads to increasing economic growth.[176] This finding has been confirmed by studies by David Gould and William Gruben that have demonstrated a positive relationship between strong IP protection regimes and economic growth in open economies.[177] Comparably, a recent study by Beata Smarzynska Javorcik concludes that weak IP protection acts as a deterrent for investors not only in sensitive sectors but more generally investors in all sectors.[178] These findings were corroborated by Carlos Prima Brago, Carsten Fink, and Claudia Paz Sepulveda who support the argument that the creation of frameworks for enhanced IP protection will benefit developing countries.[179] These findings were further supported by Edwin Mansfield whose findings indicated that both the chemical and the drug industries are extensively reliant on the existence of the patent system for innovation.[180] In addition to patent law focused studies, there are also a number of studies relating exclusively to copyright that come to the conclusion that copyright law – or more specifically copyright owner control – promotes competition and development.[181] It follows that there exists a general consensus of the academic literature that IP protection is positively correlated with economic growth.

However, a number of critical voices have emerged in recent years that have questioned the causal relationship between IP protection and inventive activity or economic development.[182] First of all, Carsten Fink, Keith Maskus, and Carlos Prima Braga have demonstrated that the above described positive relationship only applies when countries dispose of both a strong imitation capacity and a

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[176] See in particular MASKUS, *supra* note 175; see also: MASKUS, Strengthening Intellectual Property Rights in Lebanon, in: FINK/MASKUS (EDS.), Intellectual Property and Development: Lessons from Recent Economic Research 283 (2005); MASKUS, The Role of Intellectual Property Rights in Encouraging Foreign Direct Investment and Technology Transfer, in: FINK/MASKUS (EDS.), Intellecual Property and Development: Lessons from Recent Economic Research 54 (2005); MASKUS, in: Policy Discussion Paper No. 0022 (2000); MASKUS, *supra* note 134, at 471; MASKUS, The Global Effects of Intellectual Property Rights: Measuring What Cannot be Seen, in: FINK/MASKUS (EDS.), Intellecual Property and Development: Lessons from Recent Economic Research 54 (2005); MASKUS, Intellectual Property Rights and Economic Development: Patents, Growth, and Growing Pain, in: FINK/MASKUS (EDS.), Intellecual Property and Development: Lessons from Recent Economic Research 143 (2005).

[177] GOULD/GRUBEN, in: Journal of Dev. Econ., Vo. 48, 323-3250 (1996) (estimation of the relationship between patent regimes and growth among open economies).

[178] SMARZYNSKA JAVORCIK, The Composition of Foreign Direct Investment and Protection of Intellectual Property Rights: Evidence from Transition Economies, in: FINK/MASKUS (EDS.), *supra* note 176, at 159; see also: SMARZYNSKA JAVORCIK/SPATAREANU, in: Discussion Paper No. 4839, (2005).

[179] BRAGA/FINK/SEPULVEDA, *supra* note 19.

[180] MANSFIELD, Intellectual Property Rights, Technological Change, and Economic Growth, in: WALKER/BLOOMFIELD (Eds.) Growth, Intellectual Property Rights and Capital Formation in the next Decade (1988).

[181] BARFIELD/GROOMBRIDGE, in: 1 Journal of World Intellectual Property 904 (1998).

[182] See MASKUS/REICHMAN, in: 7 J. Int'l Econ. L. 279 (2004); MUSUNGU/DUTFIELD, in: TRIPS Issues Paper 3 (2003); BOYLE, *supra* note 9.

sufficiently large market to enable foreign firms to capture economies of scale or scope.[183] On a more general level, Pierre Desrochers has questioned the use of patent data as a proxy for inventive activity due to a number of identification and intrinsic variability problems in patent statistics.[184] More specifically, critical voices have stressed the dependency of IP protection and their impact on economic development on their institutional context.[185] Furthermore, it has been argued that harmonization of IPRs has led to the introduction of standards and rules that might be ill-suited to the particular needs of developing countries.[186] Some empirical studies have further failed to find the expected relationship between foreign investment and IP protection.[187] And finally, it is noticeable that most studies in relation to developing countries have been undertaken in relation to the patent regime rather than to copyright protection thereby exposing a lack of copyright-related analysis.

In relation to China, a number of studies have contributed to a preliminary assessment of the impact of IP protection on the Chinese market. Most prominently, Keith Maskus, Sean Dougherty, Andrew Mertha[188] and Pamela Samuelson are known for their assessment of IP protection and economic development in China.[189] More generally, Joseph Straus concluded that the development of its intellectual property rights protection played a "decisive role"[190] in China's development. A more detailed study by Keith Maskus, Sean Dougherty, and Andrew Mertha also supports a positive relationship between IPRs and development whilst recognizing three problems in relation to the Chinese market: first, the limitation of incentives to develop products and brand names due to inadequate enforcement; second, the structural difficulties for commercializing the results of inventions; third, the insufficiency of stronger IPRs alone to establish effective conditions for further technological and economic development.[191] Recognizing the role of other factors affecting information economy growth, Pamela Samuelson notes that "intellectual property law can help fulfill China's further aspirations for growth of its economy"[192] thereby confirming the belief in a positive correlation between the introduction of IPRs and economic growth.

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[183] See MASKUS, *supra* note 175; PRIMO BRAGA/FINK, in: 9 Duke J. Comp & Int'l L. 163, 164 (1998); HEALD, in: 88 Minn. L.R. 249, 255 (2003).

[184] See DESROCHERS, in: The Quarterly Journal of Austrian Economics, Vol. 1, No. 4., 51-74 (1998).

[185] KHAN, in: Study Paper 1a, 1-3 (2005).

[186] LIEBIG, Geistige Eigentumsrechte 22 (2001); KHAN, *supra* note 185, at 4.

[187] KHAN, *supra* note 185, at 9.

[188] MASKUS/DOUGHERTY/MERTHA, Intellectual Property and Economic Development in China in: FINK/MASKUS (EDS.), *supra* note 176, at 295-332.

[189] SAMUELSON, in: International Symposium on the Protection of Intellectual Property for the 21st Cenutry (1998).

[190] STRAUS, *supra* note 37, at 7.

[191] MASKUS/DOUGHERTY/MERTHA, Intellectual Property and Economic Development in China in: FINK/MASKUS (EDS.), *supra* note 176, at 325-326.

[192] SAMUELSON, *supra* note 189, at 1-2.

Yet, it shall not go unnoticed that a number of critical voices have questioned the contribution of IPRs to China's economic growth. Some commentators have regarded China as the "proverbial exception", as Peter Yu has termed it, to the causal relationship between the strength of IP protection and economic development.[193] However, Peter Yu has explicitly rejected this position by stressing the ambiguity of the relationship between IP protection and economic development and by naming it "the China puzzle".[194] In essence, he argues for a more complex understanding of this relationship that includes socio-economic factors. Taking this approach he sees China following the economic development path of countries such as Japan, Singapore, Hong Kong, South Korea, and Taiwan which at some point have all reached a crossover point at which IP protection will vastly improve when the overall benefits of such protection will begin to outweigh its overall costs.[195] Despite these concerns about IP protection in China, it is unquestionable that the strength of IPRs affects decisions by multinational firms on where to invest, how much to invest, in what forms, and whether to transfer advanced technologies.[196] It is, thus, not surprising that this unquestionable result is readily taken into account in Chinese IP policies.

In summary, the impact of IPRs on societal and economic welfare is difficult to measure as has been pointed out by Frank Machlup who has repeatedly stressed the limitations of the evaluation of the IP law system: "If we did not have a patent system, it would be irresponsible, on the basis of our present knowledge of its economic consequences, to recommend instituting one. But since we have had a patent system for a long time, it would be irresponsible, on the basis of our present knowledge, to recommend abolishing it."[197] Following this tendency, recent economic research on the interrelationship between IP protection and economic development has reached a common consensus that – with the major caveats explained above – IP protection is a necessary condition, albeit not the only condition, for economic growth generally and, more specifically, in China. This consensus has not only reached the Chinese government but has come to constitute the basic credo that constitutes the basis of Chinese IP policy.

IV. The Chinese Approach to IP Policy in the Light of International IP Law Developments

[193] YU, Intellectual Property and Development: The Regional Linkages, in: GERVAIS (EDS.), Intellectual Property; Trade and Development: Strategies to Optimize Economic Development in a TRIPS Plus Era 220 (2007).

[194] Ibid, at 175.

[195] Ibid, at 202.

[196] Cf. MASKUS/DOUGHERTY, Intellectual Property Rights and Economic Development in China 7-10 (1998) for a detailed discussion of how IPRs stimulate economic development.

[197] MACHLUP, An Economic Review of the Patent System 80 (1958).

IP law and policy in China does not have as long a history as in other Western countries.[198] Rather it is a very recent occurrence that is still in flux. Nevertheless, this very recent occurrence demonstrates patterns of IP policy development that can be divided into three phases: first, incipient Chinese IP policy in post-Mao China, second, WTO-driven IP policy in the late 1990s, and third, Chinese pro-innovation IP policy in the 21st century. The following section is devoted to an analysis of these three phases of policy development. It is further intended to demonstrate that recent policy shifts in China are the first omens of the Chinese emergence as potent force in reshaping the global intellectual property landscape according to their own political, economic, and social interests.

1. Phase I: Incipient Chinese IP Policy in post-Mao China

IP policy development in the incipient Chinese IP policy period in post-Mao China was triggered primarily by external pressures – especially bilateral pressures – upon the Chinese government to provide for IP protection rather than the recognition of the Chinese government to provide for a workable IPR system. However, before embarking on an overview of the first development phase of Chinese IP policy, the history of IP law in China warrants brief attention.

Copyrights, patents, and trademarks had not arrived in China until the late 1800s. Neither was there any sustained indigenous counterpart to IP law in imperial China,[199] nor did any of the American and European attempts to introduce Western-style IP law into China prove successful.[200] Even though the fall of the Qing Empire in 1911 marked the beginning of rudimentary ideas and laws about copyrights, patents and trademarks, those ideas and laws did not manage to take root in Republican China.[201] It is only the most recent attempts of the Chinese government to develop socialist trademark patent and copyright laws with "Chinese characteristics"[202] in the 1970s and 1980s that constitute the basis of today's IP law regime in China.[203] Eventually, it was the Great Proletarian Cultural Revolution, which Mao launched in May 1966 and which ended in October

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[198] Whilst, for instance, the first record of a copyright case dates back to the year AD 567 (cf. BAINBRIDGE, *supra* note 7, at 29), the first ideas of copyright protection and legislation reached China in 1910 on the eve of the Imperial order (cf. GANEA/PATTLOCH/HEATH (EDS.), Intellectual Property Law in China 205 (2005).

[199] Cf. ALFORD, *supra* note 66, at 9-29 (1995) for a discussion of why there was no indigenous counterpart to intellectual property in imperial China.

[200] Cf. ALFORD, *supra* note 66, at 30-55 (1995) for a discussion of the turn-of-the century introduction of Western notions of intellectual property into China.

[201] FENG, Intellectual Property in China 3 (2003).

[202] ALFORD, *supra* note 66, at 92 (1995).

[203] GUO, *supra* note 74, at 950.

1976 with the arrest of his widow that marks the turning point for Chinese IP law and the inception of Chinese post-Maoist law reforms.[204]

The inception of Chinese post-Maoist reform constituted an ambitious modernization programme, under the policy of "reform and open up" (改革开放) that overturned many of the Maoist practices.[205] This modernization programme also included the establishment of a comprehensive IP law system thereby marking the above-defined first IP law reform phase of incipient Chinese IP policy in post-Mao China. Thus, since 1979, the creation of an effective body of IP law has become a crucial component in Chinese economic reform.

The creation of an effective body of IP law entailed, first of all, the joining of China of all major international IPR conventions, In 1980 China joined WIPO[206]; thereafter, in 1984, China joined the Paris Convention,[207] the Madrid Protocol[208] and the Washington Treaty[209] in 1994, the Berne Convention[210] and the Universal Copyright Convention[211] in 1992, the Geneva Phonograms Convention[212] in 1993, and the Patent Cooperation Treaty (PCT)[213] in 1994.[214] By now, China is also a member of a number of other international agreements relating to patents, trademarks, and copyrights as well as other kinds of IPRs.[215]

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[204] WANG/ZHANG, *supra* note 44, at 12.

[205] KIM in: International Organization, Vol. 35, No. 3, 433, 433-436 (1981), KUEH in: The China Quarterly, No. 119, Special Issue: The People's Republic of China after 40 Years, 420, 420-442-447 (1989).

[206] See *supra* note 15.

[207] *Sup*ra note 18.

[208] The Protocol relating to the Madrid Agreement concerning the International Registration of Marks (Madrid Protocol), adopted at Madrid on June 27, 1989 and amended on October 3, 2006, 1161 U.N.T.S. 3.

[209] Treaty on Intellectual Property in Respect of Integrated Circuits (Washington Treaty), done at Washington, D.C., on May 5, 1989, 28 I.L.M. 1477 (1989).

[210] *Supra* note 17.

[211] Universal Copyright Convention, adopted at Geneva at September 6, 1952, as revised in Paris on July 24, 1971, 25 U.S.T. 1341.

[212] Convention for the Protection of Producers of Phonograms against unauthorized Duplication of Their Phonograms, adopted at Geneva at October 29, 1971, 25 U.S.T. 309.

[213] Patent Cooperation Treaty (PCT), done at Washington on June 19, 1970, amended on September 28, 1979, modified on February 3, 1984, and October 3, 2001, as in force from April 1, 2002, 28 U.S.T. 7645.

[214] MASKUS/DOUGHERTY/MERTHA, in: Intellectual Property Rights and Economic Development in China, in: FINK/MASKUS (Eds.), *supra* note 176, at 296.

[215] China is, inter alia, member of the following international agreements: of the Nice Agreement for the International Classification of Goods and Services for the Purposes of the Registration of Marks; of the Strasbourg Agreement Concerning the International Patent Classification; of the Trademark Law Treaty; of the Budapest Treaty on the

The creation of an effective body of IP law entailed, secondly, the fulfillment of the obligations adherent to the accession to international IPR conventions through dramatic reform of the Chinese IP laws.[216] Based on the 1982 Fifth Constitution of the People's Republic of China (Constitution)[217] the Chinese government set out to adopt a trademark law[218] and its implementing regulations,[219] a patent law[220] and its implementing regulations,[221] and a copyright law[222] and its implementing

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International Recognition of the Deposit of Microorganisms for the Purposes of Patent Procedure; and of the International Union for the Protection of New Varieties of Plants (UPOV).

[216] See DIETZ (Ed.), Die Neuregelung des gewerblichen Rechtsschutzes in China (1988), for an account of and regulations from the earlier periods of IP law reform in China.

[217] 中华人民共和国宪法, adopted at the Fifth Session of the Fifth NPC and promulgated for Implementation by the Proclamation of the NPC on December 4, 1982, amended at the first Session of the Seventh NPC on April 12, 1988, the first Session of the Eighth NPC on March 29, 1993, at the second Session of the Ninth NPC on March 15, 1999, and at the 1st Session of the Tenth NPC on March 14, 2004, in: Gazette of the State Council (国务院公报) 2000, No. 30, p9, English translation in: CCH Business Regulation 4-500 (English-Chinese).

[218] 中华人民共和国商标法, adopted at the 24th Session of the Standing Committee of the Fifth NPC on August 23, 1982, revised for the first time according to the Decision on the Amendment of the Trademark Law of the People's Republic of China adopted at the 30th Session of the Standing Committee of the Seventh NPC on February 22, 1993, and revised for the second time according to the Decision on the Amendment of the Trademark Law of the People's Republic of China adopted at the 24th Session of the Standing Committee of the Ninth NPC on October 27, 2001; in: Gazette of the State Council (国务院公报) 2002, No. 59; English translation in: CCH Business Regulation 11-500 (English-Chinese).

[219]中华人民共和国商标法实施条例, promulgated by the State Council on 3 August 2002, repealing the Implementing Regulations promulgated by the State Council on March 10, l983, revised for the first time with the approval by the State Council on January 3, l988, and revised for the second time with the approval by the State Council on July 15, July 1993 and the Answers by the State Council to Issues Relating to the Attachment of Certificates for the Purpose of Trademark Registration; in: Gazette of the State Council (国务院公报) 2002, No. 358; English translation in: CCH Business Regulation 11-505 (English-Chinese).

[220] 中华人民共和国专利法, adopted at the 4th Session of the Standing Committee of the Sixth NPC on March 12, 1984, amended by the Decision Regarding the Revision of the Patent Law of the People's Republic of China, adopted at the 27th Session of the Standing Committee of the Seventh NPC on September 4, 1992, amended for the second time by the Decision Regarding the Revision of the Patent Law of the People's Republic of China, adopted at the 17th Session of the Standing Committee of the Ninth NPC on August 25,2000; in: Gazette of the State Council (国务院公报) 2000, No. 30, p9; English translation in: CCH Business Regulation 11-600 (English-Chinese); see also STEINMANN, Grundzüge des chinesischen Patentrechts (1992), for an excellent account in German of the earlier patent law reform period in China.

[221] 中华人民共和国专利法实施细则, promulgated by Decree No. 306 of the State Council of the People's Republic of China on June 15, 2001, repealing the Rules for Implementation of the Patent Law of the People's Republic of China, amended on December 12, 1992 upon approval of the State Council and promulgated on December 21, 1992 by the Patent Office of China; in: Gazette of the State Council (国务院公报) 2001, No. 23, p7; English translation in: CCH Business Regulation 11-603 (English-Chinese).

regulations.[223] In addition, the legal reform process included the reorganization of the judicial and administrative system as well as the establishment of the right of citizens and legal persons to hold IPRs as private rights in the General Principles of Civil Law of the People's Republic of China. (Civil Law)[224] Thus, in the 1980s, China made great strides towards the establishment of a comprehensive IP protection system.

The motivations for this creation of a comprehensive IP protection system were threefold. First of all, modern IP law reform in China constituted part of a socialist legal system a "source of legitimacy for the government's reform policies."[225] It is most remarkable that, from the very outset of Chinese modernization in the late 1970, it was one of China's top priorities to formulate its own IPR regime. On May 12, 1977, even before his reemergence in the top Chinese leadership, DENG Xiaoping instructed FANG Yi and LI Chang, who were then in charge of administering technology and education ministries, to reinstitute a patent system.[226] However, contrary to some of the rationales of Western IP protection systems that involved a commitment to markets,[227] the foremost motivation for IP protection was the promotion of inventions rather than the protection of the rights of inventors. Following this motivation, the Regulations on Awards for Inventions were adopted in 1978.[228] This approach is well in line with the findings of Donald Clarke that the first phase of economic reform in China from 1979 to 1984 "did not involve a commitment to markets"[229] but was "essentially an attempt to make the planning system work better."[230] From 1985 onwards,

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[222] *Supra* note 77, see also WEI, *supra* note 68, at 14-18 on the drafting and discussions of the 1990 Chinese Copyright Law.

[223] 中华人民共和国著作权法实施条例, issued by Premier Zhu Rongji on August 2, 2002, effective as of September 15, 2002, repealing the Implementing Regulations that were approved by the State Council on May, 1991, in: Gazette of the State Council (国务院公报) 1991, p745; English translation in: CCH Business Regulation 11-702 (English-Chinese).

[224] 中华人民共和国民法通则, Chapter Four, adopted on April 12, 1986; in: Gazette of the State Council (国务院公报) 1996, p388; English translation in: CCH Business Regulation 19-150 (English-Chinese); note that Chinese legal scholars regard IPRs as rights expressly created by the Constitution in Article 13 and Article 46, see also: LONG in: 31 St. Mary's L.J. 63, 71 (2001).

[225] PALMER, in: 8 Ind. J. Global Stud 449 (2001).

[226] Extracts of Deng's speech are available in Chinese at: http://www.cas.cn/html/cas50/bns/1977.html (Status August 15, 2008); see also KONG, in: 21 Pac. McGeorge Global Bus. & Dev. L.J. 111, 113 (2008).

[227] See *supra*, A.II.1 Purposes of and Rationales for IP Protection in Historical Perspective.

[228] Adopted December 28, 1978, available in English at: http://preview.english.mofcom.gov.cn/aarticle/lawsdata/chineselaw/200211/20021100050646.html (Status August 15, 2008); see also KONG, *supra* note 226, at 114.

[229] CLARKE, The George Washington University Law School, Legal Studies Research Paper No. 396, 5 (2007).

[230] Id. at 5, citing the Economic Contract Law adopted in 1981 (中华人民共和国经济合同法) and the Law on Sino-Foreign Equity Joint Ventures of 1979 (中华人民共和国中外合资经营企业法) as examples.

however, the IP law reform was embedded in an overall economic reform that embraced the market more openly and fully as critical component.

Secondly, next to improvements of the Chinese planning system, the promulgation of new IP laws in China constituted governmental efforts to facilitate foreign investment. In the early 1980s, as developing country, China was in dire need of foreign investment and technology. The country was well aware of the growing consensus among economists that trade and foreign direct investment (FDI) function as important channels of technology transfer (TT), learning, and competition.[231] In turn, both imports of high-technology goods and inward FDI are associated with higher growth rates. Even though there was no conclusive evidence that the introduction of IP protection standards would provide a boost to economic growth through raising access to technology and accelerating its adoption by developing countries,[232] it was expected that the provision of reliable IP laws would lure foreign investors to China. In fact, there were some studies supporting the positive impact of IPRs on economic development[233] arguing that patenting may enhance technology diffusion through the disclosure of inventions, arguing that IPRs would allow for effective licensing and assignment, arguing that IPRs would act as stimulus to foreign investment, arguing that IPRs would stand for quality assurance and facilitate the domestic and international diffusion of knowledge thereby fostering international flows of technology. Yet, there were also studies that demonstrated that strong IPR regimes were only really effective once economies became sufficiently developed to adopt stronger regimes themselves.[234] In addition, it was also argued that it would be difficult to foster attitudes of creativity, invention, and risk-taking in an environment of weak protection.[235] Despite these concerns about IP protection in China, it is unquestionable that the strength of IPRs affects decisions by multinational firms on where to invest, how much to invest, in what forms, and whether to transfer advanced technologies.[236] It follows that simply waiting for the Chinese economy to reach a certain level of development, did not seem to be an option for the Chinese government that had taken a very proactive stances on IP policy since the early 1980s.

And finally, and most importantly, it was external and foreign pressures that led to the most substantial reform of Chinese IP law of the last century. It is most remarkable that this first phase of IP law reform was triggered by the 1979 Agreement on Trade Relations between China and the U.S., which provided for equivalent treatment of copyright, patent, and trademark protection in both

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[231] See SCHIAPPACASSE, in: 2 Buff. Intell. Prop. L.J. 164 (2004) on the interrelationship of IP protection and TT and economic development in China; more generally see MASKUS, in: 9 Duke J. Comp. & Int'l L. 109,147 (1998); HAUG, 5 Harv. J.L. & Tech. 209, 217-18 (1992).

[232] MASKUS/DOUGHTERTY/MERTHA in: FINK/MASKUS (ED.) Intellectual Property and Development 319-320 (2005).

[233] MASKUS, *supra* note 134, at 471, see also *supra* A.III.3.

[234] LIEBIG, *supra* note 186, at 22.

[235] Ibid, at 8.

[236] Cf. MASKUS/DOUGHERTY, *supra* note 196, at 7-10 for a detailed discussion of how IPRs stimulate economic development.

countries.[237] Furthermore, the Agreement entailed provisions relating to the acknowledgement of the importance of IP protection and provisions containing a pledge to enforce or enact patent, trademark, and copyright laws for their respective countries.[238] Thirteen years later, in 1992, the U.S. and China signed their first bilateral trade-related IP agreement, the Memorandum of Understanding on the Protection of Intellectual Property (Memorandum of Understanding),[239] which required China to revise its patent law, to accede to the Berne Convention[240] and the Geneva Convention, and to enact a law against unfair competition as provided for in Article 10bis of the Paris Convention.[241] China fully complied with the requirements of the Memorandum of Understanding by passing the 1992 Revision of Patent Law,[242] the 1992 Implementing International Copyright Treaties Provisions,[243] and in 1993 the Law Against Unfair Competition (Unfair Competition Law).[244] However, these reform steps did not suffice to satisfy the U.S. expectations in the field of IP enforcement. Thus, the U.S. further resorted to the threat of trade sanctions pursuant to the Special 301 provisions of the U.S. trade law.[245] Both in 1994 and in 1996 the U.S. initiated investigations under Special 301 threatening China with the imposition of a hundred percent duty on Chinese imports.[246] The conflicts were resolved in the 1995 Agreement Regarding Intellectual Property Rights (IPR Agreement)[247] and the 1996 Agreement that included a Report on Chinese Enforcement Actions and an Annex on Intellectual Property Rights Enforcement and Market

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[237] Agreement on Trade Relations, July 7, 1979, U.S.-P.R.C., 31 U.S.T. 4651, see also WISE in: 38 Harv. J. on Legis. 567, 567- (2001).

[238] See Article VI of the Agreement on Trade Relations, *supra* note 237.

[239] U.S.-P.R.C. 34 I.L.M. 676 (1995), see also ZHANG, in: 8 Fordham Intell. Prop. Media & Ent. L.J. 63, 73 (1997).

[240] *Supra* note 17.

[241] *Supra* note 18.

[242] *Supra* note 220.

[243] 实施国际著作权条约的规定, in: Gazette of the State Council (国务院公报) 1992, No. 105; English translation in: China L. Foreign Bus. (CCH) P 11-703 (1992).

[244] 中华人民共和国反不正当竞争法, adopted at the Third Session of the Standing Committee of the Eighth NPC on September 2, 1993, in: Gazette of the State Council (国务院公报) 1993, p986; English translation in: CCH Business Regulation 16-640 (English-Chinese).

[245] Special 301 – based on Special 301 of the 1974 Trade Act, enacted January 3, 1975, Pub. L. Pub. L. No. 98-618, §182, as added by Omnibus Trade and Competitiveness Act of 1988, Pub. L. No. 100-418, §1303(b), 102 Stat. 1107 (August 23, 1988 (codified as amended at 19 U.S.C.A. §2242) – requires the United States Trade Representative to notify Congress of priority foreign countries that fail to adequately protect US intellectual property rights and to undertake all required remedial measures within a mandated period, available at: http://www.access.gpo.gov/uscode/title19/chapter12_.html (Status August 15, 2008).

[246] ZHANG, *supra* note 239, at 74.

[247] Agreement Regarding Intellectual Property Rights, February 26, 1995, U.S.-P.R.C., 34 I.L.M. (1995).

Access Accord.[248] In essence, however, the Sino-U.S. IP battles of the 1980s and early 1990s demonstrate the extent to which external pressure and coercion have contributed to the reinstitution of IP protection as part of the new legal system.[249]

In summary, this first phase of incipient IP policy in post-Maoist China is characterized by the reinstitution of IP law as part of the new legal system. This reinstitution was triggered by a number of motivations, primarily, however, by external pressures exerted by the U.S. in its bilateral trade relations with China. Regardless of the motivations and reasons, China has since the late 1970s been well on its way from a socialist legal system to international legal integration in the field of IP protection. Chinas foremost socialist justification for IP law was gradually replaced by Western, capitalist, economic, and utilitarian perceptions of IP protection.

2. *Phase II: WTO-driven IP policy in the late 1990s*

The second phase of modern Chinese IP policy in the late 1990s was marked by one of the strongest forces shaping Chinese IP policy to adopt Western legal rules: the prospect of joining the international trade circle through membership in the WTO. As in the first phase of modern Chinese IP policy, however, this prospect worked in conjunction with U.S. coercion on China to better protect foreign IP interests in China.[250]

The U.S. coercion pursuant to the Special 301 provisions of the U.S. trade law[251] took several forms, including threats to impose trade sanctions, to block China's accession to international organizations, to revoke China's most-favoured nation status, and the dispatching of a U.S. carrier group in response to Chinese military manoeuvres during the 1996 Taiwan Straits crisis.[252] In 1995 and 1996 in response to threats by the U.S. that it would impose punitive trade sanctions in retaliation for losses caused by the deficiencies in China's protection of IPRs, the U.S. and China executed bilateral agreements.[253] Parallel to these developments, the U.S.-China trade quickly increased with an increase of total U.S. exports to China by nearly twenty-seven percent in 1995 alone.[254]

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[248] LI, in: 10 Colum. J. Asian L. 391, 424 (1996) on the Evaluation of the Sino-American IP Agreements.

[249] FENG, *supra* note 201, at 3-4.

[250] BIRD, *supra* note 124, at 317.

[251] *Supra* note 245.

[252] MERTHA, *supra* note 4, at 6.

[253] TACKABERRY in: Journal of Asian Business 1, 4 (1998), see *supra* notes 247, 248.

[254] ZHANG, *supra* note 239, at 76.

In addition to U.S. coercion, it was international pressures associated with the TRIPS Agreement and increasing cultural and commercial activities relating to intellectual property in China that exposed the need for a stronger and more effective IP law system. As early as the 1970s, Western countries had sought to revise the existing IP conventions while gradually shifting the efforts to the GATT and Uruguay Round negotiations when negotiations at WIPO had come to a standstill.[255] On December 20, 1991, the Draft Final Act Embodying the Results of the Uruguay Round of Multilateral Trade Negotiations[256] including the text of the TRIPS Agreement was submitted by Arthur Dunkel.[257] The proposed TRIPS Agreement entailed a number of obligations that had not yet been met by Chinese IP protection at that time: Chinese law had not yet extended the Berne Convention[258] protection to computer software, Chinese laws were silent on the protection of trade secrets,[259] and Chinese enforcement standards were not yet TRIPS-compatible.[260] Even though the adoption of the TRIPS Agreement, thus, imposed numerous obligations on Chinese IP law reform, the Chinese government recognized the benefits from WTO membership: the opportunity to disable trade sanctions and the annual renewals of most-favored-nation status as U.S. policy levers, the gradual reduction of country quotas on textiles, the prospect of secure markets , and the appropriate political leverage for the Chinese government to continue its reform and privatization program. These benefits acted as indirect pressure on the Chinese government to sign up to the TRIPS Agreement even though it was widely recognized that the establishment of TRIPS standards at that time were not perfectly suited to the level of economic development in China.[261] Eventually, however, China's accession to the WTO in 2001, and thus the TRIPS Agreement, marked one of the most important milestones along the IP reform path of the country.

As a consequence of WTO accession, China continued to modernize its IP protection and enforcement system in the 1990s. Most noticeably, China made great strides towards the improvement of the enforcement of IP protection through the reform of its judicial system. This reform entailed, for instance, the establishment of an intellectual property rights trial division with exclusive jurisdiction over all IP cases that did not involve administrative or criminal law[262] and the establishment of special tribunals both in the civil and economic trial divisions of all other high people's courts and intermediate people's courts for copyright and industrial property cases. The modernization of the Chinese IP protection system also included the establishment of a patent

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[255] DESSLER, in: 19 Fordham Int'l L.J. 181, 185 (1995).

[256] Gatt Doc. No. MTN.TNC/W/FA (1991).

[257] DESSLER, in: 19 Fordham Int'l L.J. 181, 186 (1995).

[258] *Supra* note 17.

[259] DESSLER, *supra* note 257, at 233.

[260] Especially relating to procedures for remedying acts of infringement, written decisions and evidence, damages and injunctive relief, cf. DESSLER, *supra* note 257, at 233.

[261] See *supra* A.III.3.

[262] ZHANG, *supra* note 239, at 67.

database in 1995, a number of IPR training programs for judges, lawyers, government IPR officials, and businessmen, and the establishment of a software title verification office in 1997.[263]

However, in this second phase of WTO-driven IP policy, China's policy regarding IPRs and the enforcement of IPRs was faced with some very China-specific characteristics and challenges. First of all, copyright protection in China was – and still is – closely related with ideological issues since China was very concerned about any publication that interferes with its people and socialism.[264] Consequently, controlling Western cultural influences, while ensuring the protection of foreigner's copyrights in China, constituted a big challenge for China. Secondly, piracy was an issue of diffusion of knowledge and profits rather than an ideological problem.[265] Thus, it has been argued that China deliberately delayed effective IP enforcement in order to allow for maximum knowledge diffusion and absorption through piracy.[266] Regardless of this argument, it is undisputed that enforcement still is the biggest problem of the Chinese IP regime.[267] Thirdly, it is to be noted that the creation of a system of IP protection as the "transplantation"[268] of Western legal concepts to China has led to tensions and resistance in the full acceptance and implementation of those laws in China which significantly shows in enforcement issues.[269] And finally, it has repeatedly been argued[270] that Chinese culture does not lend itself to monopolistic and exclusionary property rights for innovations thereby creating an environment hostile to intangible property rights in creative expressions and innovations. Though such arguments can easily be refuted in modern China with reference to the ever-increasing capitalist nature of the Chinese IP industries, the argument is firmly rooted in the academic literature.

Though these very specific Chinese circumstances acted – in parts – as impediments to the improvement of IP protection in China, this second phase of IP policy development in China is also marked by the awakening of Chinese politicians and businessmen to the benefits of IP protection.[271] In relation to trademarks and copyrights, Keith Maskus and Sean Dougherty reported that, in the 1990s, piracy caused larger losses in the Chinese entertainment, publishing, and consumer goods

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[263] LACROIX/KONAN, in: Working Paper No. 02-1 (2002).

[264] ZHANG, *supra* note 239, at 78.

[265] MASKUS/DOUGHERTY/MERTHA, Intellectual Property and Economic Development in China in: FINK/MASKUS (EDS.), *supra* note 176, at 309.

[266] Though it has also been argued that the Chinese authorities simply lack the authority to end much of the piracy in the Chinese economy, in: ROSS, in: Foreign Policy 104, 18, 19 (1996) cited in: LACROIX/KONAN, *supra* note 263, at 18.

[267] CRANE, in: 7 Chi.-Kent J. Intell. Prop 95, 97 (2008).

[268] CHOW, The Legal System of the People's Republic of China 412 (2003).

[269] See also LIU in: 5 Chinese J. Int'l L. 733-752 (2006) for a detailed discussion of the lack of effect of the patent transplant in China resulting from a combination of historical, social, and cultural factors.

[270] See, for instance, CRANE, *supra* note 267, at 97; WALL, in: 17 Marq. Sports L. Rev. 341, 357 (2006).

[271] LACROIX/KONAN, *supra* note 263.

industries than in prominent Western firms such as Microsoft or Disney.[272] This finding explains the increasing organization of Chinese businesses into associations in the 1990s which undertook additional private enforcement, placed pressure on the government, and kept the public informed about the relevance of IP protection.[273] This additional pressure on the Chinese government together with the high per capita income growth in the creative industries somewhat replaced the external U.S. pressures on the Chinese government and, therefore, partly explains the cooling down of the U.S.-Chinese IPR disputes in the 1990s. Part of the change, however, is also due to the conclusion of the 1994 GATT agreement and the provision of the WTO dispute resolution mechanisms for IPR disputes.

In summary, based on the above-described motivations for Chinese IP policy, Chinese IP law reform has made great progress in the second phase of the above-defined development phases with Chinese IPR institutions converging on those of Western and OECD nations. This finding has led Sumner La Croix and Denise Eby Konan to conclude that, within this development phase of Chinese IP policy, U.S. and China had moved "from conflict to cooperation over intellectual property rights."[274] This cooperation entailed not only the proliferation and improvement of formal legal protection for intellectual property but also the creation of a political, organization, and social foundation for the effective enforcement of IPRs on the Chinese part. In consequence, China implemented a broad-based IP system that establishes the basic standards of IP protection contemplated by the TRIPS Agreement and other bilateral treaties. Based on these tremendous achievements of IP law reform in China, it was argued by Peter Yu that China should be treated as partner rather than pirate thereby recognizing the Chinese endeavors for IP law reform.[275]

3. *Phase III: Chinese pro-innovation IP policy in the 21st century*

In recent years, the Chinese dragon has awakened to the realization that globalization requires the protection of its national interests on the international stage. China has come to understand and stress its own state interests in the battle of interests in IP policy. Therefore, recent years have exposed a very specific Chinese approach to IPR regime-building which has been termed "gradualism"[276] by KONG Qiangjiang, meaning the adaptation of the standards for IP protection to

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[272] MASKUS/DOUGHERTY, in: NBR Regional Studies 1-30 (1998), see also LACROIX/KONAN, in: Working Paper No. 02-16 (2002) for an account that Chinese products, such as Hongtashan cigarettes and Maotai liquor, have repeatedly been prominent targets of counterfeiting.

[273] LACROIX/KONAN, *supra* note 263, at 18: in November 2000, for instance, Shanghai's first anti-piracy association was formed by 43 firms with well-known trademarks.

[274] LACROIX/KONAN, *supra* note 263.

[275] YU, in: 55 Am. U.L. Rev. 905 (2006).

[276] KONG, *supra* note 226, at 112.

the level of economic development in China.[277] At the same time, the aftermath of Chinese WTO accession was marked by a fundamental shift in U.S. IPR policy from the utilization of Special 301 reviews to enforcement efforts towards WTO dispute resolution panels.[278] This shift of U.S. IPR policy has reduced external pressures on the Chinese government for IP law reform thereby allowing for gradualism in the Chinese IPR regime-building. The following section will demonstrate and analyze the most recent Chinese gradualism and pro-innovation IP policy.

First of all, IP policy has always been at the forefront of Chinese industrial policy to allow for the slow transition from a socialist system, in which property was expropriated by the state, to a capitalist country. It is, in particular, noticeable that China had provided a full-fledged legal system for intellectual property before providing a law that comprehensively covers the creation, transfer, and ownership of property. It was not until October 1, 2007 that the Property Law of the People's Republic of China (Property Law)[279] went into effect.[280] It follows that, as a matter of fact, the sudden introduction of IPRs to China in the early 1980s through international obligations, had not contributed to the elimination of hostility to intellectual property, but had rather enforced it.[281] This has, inter alia, translated into the well-known enforcement problems that China encounters to the present day.[282] Regardless of these problems, IP policy has always had a prominent place in Chinese industrial policy. Annual action plans on IPR Protection[283] in China were launched together with White Papers[284] and IPR campaigns to allow for better protection of IPRs.[285] The most recent effort in Chinese IP policy is the drafting of a comprehensive National IPR Strategy[286] that comprehensively addresses issues of IP protection improvements, enforcement, fostering of IP

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[277] Compare lessons learnt from the American and European history of IP protection, *supra* A.III.2.

[278] As of August 2008, the U.S. has brought nineteen IPR cases to WTO panels and prevailed (or settled without litigation) in all cases, cf. LACROIX/KONAN, *supra* note 263, at 31.

[279] 中华人民共和国物权法, adopted at the 5th Session of the Tenth NPC of the People's Republic of China on March 16, 1007; in: Gazette of the State Council (国务院公报) 2007, No. 112; English translation in: CCH Business Regulation 19-160 (Chinese-English).

[280] WECHSLER in: GRUR Int., Vol. 5, 459 (2007).

[281] See MERTHA, *supra* note 4, at 23-25 for an introduction to the Chinese setting and legacy that has shaped attitudes to IP law.

[282] See EUROPEAN COMMISSION, IP Enforcement Survey (2006).

[283] 中国保护知识产权行动计划, for the 2007 Action Plan see: WECHSLER in: GRUR Int., Vol. 6, 554 (2007).

[284] e.g. the 1994 White Paper 中国知识产权保护状况, and the 2005 White Paper 中国知识产权保护的新进展, see WECHSLER in: GRUR Int., Vol. 6, 538 (2008).

[285] WECHSLER in: GRUR Int., Vol. 6, 554 (2007).

[286] 国家知识产权战略纲要的通知, in: Gazette of the State Council (国务院公报) 2008, No. 17, pp12-18.

talents, and enhancement of public awareness which was adopted on June 5, 2008.[287] This National IPR Strategy does not only bundle hitherto diverse local IPR strategies, but also constitutes the culmination of all IP policy efforts in one single policy document.

Secondly, China has realized that, as a developing country, it has distinctly different interests in matters such as education and public health as compared to developed countries that have already reached a level of development in these areas. In the area of public health, for instance, China is facing an increasing HIV epidemic with projections of the National Intelligence Council of as many as 10 to 15 million HIV/AIDS cases in 2010.[288] As a consequence, Chinese IP policy has attempted to cater for the needs of its population by stressing issues such as access to medicine and education. China has therefore supported the Doha Declaration[289] that attempts to strike a balance between the need for access to medicines, on the one hand, and the importance of IP protection for the development of new medicines, on the other hand.[290] China also lent its support to the 2005 permanent amendment of the TRIPS Agreement that was based on a 2003 decision on patents and public health.[291] For the first time in history, a core WTO agreement was amended by the General Council in order to achieve humanitarian and development goals and China was in support of it thereby stressing its own national needs in the area of public health.

Thirdly, China continues to realize the importance of both the unhampered influx of knowledge and intellectual property into China and the promotion of domestic innovation. As a result, it has come to embed its IP policy into the framework of an overall pro-innovation industrial policy which protects domestic S&T innovations. A recent amendment of the Chinese Science and Technology Progress Law[292] puts enormous emphasis on the role of IP policies in the promotion of science and technology in China while considering science and technology as the primary productive force in socialist modernization. Article 3 of the said law explicitly demands that "the state and the whole society shall respect knowledge, esteem talent, value the creative work of scientific and technological personnel, and protect intellectual property rights."[293] This proactive Chinese

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[287] See WECHSLER in: GRUR Int., Vol. 8 (2008) forthcoming; cf. News on the Chinese IPR strategy, available at: http://english.ipr.gov.cn/en/iprspecials/IPRStrategy/index.htm (Status August 15, 2008).

[288] FESTEL, The Chemical and Pharmaceutical Industry in China 93 (2005).

[289] *Supra* note 170.

[290] Paragraph 4 of the Doha Mandate, *supra* note 170.

[291] Cf. Amendment of the TRIPS Agreement, Decision of December 6, 2005, available at: http://www.wto.org/english/tratop_e/trips_e/wtl641_e.htm (Status August 15, 2008).

[292] 中华人民共和国科学技术进步法，Law of the People's Republic of China on Science and Technology Progress, adopted at the Second Meeting of the Standing Committee of the Eighth NPC on July 2, 1993, promulgated by Order No. 4 of the President of the People's Republic of China, and effective as of October 1, 1993; revised on December 29, 2007; in: Gazette of the State Council (国务院公报) 2008, No. 2，English translation available at: http://www.most.gov.cn/eng/policies/regulations/200412/t20041228_18309.htm (Status August 15, 2008).

[293] Ibid.

approach towards law- and policy-making is also reflected in the 2008 passage of the Chinese Anti-Monopoly Law [294] which does not represent the outcome of external pressures on Chinese lawmakers but which was intended to provide for the optimal policy level to allow China's domestic firms to compete effectively with their foreign counterparts.[295] It follows that China is increasingly taking into account its own domestic interests to further its national economic development.

Fourthly, the Chinese governmental attempts to improve the IP protection framework for its domestic industries were further spurred and supported by Chinese IP industries. Most recently, Chinese firms have moved from unprecedented success in competition within an imitation paradigm towards a competitive paradigm in which creation is central.[296] It was argued by Wei XIE and Steven White that China has entered a new phase of technological development in which Chinese firms are adopting new modes of technological learning which will help them graduate from imitators to creators provided a number of conditions are fulfilled, i.e. that the absorptive capacity of Chinese firms improves, provided that their ability to identify a potential source of technology improves, and provided that competitive pressures in industries dominated by state-owned firms increases.[297] Nevertheless, in some industry branches, Chinese industries have reached a level of development that forces them to learn the rules of the IP game in order not to lose out.[298] In almost all industry branches, Chinese companies are increasingly adopting proactive IP protection strategies by not only proactively filing and registering IPRs but also by proactively taking international companies to Chinese courts.[299] In summary, these examples demonstrate that the Chinese government has made considerable progress towards industrialization, modernization, and the localization of value-added production, although there is varying progress depending on the industries and sectors concerned. This progress is now reinforced by the adoption of IP policies that foster national innovation and development. The year 2008 is expected to be marked by the third patent law reform in China.[300] This third amendment marks a clear departure from previous patent

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[294] 中华人民共和国反垄断法, The Anti-Monopoly Law of the People's Republic of China, adopted at the 29th Session of the Standing Committee of the Tenth NPC on August 30, 2007 and effective as of August 1, 2008, in: Gazette of the State Council (国务院公报) 2008, No. 2007, No. 58; see also: STUDENT, in: 17 Minn. J. Int'l L. 503 (2008).

[295] STUDENT, *supra* note 294, at 503.

[296] XIE/WHITE, in: INSEAD Working Paper Series 2 (2004), see especially the following Chinese firms: Haier (海尔), Huawei (华为), Legend (影视库), TCL, and Greatwall (长城汽车).

[297] Ibid, at 15-17.

[298] COVERSTORY, in: Managing IP, 34 (2005).

[299] LERER, in: IP Law & Business, No. 12, 28 (2005).

[300] GABRIEL, in: 9 Asian-Pac. L. & Pol'y J. 323 (2008), on September 8, 2008, China's National People's Congress has published the proposed amendments to the Chinese patent law (专利法修正案(草案)) on its website and is asking for comments, available in Chinese at the website of the Chinese National People's Congress: http://210.82.31.29/COBRS_LFYJ/user/UserIndex.jsp?ID=788911 (Status September 19, 2008).

law amendments: there was neither external coercion nor an international treaty that pressurized China into this reform. Rather it was the Chinese interest to safeguard China's economic security and national interest that served as motivations for these amendments.[301] In addition, the substance of the new patent law reflects the Chinese determination to promote domestic innovation and to reduce its reliance on foreign-controlled patents by providing the same rights to domestic innovators and foreign inventors, by providing that inventions made in China must first be filed in China, and by providing enhanced protection for genetic resources through compliance with the Convention on Biological Diversity.[302] The proposed patent reform also intends to provide more efficient and convenient channels in application, acquisition, and enforcement of patent rights.[303] Thus, the Chinese approach towards the patent law reform demonstrates its determination to proactively resort to IP policies as economic policy tool to promote innovation and economic development.

In summary, the times have passed in which China's motivation for implementing IP laws was to gain favourable trading partnerships with Western countries.[304] Recent developments in Chinese IP policy and reform have demonstrated the Chinese drive to excel in S&T and to become the world's innovation leader with the help of its IP protection regime. This Chinese drive is closely related to the realization that the effects of IP protection are extraordinarily sensitive to country- and industry-specific characteristics which has now let to increasingly extensive use of IP policy space by the Chinese government.[305] This extensive use of IP policy space, which entails the testing of policy boundaries, might well lead to the gradual emergence of China as a potent force in reshaping the global IP landscape. However, the academic advocacy to rethink the ever-increasing extension of IP protection and the call of academics for the return to moderate IPR protection is of yet unheard by the Chinese government.[306] It still follows the traditional, economics-based approach to the IPR regime as instrument for economic development while Western scholars have started to embrace a more comprehensive and normative view of the IP law system that takes into account a reconsideration of the authority of multilateral institutions, the rule of law, and human rights.[307] Whether the Chinese approach will serve the country to become the world's innovation leader is yet to be seen.

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[301] OLLIER, in: Managing IP 3, 5 (2007).

[302] See ICC, in: Comments on the Draft Amendment of the Patent Law in China (2007); Convention on Biological Diversity (Biodiversity Convention) adopted in Rio de Janeiro in June 1992, see http://www.cbd.int/ for more details (Status August 15, 2008); note also that genetic resources includes traditional knowledge, like Traditional Chinese Medicine (TCM).

[303] OLLIER, *supra* note 301.

[304] CRANE, *supra* note 267, at 97.

[305] See *supra* A.III.1 and A.III.3.

[306] KONG, *supra* note 226, at 123.

[307] See, for instance, YU, in: MSU Legal Studies Research Paper No. 04-01 (2007).

V. Conclusion

In summary, this paper has analyzed the use of IP policy as powerful economic tool both on an international level as well as in China in a world of ever-closer financial and economic ties. It has surveyed the changing purposes of and rationales for international IP protection before demonstrating that Chinese IP tradition has neither followed Western rationales nor has it developed its own rationales for IP protection until very recently in Chinese history. The paper has also critically exposed the reduction of policy space for the regulation of IP Chinese protection through the integration of IP protection into international trade policy. This reduction of policy space was then connected to speculations about the future development of IP protection for which a more country- and industry-specific approach was recommended in the light of specific economic development needs in China. The use of IP policy as powerful economic policy tool both on an international level as well as in China was further explained by reference to the economic mechanisms underlying IP protection, the political economy of IP protection, and the very specific interrelationship between IP protection and economic development in China. IP protection was demonstrated to constitute a necessary condition, albeit not the only condition, for economic growth generally and, more specifically in China. It was further demonstrated that the most recent Chinese IP policy is marked by gradualism, meaning the adaptation of the standards for IP protection to the level of economic development and innovation in China. Based on this finding, it was argued that recent policy shifts in Chinese IP policy are to be considered as the first omens of the Chinese emergence as potent forces in reshaping the global intellectual property landscape according to their own political, economic, and social interests.

In conclusion of the above findings, China has gone a long way towards a modern IP policy for the establishment of a modern legal IP system. The development of Chinese IP policy gets even more so remarkable when considering comments of GUO Shoukang in 1997 where he stated that only 40 years ago he had not even once encountered the term “intellectual property” during his legal education in China.[308] Eventually, it is not surprising that China is gradually following the example of Western industrialized countries that have resorted to IP policies as economic tools since the early stages of industrialization. However, the extent of resoluteness and stringency of Chinese modern IP policy is unknown even to developed countries. Soon enough, Chinese IP policy may even serve as an example for Western industrialized countries on how to promote and foster scientific and technological innovation. As of yet, the Chinese modern and proactive IP policy has not yet translated into noticeable policy efforts on an international level. However, it will be a matter of time, until China will not only pursue IP policies in line with its own state interests on a national level but also on an international level. In fact, it is to be expected that China will gradually emerge as a potent force in reshaping the global intellectual property landscape.

[308] GUO, *supra* note 74, at 949.

However, it is suggested that this development is rather deplorable when judged against larger public policy goals and societal welfare interests. The deliberate and conscious use of IP policy as economic policy tool to protect national interests will eventually disturb the balance of rights and obligations in IP law, and the balance of interest in the entire IP law system. Even though it is acknowledged that a "one size fits all" IP system for all industries and all countries in the world does not do justice to the diversity of industries and countries, it would be desirable to design an IP law system that aims at the maximization of full welfare designed as a sound mixture of both utility as a representation of preferences and individual happiness. If this objective were at the core of international IP policy, any imbalances and injustices in the IP law system would constitute an unacceptable denial of due happiness and welfare requiring for expeditious policy and strategy adjustments.

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