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# Building the Ladder: Three Decades of Development of the Chinese Patent System

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# Building the Ladder: Three Decades of Development of the Chinese Patent System

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☞ China; Developing countries; Legal history; Patents; TRIPs

## Introduction

When *The WIPO Journal* was launched in summer 2009, the World Intellectual Property Organization (WIPO) had only just adopted the Development Agenda and its 45 recommendations for action less than two years ago. Based on these recommendations, the organisation introduced a wide array of pro-development activities, ranging from technical assistance and capacity building to norm setting and public policy, and from technology transfer to assessment, evaluation and impact studies.<sup>1</sup>

Shortly after the establishment of the WIPO Development Agenda, however, policy makers, government leaders and academic commentators began expressing concern about the developed countries' aggressive push for non-multilateral norm-setting activities and its potential damage to the multilateral intellectual property system. The negotiation of the Anti-Counterfeiting Trade Agreement (ACTA) was formally announced only two weeks after the adoption of this Agenda. As WIPO Director General Francis Gurry lamented at that time, countries negotiating this highly controversial agreement had "tak[en] matters into their own hands to seek solutions outside of the multilateral system to the detriment of inclusiveness of the present system".<sup>2</sup>

Interestingly, just as this *Journal* is about to celebrate its fifth anniversary, WIPO has successfully negotiated two substantive international intellectual property treaties. On June 26, 2012, more than 100 WIPO members signed the final act of the Beijing Treaty on Audiovisual Performances (Beijing Treaty), which offers protection to audiovisual performers under the existing international copyright system. A little more than a year later, WIPO adopted the Marrakesh Treaty to Facilitate Access to Published Works for Persons Who Are Blind, Visually Impaired, or Otherwise Print Disabled (Marrakesh Treaty). Upon ratification, this landmark agreement will provide easy or ready access to copyrighted publications to hundreds of millions of individuals with print disabilities.

Although WIPO already administers more than two dozens international agreements, the completion of the Beijing and Marrakesh Treaties in a short span of 369 days is still a remarkable accomplishment. Since the adoption of the WIPO Copyright Treaty and the WIPO Performances and Phonograms Treaty in December 1996, no new substantive international intellectual property agreement has ever been established. It took yet another decade to complete the Beijing Treaty. Meanwhile, the Marrakesh Treaty was negotiated amidst the unprecedented challenges posed by the proliferation of bilateral, plurilateral and regional trade, investment and intellectual property agreements. As Director General Gurry rightly

\* Copyright © 2013 Peter K. Yu. The Author is grateful to Erin Cassidy, Kyle Mendenhall, Srikant Mikkilineni and Lindsey Purdy for excellent research and editorial assistance.

<sup>1</sup> WIPO, "The 45 Adopted Recommendations under the WIPO Development Agenda", available at <http://www.wipo.int/ip-development/en/agenda/recommendations.html> [Accessed October 16, 2013].

<sup>2</sup> Catherine Saez, "ACTA a Sign of Weakness in Multilateral System, WIPO Head Says" *Intellectual Property Watch*, June 30, 2010.

reminded us, “This treaty is a victory for the blind, visually impaired and print disabled, *but also for the multilateral system.*”<sup>3</sup>

Taken together, the developing countries’ recent pro-development initiatives and the developed countries’ non-multilateral activities have suggested that the international intellectual property regime goes through a series of ups and downs—or, as I put it in the past, “currents and crosscurrents”: “While the currents of multilateralism push for uniformity and increased harmonization, the crosscurrents of resistance . . . protect national autonomy and international diversity”.<sup>4</sup> If we are to develop a better and deeper understanding of this regime, studying its history will be highly instructive.

Since its inception, this Journal has devoted the first issue of each volume to a special topic. This approach aims to demonstrate that intellectual property issues are both interdisciplinary and multidisciplinary. The inaugural issue contained 14 essays on intellectual property laws and policies. The second issue focused on economics, the third on politics and the fourth on culture. To celebrate the journal’s fifth anniversary, it is *a propos* to devote this entire special issue to intellectual property history.

To open this special anniversary issue, this article examines the patent system in China, a country that has accomplished what no other country has ever achieved in such a short period of time—be it Germany, Japan or the United States. While it took the now-developed countries centuries to establish their patent systems, the same feat took China only three decades. Today, China has slowly emerged as a leader in the patent field. In 2012, the number of applications through the Patent Cooperation Treaty (PCT) increased by 13.6 per cent to 18,627, earning China the fourth spot, behind only the United States, Japan and Germany.<sup>5</sup> Among all the applicants, China-based ZTE Corp (formerly Zhongxing Telecommunication Equipment Corp) and Huawei Technologies had the largest and fourth largest number of PCT applications, respectively. With significant backing from the Chinese government and the anticipated involvement of the world’s largest public sector, China will likely catch up with the existing intellectual property powers more quickly than many have anticipated.

Instead of looking forward to what the future will hold for the Chinese patent system, this article looks backwards and traces its three decades of development. It begins with a historical overview of the protection China offered to inventions during the dynastic and Republican eras. The article then identifies five different stages of development of the modern Chinese patent system. Going from stage to stage, this article demonstrates how a developing country could strategically build a patent system that is tailored to its own social, economic and technological conditions. The article concludes with five key lessons China’s patent reform can provide to other developing countries.

## The damn ladder

In Joseph Conrad’s *Heart of Darkness*, a young sea captain, Charles Marlow, is charged with a colonial assignment into the Belgian Congo. When his iron riverboat—a then-modern invention—breaks down, he desperately looks for tools and spare parts to repair the boat so that he can continue his upriver voyage. Thinking about his needs, he muses to himself, in Conrad’s usual narrative prose, “What I really wanted was rivets, by heavens! Rivets. To get on with the work—to stop the hole. Rivets I wanted.”<sup>6</sup>

Like Marlow, developing countries have been actively engaging in an upstream journey—a journey in not only the intellectual property world but also the international economic system. Their obsession was not Conrad’s famed “rivets”, but another now-famous metaphor: the ladder. This ladder allows developing

<sup>3</sup> WIPO, “Historic Treaty Adopted, Boosts Access to Books for Visually Impaired Persons Worldwide”, available at [http://www.wipo.int/pressroom/en/articles/2013/article\\_0017.html](http://www.wipo.int/pressroom/en/articles/2013/article_0017.html) [Accessed October 16, 2013] (emphasis added).

<sup>4</sup> Peter K. Yu, “Currents and Crosscurrents in the International Intellectual Property Regime” (2004) 38 *Loyola L.A. L. Rev.* 323, 328.

<sup>5</sup> WIPO, “Strong Growth in Demand for Intellectual Property Rights in 2012”, available at [http://www.wipo.int/pressroom/en/articles/2013/article\\_0006.html](http://www.wipo.int/pressroom/en/articles/2013/article_0006.html) [Accessed October 16, 2013].

<sup>6</sup> Joseph Conrad, *Heart of Darkness* (London: Penguin Books, 1902), p.58.

countries to catch up with their more developed counterparts and to become economically prosperous and technologically proficient.

For example, noted development economist Ha-joon Chang criticised the existing international trading system for enabling developed countries to “‘kick away the ladder’ by which they have climbed to the top”.<sup>7</sup> In doing so, these countries prevented their less developed counterparts from adopting policies and institutions they themselves had used in their formative periods of development. Kevin Gallagher, an international relations scholar, also lamented how developed countries, like the United States and members of the European Union, had deployed bilateral, plurilateral and regional trade and investment agreements to induce developing countries to “trade away” their ladder.<sup>8</sup>

Having an obsession with the ladder is nothing new. In fact, Chang’s widely cited book draws on the work of nineteenth-century political economist, Friedrich List. Dubbed by Chang and others as “the father of infant industry argument”,<sup>9</sup> List coined the phrase “kicking away the ladder”. As he wrote metaphorically in *The National System of Political Economy*:

“It is a very common clever device that when anyone has attained the summit of greatness, he kicks away the ladder by which he has climbed up, in order to deprive others of the means of climbing up after him.”<sup>10</sup>

Like other developing countries, China has been obsessed with this ladder since it re-opened its market to foreign trade in the late 1970s. Unlike these countries, however, China thus far has not traded away the ladder. Nor has it allowed other countries to kick away this ladder. Instead, the country slowly built a carefully-made ladder that enabled it to climb to economic, and now intellectual property, greatness. Although China did not establish a modern patent system until 1984, it now has more domestic patent applications than any other country in the world, including the United States.<sup>11</sup>

## Stage 0: Location of prototypes

For a country with more than 4,000 years of history and a large number of inventions, including the compass, gunpowder, papermaking and woodblock printing,<sup>12</sup> it is always challenging to locate the origin of a system that incents inventions. If the British patent system owes its origin to the Statute of Monopolies, one can trace the development of Chinese patent rights to “over 2,000 years ago when the emperors granted individual merchants the right to smelt iron, distill salt, and mint coin”.<sup>13</sup> Since then, other emperors or territorial rulers experimented with the introduction of patents on Chinese soil in various historical periods. For example, commentators recounted the push for the patent system during the Taiping Rebellion (1850–1864). As one observer wrote:

“During the period of the Taiping Rebellion, the leader Hong Renxuan put forward his concept of a patent system, noting that ‘if someone can design a kind of train as we see in foreign countries which can run 8,000 kilometers in a day and a night, he should be granted a patent and be given the power to allow others to imitate.’ He also maintained that ‘people [should be] encouraged to improve

<sup>7</sup> Ha-Joon Chang, *Kicking away the Ladder: Development Strategy in Historical Perspective* (London: Anthem Press, 2002), p.10.

<sup>8</sup> Kevin P. Gallagher, “Trading away the Ladder? Trade Politics and Economic Development in the Americas” (2008) 13 *New Pol. Econ.* 37.

<sup>9</sup> Chang, *Kicking away the Ladder* (2002), p.3.

<sup>10</sup> Friedrich List, *The National System of Political Economy*, translated by Sampson S. Lloyd (New York: Longmans, Green & Co, 1909), p.295.

<sup>11</sup> State Intellectual Property Office, “Table 4 Distribution of Grants for Inventions Received from Home and Abroad”, available at [http://english.sipo.gov.cn/statistics/2011/12/201201/t20120116\\_641766.html](http://english.sipo.gov.cn/statistics/2011/12/201201/t20120116_641766.html) [Accessed October 16, 2013]; US Patent and Trademark Office, “U.S. Patent Statistics Chart: Calendar Years 1963–2012”, available at [http://www.uspto.gov/web/offices/ac/ido/oeip/tafus\\_stat.htm](http://www.uspto.gov/web/offices/ac/ido/oeip/tafus_stat.htm) [Accessed October 16, 2013].

<sup>12</sup> On Chinese scientific developments, see Benjamin A. Elman, *On Their Own Terms: Science in China, 1550–1900* (Cambridge, Mass.: Harvard University Press, 2005); Joseph Needham, *Science and Civilisation in China* (Cambridge: Cambridge University Press, 1956–2004), Vols 1–7; Robert Temple, *The Genius of China: 3,000 Years of Science, Discovery, and Invention* (New York: Simon and Schuster, 2007).

<sup>13</sup> Flora Wang, “An Overview of the Development of the Chinese Patent System” in Mark A. Cohen, A. Elizabeth Bang and Stephanie J. Mitchell (eds), *Chinese Intellectual Property Law and Practice* (The Hague: Kluwer Law International, 1999), p.3.

craftsmanship and sell their technical inventions or innovation ... [and] ... those who counterfeit will be punished.”<sup>14</sup>

A few decades later, in 1898, a late Qing emperor also attempted to introduce the Regulations to Promote Industrial Technology during the famous “Hundred Days Reform” toward the end of imperial dynastic rule.<sup>15</sup> As its name suggests, this ill-fated reform movement failed in only a few short months, causing its leaders to either be executed or retreat in exile.

At the turn of the 1900s, China finally introduced its first patent law, after much pressure from colonial powers and its foreign trading partners. In 1903, the United States used its military and economic power to induce China to sign the Treaty between the United States and China for the Extension of the Commercial Relations between Them. Building upon the newly-adopted Paris Convention for the Protection of Industrial Property (Paris Convention), to which the United States acceded less than two decades earlier, this treaty granted copyright, trademark and patent protection to Americans in return for reciprocal protection to the Chinese.<sup>16</sup> Although China also signed similar commercial treaties with Britain and Japan at around the same time, the 1903 US-China treaty remained the only agreement offering patent protection.<sup>17</sup>

Pursuant to this turn-of-the-century commercial treaty, China introduced a substantive patent law in 1912, the year after the fall of the last imperial dynasty in China. Titled the Provisional Regulations on Awards for Devices (Creations), the law offered foreign patent owners very limited protection despite what it stated on paper.<sup>18</sup> The law also came into existence under unique circumstances when China remained a semi-colony. As Peter Feng observed, substantive intellectual property protection arrived “with such inventions and novel ideas as the gunboat, opium, ‘most favoured nation’ trading status and extraterritoriality”.<sup>19</sup>

During the Republican era, which immediately followed the fall of the Qing dynasty, intellectual property rights managed to receive some legislative attention. Shortly after the Nationalist Party (*Guomindang*) took power in 1928, China introduced the Measures to Encourage Industrial Arts, which afforded protection to indigenous inventions.<sup>20</sup> Despite this effort, “the decades of incessant wars, famines and revolutions scarcely lent [intellectual property rights] a chance to take root in China”.<sup>21</sup> Although a new patent law was finally introduced in 1944, shortly before the end of the Second World War, the patent system never took off in mainland China following Guomindang’s retreat to Taiwan.<sup>22</sup> That system eventually became the Taiwanese patent system.

In 1949, the Chinese Communist Party established the People’s Republic of China. A year later, China introduced the Provisional Regulations Governing Invention and Patent Rights, which covered both inventors’ certificates (*faming zhengshu*) and patents.<sup>23</sup> Included in the regulations were provisions that allowed the State to take over patent rights in exchange for compensation. The adoption of these regulations led to the filing of the first Chinese patent, which was issued for a soda-making process.<sup>24</sup>

<sup>14</sup> Wang, “An Overview of the Development of the Chinese Patent System” in Cohen, Bang and Mitchell (eds), *Chinese Intellectual Property Law and Practice* (1999), p.3.

<sup>15</sup> Zheng Chengsi with Michael D. Pendleton, *Chinese Intellectual Property and Technology Transfer Law* (London: Sweet & Maxwell, 1987), p.52.

<sup>16</sup> William P. Alford, *To Steal a Book Is an Elegant Offense: Intellectual Property Law in Chinese Civilization* (Stanford: Stanford University Press, 1995), pp.37–38.

<sup>17</sup> Alford, *To Steal a Book Is an Elegant Offense* (1995), p.37.

<sup>18</sup> Zheng with Pendleton, *Chinese Intellectual Property and Technology Transfer Law* (1987), p.52.

<sup>19</sup> Peter Feng, *Intellectual Property in China*, 2nd edn (Hong Kong: Sweet & Maxwell Asia, 2003), p.3.

<sup>20</sup> Zheng with Pendleton, *Chinese Intellectual Property and Technology Transfer Law* (1987), p.52.

<sup>21</sup> Feng, *Intellectual Property in China* (2003), p.3.

<sup>22</sup> Peter Ganea and Thomas Patloch, *Intellectual Property Law in China* (The Hague: Kluwer Law International, 2005), p.2; Zheng with Pendleton, *Chinese Intellectual Property and Technology Transfer Law* (1987), p.52.

<sup>23</sup> On these regulations and other patent prototypes, see Barden N. Gale, “The Concept of Intellectual Property in the People’s Republic of China: Inventors and Inventions” (1978) 74 *China Q.* 334; Hsia Tao-tai and Kathryn A. Haun, “Laws of the People’s Republic of China on Industrial and Intellectual Property” (1973) 38 *Law & Contemp. Probs.* 274, 275–284.

<sup>24</sup> Zheng with Pendleton, *Chinese Intellectual Property and Technology Transfer Law* (1987), p.52. The patent was filed on October 20, 1950 and granted on April 1, 1953.

These regulations were quickly modified in 1954 with the enactment of the Provisional Regulations Concerning Awards for Inventions with Regard to Products, Technical Improvements and Rationalisation Proposals.<sup>25</sup> Between 1950 and 1963, “only four patents and six inventor certificates were granted”.<sup>26</sup> In December 1963, the regulations were once again replaced by the Regulations Concerning Awards for Inventions and the Regulations Concerning Awards for Technical Improvement Proposals.<sup>27</sup> Many of these regulations were direct transplants from the Soviet Union.

With the launch of the Cultural Revolution in the mid-1960s, formal law and administrative bureaucracy were denounced, and scientists, engineers and members of the intelligentsia were discredited, demoted or dismissed from their positions. In such a politico-judicial environment, there was understandably neither protection nor respect for any form of intellectual property right. As a comrade in China would question at that time:

“Is it necessary for a steel worker to put his name on a steel ingot that he produces in the course of his duty? If not, why should a member of the intelligentsia enjoy the privilege of putting his name on what he produces?”<sup>28</sup>

Given the sentiments at that time, it is therefore no surprise that the modern Chinese patent system was not established until after the Cultural Revolution. Nevertheless, it is worth noting that Chinese leaders began exploring the need for such a system even before the end of the Cultural Revolution. As Andrew Mertha recalled:

“As early as November 1973, after the Chinese delegation to the World Intellectual Property Organization ... returned to Beijing, delegation leader Ren Jiaxin, who would later become Chief Justice of China’s Supreme Court, proposed the establishment of a patent system in China. According to the *People’s Daily*,<sup>29</sup>

This was the first time that New China has sent representatives to an international conference related to intellectual property rights. At that time, many people in China found the term ‘Intellectual Property’ rather unfamiliar. The [China Council for the Promotion of International Trade (CCPIT)] had rendered it, for the first time, into the Chinese equivalent, *zhishi chanquan*.”

## Stage 1: Creation

The establishment of the modern Chinese patent system began after China re-opened its market to foreign trade in the late 1970s. Putting science and technology in command, as opposed to Mao Zedong’s “politics in command”, Chinese leaders, led by Deng Xiaoping, vigorously pushed for the Four Modernisations to develop China’s world-class strengths in agriculture, industry, science and technology, and national defence. The establishment of a modern patent system was considered an essential policy tool to help China play economic and technological catch-up. Professor Mertha recounted the development of events in chronological order:

“In 1978, on the eve of reform, the State Council charged the State Science and Technology Commission (SSTC) with developing a patent system for China. In March 1979, the drafting group of the Chinese Patent Law was established. [In June 1979, the Chinese Patent Office, or State Patent Bureau, was established, assuming the responsibilities of the drafting group.] On October 17 of the same year, the formal request for the establishment of a patent system in China was submitted to the

<sup>25</sup> Ganea and Pattloch, *Intellectual Property Law in China* (2005), p.3.

<sup>26</sup> Ganea and Pattloch, *Intellectual Property Law in China* (2005), p.3.

<sup>27</sup> Ganea and Pattloch, *Intellectual Property Law in China* (2005), p.3.

<sup>28</sup> Alford, *To Steal a Book Is an Elegant Offense* (1995), p.65.

<sup>29</sup> Andrew C. Mertha, *The Politics of Piracy: Intellectual Property in Contemporary China* (Ithaca: Cornell University Press, 2005), p.78.

State Council by the SSTC. On January 14, 1980, the State Council approved the request, and on March 3, China became a member of the World Intellectual Property Organization.”<sup>30</sup>

In July 1979, China and the United States signed the Agreement on Trade Relations between the United States of America and the People’s Republic of China. Among other things, the agreement called for reciprocal protection of copyrights, patents and trademarks owned by the nationals of the other party. Although China quickly began the drafting process,<sup>31</sup> both to promote economic development and to bring in foreign investment, the debate over a new patent law was rather intense and controversial.

To begin with, the concept of patents did not sit well with the socialist conditions on the ground in the early days of China’s re-opening. Translated literally as either “exclusive benefit” or “exclusive profit”,<sup>32</sup> the term “patent” (*zhuanli*) does not come with connotations of “openness” as found in “letters patent” (*litterae patentes*) in the West.<sup>33</sup> Indeed, the late Dr Arpad Bogsch, the long-time WIPO Director General, “suggested that some other Chinese terminology should have been employed to replace the two [existing] Chinese characters in order to avoid misunderstanding”.<sup>34</sup>

Even more complicated, other than a few regulations mentioned above and the system of inventors’ certificates based on the Soviet model, China did not have much of a modern patent system in place before its re-opening to foreign trade. As a result, the drafters of the new patent law had to start from scratch, and delegations were sent to foreign countries to observe, learn and borrow models.<sup>35</sup> A few agencies, such as the Ministry of Chemical Industry and the Ministry of Electronics Industry, were also “opposed to a shift away from the Soviet model with its inventors’ certificates”.<sup>36</sup>

In the end, two camps emerged. In one camp were those who believed that the development of the patent system would help China slowly catch up with developed countries. As Guo He put it:

“The prevailing opinions ... were that the patent system was a technical system with legal overtones which could be utilized by a socialist state, and that establishing a patent system in China would benefit the country.”<sup>37</sup>

These opinions made good sense because the country’s ill-advised import substitution policies had made the country technologically backward and the Cultural Revolution had caused the country to lose a decade of productivity, training and technological development.

In another camp were those who strongly opposed the development of patent law—at least, a modern patent law based on a Western model. Among their objections were the concern about establishing new private property interests in a socialist economic system, the belief that strong intellectual property protection was inappropriate for a developing country like China, the inexperience with Western forms of intellectual property protection, and potential security risks posed by a lack of access to key patented products and technologies.<sup>38</sup>

On March 12, 1984, the Chinese legislature eventually adopted the new patent law, after preparing 24 drafts.<sup>39</sup> Comprising 8 chapters and 69 articles and covering 3 different types of patents (invention patents,

<sup>30</sup> Mertha, *The Politics of Piracy* (2005), pp.81–82.

<sup>31</sup> The Working Group was established on March 13, 1979. Ganea and Pattloch, *Intellectual Property Law in China* (2005), p.3.

<sup>32</sup> Feng, *Intellectual Property in China* (2003), p.167; Ganea and Pattloch, *Intellectual Property Law in China* (2005), p.2. The late Zheng Chengsi traced this term back to “a very ancient historical record, ‘Guo-Yu,’ which was written some 3,000 years ago in the late Zhou Dynasty”. Zheng with Pendleton, *Chinese Intellectual Property and Technology Transfer Law* (1987), p.51.

<sup>33</sup> Oren Bracha, “The Commodification of Patents 1600–1836: How Patents Became Rights and Why We Should Care” (2004) 38 *Loy. L.A. L. Rev.* 177, 184–185; Zheng with Pendleton, *Chinese Intellectual Property and Technology Transfer Law* (1987), p.51.

<sup>34</sup> Zheng with Pendleton, *Chinese Intellectual Property and Technology Transfer Law* (1987), p.51.

<sup>35</sup> Maria C.H. Lin, “The Patent Law of the People’s Republic of China” (1985) 13 *AIPLA Q.J.* 107, 108. These countries included Australia, Brazil, France, Japan, Romania, Switzerland, the United States, West Germany and Yugoslavia.

<sup>36</sup> Mertha, *The Politics of Piracy* (2005), p.86.

<sup>37</sup> Guo He, “Patents” in Rohan Kariyawasam (ed.), *Chinese Intellectual Property and Technology Laws* (Cheltenham: Edward Elgar Publishing, 2011), p.25.

<sup>38</sup> Alford, *To Steal a Book Is an Elegant Offense* (1995), pp.66, 70; Mertha, *The Politics of Piracy* (2005), pp.84–86.

<sup>39</sup> Feng, *Intellectual Property in China* (2003), p.168.

design patents and utility model patents), the law entered into effect on April 1, 1985. On this first day, the newly established Chinese Patent Office received 3,455 applications, a number that set the world record.<sup>40</sup> In that same year, China also joined the PCT, which streamlined the early stages of the patent application process while allowing Chinese nationals to file applications simultaneously in multiple jurisdictions.

Notwithstanding these exciting developments, the effectiveness of the 1984 Patent Law was greatly limited by a lack of experience with patent protection, the uneasiness about introducing private rights in a socialist environment and a myriad of compromises struck in the drafting process. As William Alford observed, the law was primarily designed to promote “socialist legality with Chinese characteristics”.<sup>41</sup> For example, art.25 excluded “foodstuffs, medicines, chemicals, and substances relating to nuclear fission”, similar to the exclusions found in the patent laws of India and other developing countries.<sup>42</sup> To respond to the concern that state enterprises could not own rights that belong to the people, the law also distinguished between those who “hold” (*chiyou*) rights and those who “own” (*yongyou*) rights.<sup>43</sup> While individual inventors could own rights, state enterprises could only hold rights.<sup>44</sup> That distinction slowly evolved away in Stages 2 and 3, both of which will be discussed further below.

Moreover, despite granting rights to individual inventors, the law imposed severe limits that rendered the original grants largely insignificant. Although art.6 granted patent protection to “job-related invention-creation”, it limited ownership to the work unit (*danwei*), the enterprise or the joint venture. The implementing regulations further defined the term “job-related invention-creations” broadly to encompass virtually anything made on or in relation to one’s job while using materials or data from one’s unit, or within a year of leaving that unit.<sup>45</sup> Given the importance of a work unit in a socialist economy (which provided workers with housing, welfare benefits, social context and employment) and the difficulty in securing sophisticated equipment or sizable capital in the early 1980s, the provision had effectively frustrated individuals from holding job-related patents in their own names.

It is therefore no surprise that the protection of job-related patents has remained controversial since the drafting of the 1984 Patent Law. As the late Zheng Chengsi recounted:

“Between 1990 and 1995, the Chinese Patent Office held a series of expert meetings for the purpose of drafting a document called ‘Regulations concerning Job-Related Inventions’. This document has never been finalised because there has been too much debate among experts from different interest groups.”<sup>46</sup>

In sum, the 1984 Patent Law provided an important first step toward the development of the modern Chinese patent system. This first step also provided us with important insight into how Chinese intellectual property laws would have been developed without the influence of its trading partners. As Andrew Mertha observed:

“the first ten years in the development of China’s patent regime provide a window into the natural evolution of IPR [intellectual property rights] in China, at least until the early 1990s”.<sup>47</sup>

Nevertheless, foreign patent owners received very limited protection under the law. In fact, the rights delineated in the law were so restrictive that Chinese scholars began discussing a revision “[a]lmost as

<sup>40</sup> Feng, *Intellectual Property in China* (2003), p.168.

<sup>41</sup> Alford, *To Steal a Book Is an Elegant Offense* (1995), p.70.

<sup>42</sup> Mertha, *The Politics of Piracy* (2005), p.82.

<sup>43</sup> Feng, *Intellectual Property in China* (2003), pp.191–193.

<sup>44</sup> Feng, *Intellectual Property in China* (2003), p.169; Ganea and Pattloch, *Intellectual Property Law in China* (2005), pp.6–7.

<sup>45</sup> Alford, *To Steal a Book Is an Elegant Offense* (1995), p.71.

<sup>46</sup> Zheng Chengsi, *Intellectual Property Enforcement in China: Leading Cases and Commentary* (Hong Kong: Sweet & Maxwell Asia, 1997), pp.89–90.

<sup>47</sup> Mertha, *The Politics of Piracy* (2005), p.77.

soon as the [law] came into force”.<sup>48</sup> The opportunity for revision, however, did not arise until a few years later when China was under heavy external pressure to revamp its intellectual property system.

## Stage 2: Imitation and transplantation

Shortly after the enactment of the 1984 Patent Law, the United States and other foreign countries began to exert greater pressure on China to undertake further reform of its intellectual property system. While American firms showed patience shortly after China’s re-opening, their patience soon dissipated. As Warren Maruyama, the former general counsel of the US Trade Representative (USTR), recounted:

“At a 1985 meeting to the U.S.-China Joint Committee on Commerce and Trade (JCCT), the U.S. for the first time expressed concerns about weak Chinese IPR standards. In 1987, the U.S. put IPR protection on the agenda for U.S.-China market access talks.”<sup>49</sup>

At that time, the United States’ main intellectual property concern was copyrights, not patents. Although China introduced its first trademark and patent laws in 1982 and 1984, respectively, it has yet to introduce a new copyright law. Part of the delay was caused by the need for censorship and control of information flows in China. The lack of copyright protection was particularly problematic, as a lack of both copyright protection and market access had made it difficult for the politically powerful US movie, music and software industries to protect their content.

Since the mid-1980s, the entertainment industries had actively lobbied the USTR to put more pressure on China to reform its intellectual property system. In the late 1980s and the early 1990s, the US Government repeatedly threatened China with a series of economic sanctions, trade wars, non-renewal of most-favoured-nation status and opposition to China’s entry into the WTO.<sup>50</sup> Such threats eventually led to the signing of two memoranda of understanding in 1989 and 1992. The 1989 memorandum was seldom mentioned because it was negotiated amidst student protests in Tiananmen Square.<sup>51</sup> Although that memorandum reassured the United States that China would strengthen protection for computer software, the 1992 memorandum was the “first full bilateral IPR agreement” between China and the United States.<sup>52</sup> In retrospect, the latter memorandum has been rather effective in revamping the Chinese intellectual property system.

Much of the 1992 memorandum concerned efforts in the copyright area. These efforts included accession to the Berne Convention for the Protection of Literary and Artistic Works, ratification of the Geneva Convention for the Protection of Producers of Phonograms against Unauthorized Duplication of Their Phonograms, and the introduction of software regulations. Notwithstanding this primary focus, the memorandum also included provisions in the patent area. For example, both arts 1 and 2 of the memorandum provided detailed provisions on patent reforms demanded by the United States.

In 1993, China adopted the First Amendment to the Patent Law. This amendment expanded the scope of protection to cover foodstuffs, beverages, condiments and medicines.<sup>53</sup> It further extended protection from only processes to both processes and products, an issue of high importance to the US pharmaceutical industry.<sup>54</sup> In addition, the amendment extended the term of protection for invention patents from 15 to

<sup>48</sup> Feng, *Intellectual Property in China* (2003), p.171.

<sup>49</sup> Warren H. Maruyama, “U.S.-China IPR Negotiations: Trade, Intellectual Property, and the Rule of Law in a Global Economy” in Cohen, Bang and Mitchell (eds), *Chinese Intellectual Property Law and Practice* (1999), p.186.

<sup>50</sup> Peter K. Yu, “From Pirates to Partners: Protecting Intellectual Property in China in the Twenty-first Century” (2000) 50 *Am. U. L. Rev.* 131, 140–151.

<sup>51</sup> This memorandum was reprinted in “PRC Agrees to Push for Copyright Law that Will Protect Computer Software” *World Intellectual Property Report*, July 1989, p.151.

<sup>52</sup> Joseph A. Massey, “The Emperor Is Far Away: China’s Enforcement of Intellectual Property Rights Protection, 1986–2006” (2006) 7 *Chi. J. Int’l L.* 231, 235.

<sup>53</sup> Chinese Patent Law 1993 art.25.

<sup>54</sup> Chinese Patent Law 1993 art.11.

20 years.<sup>55</sup> It also added provisions for the right to import<sup>56</sup> while converting a three-month pre-grant opposition procedure to a six-month post-grant invalidation procedure.

Because the amended Patent Law was drafted in response to external pressure from the United States, it offered foreign patent holders much stronger protection than the 1984 Patent Law. Nevertheless, the protection under the Chinese patent system remained insufficient, and it took at least another round of reform before the law became largely compliant with the standards of the World Trade Organization (WTO) and its Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS Agreement).

### Stage 3: Standardisation and customisation

In 2000, China again amended its patent law. A major motivation behind this amendment was China's accession to the WTO. China had been petitioning for membership since the founding of this international trading body. After exhaustive negotiations for more than 15 years, China was finally admitted to the WTO on December 11, 2001. Among all the three major branches of intellectual property law, the patent law was the first to be revised.

Shortly before the adoption of the Second Amendment in August 2000, the Chinese Patent Office was renamed the State Intellectual Property Office (SIPO), with Dr Gao Lulin serving as its founding director. Although such reorganisation did not enable the office to expand its mandate to cover copyright and trademark matters, or earn the coveted title of "General Administration" (*zongshu*), the renaming indicates the growing importance of patents in China's economic plan. By elevating SIPO to a vice-ministerial level agency that directly reports to the State Council,<sup>57</sup> SIPO also avoids the challenging experience of bouncing back and forth among the State Council, the State Economic Commission (SEC) and SSTC. As Andrew Mertha recalled:

"[T]he Patent Bureau was constantly being transferred from one administrative 'host' unit to another during its relatively brief lifetime—from the SSTC to the SEC to the SSTC to the State Council, all in the space of thirteen years".<sup>58</sup>

On July 1, 2001, the Second Amendment entered into effect. Pursuant to this new amendment, the law prohibited the "offers for sale" of products that infringe upon invention patents and utility models, consistent with art.28.1 of the TRIPS Agreement.<sup>59</sup> The amended law also tightened the standards for obtaining a compulsory license as permissible under art.31 of the Agreement.<sup>60</sup> In addition, it allowed for the judicial review of patent invalidations pursuant to art.41.4 of the TRIPS Agreement.<sup>61</sup> The law further simplified the application procedures while eliminating the unnecessary duplication of the patent invalidation and revocation processes.<sup>62</sup>

Moreover, the amended law clarified protection of an employee's invention by stating that the right to apply for a patent in such an invention belonged to the employer unless a contrary agreement existed<sup>63</sup>—an ongoing issue predating even the 1984 Patent Law. To strengthen protection for both local and foreign rights holders, the law further required innocent infringers to prove the legitimate source of the patented

<sup>55</sup> Chinese Patent Law 1993 art.45.

<sup>56</sup> Chinese Patent Law 1993 art.11.

<sup>57</sup> Martin K. Dimitrov, *Piracy and the State: The Politics of Intellectual Property Rights in China* (Cambridge: Cambridge University Press, 2009), p.254.

<sup>58</sup> Mertha, *The Politics of Piracy* (2005), p.90.

<sup>59</sup> Chinese Patent Law 2000 art.11.

<sup>60</sup> Chinese Patent Law 2000 arts 48–50.

<sup>61</sup> Chinese Patent Law 2000 art.46.

<sup>62</sup> Chen Jiwen, "Better Patent Law for International Commitment—The Amendment of Chinese Patent Law" (2001) 2 Rich. J. Global L. & Bus. 61, 67–70; Sun Haitao, "Post-Grant Patent Invalidation in China and in the United States, Europe, and Japan: A Comparative Study" (2004) 15 Fordham Intell. Prop. Media & Ent. L.J. 273, 286.

<sup>63</sup> Chinese Patent Law 2000 art.6.

product.<sup>64</sup> Where damages could not be determined, the amended law allowed for the calculation of damages based on appropriate royalties.<sup>65</sup>

For most observers, the Second Amendment was adopted to conform the Chinese patent system to WTO standards. The need for such conformity was understandable considering China's willingness to make significant sacrifices to join the WTO. As Samuel Kim put it, China was eager "to gain WTO entry at almost any price".<sup>66</sup> Indeed, many Chinese leaders and members of the public considered the WTO membership as not only an economic issue, but also an issue affecting national pride. In their view, the accession to the WTO concerns China's rightful place in the world after experiencing "a century of humiliation", during which foreign imperial powers literally carved the country up into a semi-colony.

Notwithstanding the importance of conforming to WTO standards, many provisions in the Second Amendment were introduced primarily to respond to the country's rapidly-changing local conditions (*guoqing*).<sup>67</sup> The Amendment indeed was as much about customisation as it was about standardisation. It also highlighted the impact of local conditions on the Chinese patent system, reflecting the Chinese leaders' changing attitude toward the rule of law, the emergence of private property rights and local stakeholders, the increasing concerns about ambiguities over relationships in state-owned enterprises and the government's active push for modernisation.<sup>68</sup>

For instance, the Second Amendment focused on simplifying the application procedures and eliminating the duplication of the patent invalidation and revocation processes, even though the TRIPS Agreement does not have similar requirements. The clarification over the protection for employee's inventions also clearly reflected the changing nature of China's economic conditions, in which a large number of employees of state-owned enterprises had entered the private sector—or, in Chinese parlance, "plunged into the sea" (*xiahai*). Those conditions were very different from the 1980s and early 1990s, when state-owned enterprises dominated the Chinese economy.

In sum, the Second Amendment provided a timely update to the Chinese patent system. Internationally, it addressed the concern of the WTO and many of its members, in particular the United States, over inconsistent standards of intellectual property protection and enforcement. Domestically, the amendment enabled the country to make legislative and policy adjustments that directly responded to the rapidly-changing economy while providing a platform for enhancing technological and innovative capabilities.

## Stage 4: Indigenisation

While China was debating over which provision was to be included in the Third Amendment to the Patent Law, it also began actively pursuing an intellectual property agenda. In June 2008, the State Council introduced a pioneering National Intellectual Property Strategy. This strategy provided a comprehensive plan to improve the protection and management of intellectual property rights while emphasising the need for active development of independent or self-controlled intellectual property (*zizhu zhishi chanquan*).<sup>69</sup>

A few months later, China adopted the Third Amendment, completely revamping its patent system for the third time. Like the early 2000s, the patent law was the first to be revised. Such revision reflected the country's growing emphasis on using patents to help develop a knowledge-based economy. Unlike the previous two amendments, however, compliance with WTO or other multilateral norms played a rather

<sup>64</sup> Chinese Patent Law 2000 art.63.

<sup>65</sup> Chinese Patent Law 2000 art.60.

<sup>66</sup> Samuel S. Kim, "China in World Politics" in Barry Buzan and Rosemary Foot (eds), *Does China Matter? A Reassessment: Essays in Memory of Gerald Segal* (London: Routledge, 2004), p.49.

<sup>67</sup> Peter K. Yu, "From Pirates to Partners (Episode II): Protecting Intellectual Property in Post-WTO China" (2006) 55 Am. U. L. Rev. 901, 914–923.

<sup>68</sup> Yu, "From Pirates to Partners (Episode II)" (2006) 55 Am. U. L. Rev. 901, 908.

<sup>69</sup> State Council, *Compendium of China National Intellectual Property Strategy* (Beijing, 2008), para.7.

insignificant role. For the first time, China adjusted its patent system based on its own needs, rather than constraints imposed by the international community. As Professor Guo observed:

“The impetus for the early amendments came from outside, whilst the need for the third amendment originated from within China, that is to say, the majority of the third amendment was to meet the needs of the development of the domestic economy and technology originating in China”.<sup>70</sup>

Pursuant to the Third Amendment, the Patent Law adopts the absolute novelty standard and introduces provisions concerning the protection of genetic resources. In response to the protocol to amend the TRIPS Agreement by adding art.31*bis*, to which China acceded on November 28, 2007, the law provides new grounds for granting compulsory licenses.<sup>71</sup> The law also clarifies double patenting concerns over the filing of both an invention patent and a utility model patent. Under the amended law, an inventor can hold a single patent, but not both an invention patent and a utility model patent.<sup>72</sup>

Moreover, the amended law increased the amount of damages and fines, including statutory damages, within the Chinese patent system.<sup>73</sup> It also allows for parallel importation and introduces the Chinese equivalent of a Bolar exception, which enables generic pharmaceutical producers to import, manufacture or test a patented product prior to the expiry of the patent “for the purpose of providing information required for administrative examination and approval”.<sup>74</sup> Finally, the law abolished the provisions concerning foreign patent agencies,<sup>75</sup> which foreign inventors were required to use.

Notwithstanding this latest amendment, the levels of protection and enforcement of intellectual property rights in China have yet to completely satisfy foreign rights holders and their supportive governments. Virtually every year, the USTR puts China on its Watch List or Priority Watch List.<sup>76</sup> Such designation is alarming, but not as alarming as the priority foreign country status China used to get in the early 1990s. The piracy and counterfeiting problems in China remain the target of new international intellectual property enforcement initiatives, which range from ACTA and the Trans-Pacific Partnership Agreement to domestic legislation such as the Stop Online Piracy Act (SOPA) and the PROTECT IP Act (PIPA). In a recent report, the International Trade Commission estimated that

“firms in the U.S. [intellectual property]-intensive economy that conducted business in China in 2009 reported losses of approximately \$48.2 billion in sales, royalties, or license fees due to IPR infringement in China”.<sup>77</sup>

Although the level of intellectual property protection in China has yet to satisfy the United States, the protection and enforcement of intellectual property rights has dramatically improved in the past decade. In fact, the biggest challenge for intellectual property rights holders in China today is no longer about the low standards of protection, but the limited effectiveness in enforcement.<sup>78</sup> Such enforcement problems are well illustrated by the complaint the United States filed before the WTO Dispute Settlement Body in April 2007. Although the complaint did not focus on China’s obligations in the patent area, it implicated customs and criminal provisions that are relevant to patent protection.<sup>79</sup>

<sup>70</sup> Guo, “Patents” in Kariyawasam (ed.), *Chinese Intellectual Property and Technology Laws* (2011), p.28.

<sup>71</sup> Chinese Patent Law 2008 art.48.

<sup>72</sup> Chinese Patent Law 2008 art.9.

<sup>73</sup> Chinese Patent Law 2008 art.65.

<sup>74</sup> Chinese Patent Law 2008 art.69.

<sup>75</sup> Chinese Patent Law 2008 art.19.

<sup>76</sup> The notable exception is during the honeymoon period following China’s accession to the WTO in December 2001. In April 2005, the USTR elevated China back to the Priority Watch List.

<sup>77</sup> US International Trade Commission, *China: Effects of Intellectual Property Infringement and Indigenous Innovation Policies on the U.S. Economy* (Washington, 2011), p.xiv.

<sup>78</sup> Office of the US Trade Representative, *2005 National Trade Estimate Report on Foreign Trade Barriers* (Washington, 2005), p.95.

<sup>79</sup> On further discussions of the dispute, see Peter K. Yu, “TRIPS Enforcement and Developing Countries” (2011) 26 *Am. U. Int’l L. Rev.* 727; Peter K. Yu, “The TRIPS Enforcement Dispute” (2011) 89 *Neb. L. Rev.* 1046.

## Stage 5: What next?

Since the mid-2000s, the Chinese Government has begun to pay greater attention to the development of an innovation- and knowledge-based economy. Such a focus was greatly needed to facilitate continued economic growth in areas that could no longer rely on either agriculture or manufacturing. By changing the focus of its development strategy, China also seeks to avoid what policy makers and commentators have described as the “middle-income trap”.<sup>80</sup>

In addition, a stronger focus on patent developments fits within the incremental approach that Chinese leaders have carefully implemented over the years. In the National Long-term Scientific and Technological Development Program released in February 2006, the State Council formally declared its commitment to turn China into an innovation-based economy within 15 years.<sup>81</sup> Since then, top Chinese leaders have increasingly recognised the economic and strategic importance of a well-functioning intellectual property system. For example, President Hu Jintao remarked in the Group Study of the Political Bureau of the Central Committee of the Chinese Communist Party in May 2006:

“Strengthening the building of China’s system of intellectual property right and vigorously upgrading the capacity of creation, management, protection and application regarding intellectual property are our urgent need for the purpose of enhancing independent and self-driven innovation capabilities and building an innovation-oriented country.”<sup>82</sup>

Likewise, Premier Wen Jiabo observed:

“One thing necessary to stress is the need to concretely strengthen IP [intellectual property] protection. In the new era, global science and technology competition, as well as economic competition, is primarily a competition of IP rights. Promoting IP protection therefore promotes and inspires innovation.”<sup>83</sup>

Taking the lead of these Chinese leaders, SIPO set very ambitious goals for its National Patent Development Strategy (2011–2020). Included in the 2015 goals were the following targets:

“The annual quantity of applying for patents for inventions, utility models and designs will reach 2 million. China will rank among the top two in the world in terms of the annual number of patents for inventions granted to the domestic applicants, and the quality of patents filed will further improve. The number of owning patents every one million people and the number of overseas patent applications filed by Chinese applicants will double. The proportion of patent applications in industrial enterprises above designated size will reach 8% and the quantity of owning patent rights will significantly rise period.... The patent transaction services will be established in major cities of China with annual patent transaction amounts reaching 100 billion yuan.... The patent examiner[s] will reach 9,000.... The talents in the patent service industry will be greater and the professional categories will be more complete, with certified patent agents reaching 10,000.”<sup>84</sup>

In addition, SIPO has been very active in developing professional ties with patent offices from around the world. In 2007, for example, its officials met with their counterparts from the European Patent Office,

<sup>80</sup> Peter K. Yu, “The Middle Intellectual Property Powers” in Randall Peerenboom and Tom Ginsburg (eds), *Law and Development in Middle-Income Countries: Avoiding the Middle-Income Trap* (Cambridge: Cambridge University Press, 2014).

<sup>81</sup> Cao Cong, Richard P. Suttmeier and Denis Fred Simon, “China’s 15-Year Science and Technology Plan” *Physics Today*, December 2006, p.38; Feng Xiaoqing, “The Interaction between Enhancing the Capacity for Independent Innovation and Patent Protection: A Perspective on the Third Amendment to the Patent Law of the P.R. China” (2008) 9 *Pitt. J. Tech. L. & Pol’y* 1, para.7; Mark Liang, “Chinese Patent Quality: Running the Numbers and Possible Remedies” (2012) 11 *J. Marshall Rev. Intell. Prop. L.* 478, 483–484.

<sup>82</sup> Wu Handong, “One Hundred Years of Progress: The Development of the Intellectual Property System in China” (2009) 1 *WIPO J.* 117, 120.

<sup>83</sup> State Intellectual Property Office, “China’s Intellectual Property Protection in 2008”, available at [http://english.sipo.gov.cn/laws/whitepapers/200904/t20090427\\_457167.html](http://english.sipo.gov.cn/laws/whitepapers/200904/t20090427_457167.html) [Accessed October 16, 2013].

<sup>84</sup> State Intellectual Property Office, *National Patent Development Strategy (2011–2020)* (Beijing, 2011), pp.4–5, available in English at <http://graphics8.nytimes.com/packages/pdf/business/SIPONatPatentDevStrategy.pdf> [Accessed October 16, 2013].

the Japanese Patent office, the Korean Intellectual Property Office and the United States Patent and Trademark Office to discuss ways to “improv[e] the efficiency of their examination systems and to harmonize their office systems”.<sup>85</sup> These so-called “IP5” discussions, which are ongoing and progressing, further strengthen SIPO’s status as “a player in the top tier of patent offices that will dominate the emerging system of global patent administration”.<sup>86</sup> Such a strengthened status is no surprise, considering that the Chinese Patent Office, and later SIPO, has served as an international searching authority for PCT purposes since 1994.<sup>87</sup>

While questions remain concerning what a country could do with two million patents per year and whether such ambitious goals would result in low patent quality,<sup>88</sup> it is hard not to be amazed by the quick turnaround China has experienced in the intellectual property arena in less than three decades. Although the country did not have a modern patent system before 1984, it is now on track to become the world’s leader in both domestic and international patent applications. When questioned by *The New York Times* about SIPO’s 2015 targets, David Kappos, the former director of the United States Patent and Trademark Office, could not help but describe those numbers as “mind-blowing”.<sup>89</sup>

As of this writing, it is too soon to assess the impact of the Third Amendment or the efforts generated by the 2008 National Intellectual Property Strategy. Nevertheless, it is not difficult to notice China’s continued innovation in developing its patent ladder. Although China used this ladder to catch up with developed countries, this ladder has now been transformed into a strategic tool that helps China to climb to a much higher place—a place that it hopes will be higher than the positions of many developed countries.

## Lessons for the developing world

If one pays close attention to the recent developments in the Chinese patent system, one can notice China’s eagerness to recruit “builders” and “designers” to develop a ladder that not only meets international standards, but also is “Made in China” and “Created in China”.<sup>90</sup> To some extent, the debate on the Chinese patent system has raised the same question that has repeatedly come up in recent debates concerning China’s role in the international policy arena: Does Beijing provide an attractive alternative model for other developing countries that are struggling to catch up economically and technologically in the present international economic system?<sup>91</sup>

More importantly, what lessons does the historical development of the Chinese patent system provide? To be certain, this development was the result of a confluence of factors, many of which are unique to China and therefore cannot be replicated abroad. As Deng Xiaoping reminded Ghana President Jerry Rawlings in 1985:

“Please don’t try to copy our model. If there is any experience on our part, it is to formulate policies in light of one’s own national conditions.”<sup>92</sup>

Nevertheless, the developments in China do offer five important lessons for other countries in the developing world.

<sup>85</sup> Peter Drahos, *The Global Governance of Knowledge: Patent Offices and Their Clients* (Cambridge: Cambridge University Press, 2010), p.236.

<sup>86</sup> Drahos, *The Global Governance of Knowledge* (2010), p.233.

<sup>87</sup> Drahos, *The Global Governance of Knowledge* (2010), p.233.

<sup>88</sup> Liang, “Chinese Patent Quality” (2012) 11 J. Marshall Rev. Intell. Prop. L. 478; Dan Prud’homme, *Dulling the Cutting-Edge: How Patent-Related Policies and Practices Hamper Innovation in China* (Shanghai: European Union Chamber of Commerce, 2012); Peter K. Yu, “Five Oft-repeated Questions about China’s Recent Rise as a Patent Power” [2013] *Cardozo L. Rev. De Novo* 78, 81–88.

<sup>89</sup> Steve Lohr, “When Innovation, Too, Is Made in China” *New York Times*, January 2, 2011, p.3.

<sup>90</sup> On China’s eagerness to transform its industries, products and services from “Made in China” to “Created in China”, see Michael Keane, *Created in China: The Great New Leap Forward* (London: Routledge, 2007); Li Yahong, *Imitation to Innovation in China: The Role of Patents in Biotechnology and Pharmaceutical Industries* (Cheltenham: Edward Elgar Publishing, 2010).

<sup>91</sup> Peter K. Yu, “Sinic Trade Agreements” (2011) 44 U.C. Davis L. Rev. 953, 1018–1022.

<sup>92</sup> Justin Yifu Lin, *The Quest for Prosperity: How Developing Economies Can Take Off* (Princeton: Princeton University Press, 2012), p.xvii.

First, a one-size-fits-all model does not work well at the global level, and retaining policy space is essential to the successful development of a country's patent system. As commentators have widely noted, overprotecting intellectual property rights can harm a country as much as underprotecting them.<sup>93</sup> While policy makers and industry leaders from intellectual property-exporting countries are eager to offer policy advice on how best to improve the patent system, policy makers from developing countries should pay close attention to their countries' local needs, national interests, technological capabilities, institutional capacities and public health conditions.<sup>94</sup>

If anything, the evolution of the Chinese patent system has revealed the need for policy makers to take an incremental, pragmatic approach toward establishing a well-functioning patent system. Such development strongly resembles China's developments in other areas. The defining feature of the Chinese model—or what some commentators have described as the Beijing Consensus<sup>95</sup> or, more modestly, the Beijing Proposal<sup>96</sup>—is not a definitive formula of success. Rather, it is the leaders' pragmatic approach to “groping for stones to cross the river”<sup>97</sup> (*mozhe shitou guohe*) and their willingness to consider a wide variety of options.<sup>98</sup>

Secondly, and relatedly, countries should maximise the flexibilities available in the existing international patent system. To be certain, the policy space available under today's system is much more limited than what was available in the system's early days. When the Paris Convention was first established more than a century ago, countries could decide whether to offer patent protection without worrying about losing their membership.<sup>99</sup> That choice, however, disappeared with the arrival of the TRIPS Agreement and its international minimum standards. The establishment of TRIPS-plus bilateral, plurilateral, and regional trade, investment and intellectual property agreements has limited the policy choices even further.

Notwithstanding these growing constraints, some policy space still exists in the present system. For example, countries could still decide whether they want to promote the development of utility models, prohibit patent grants on second indications or introduce public interest exceptions into their laws.<sup>100</sup> They could also explore the use of alternative models to generate incentives for inventors.<sup>101</sup> In China, for example, the utility model patent

“was set up to invite broader participation in inventive enterprises, especially by smaller collective enterprises and private citizens who are less likely to have resources devoted to invention patents”.<sup>102</sup>

Thirdly, countries that dare to develop their patent system at different paces or in different directions than what major intellectual property-exporting countries expect will likely be heavily criticised as pirating nations, or even “rogue” players in the international intellectual property community. The USTR's notorious s.301 process easily comes to mind.<sup>103</sup> Even today, China continues to be criticised for not only its widespread piracy and counterfeiting problems but also the quality of its patent system.<sup>104</sup> For small countries that heavily depend on aid and support from developed countries, it will be very difficult for them to withstand external pressure to reform their patent systems.

<sup>93</sup> *White v Samsung Electronics America Inc* 989 F.2d 1512, 1513 (9th Cir 1993) (Kozinski J, dissenting); Ian Hargreaves, *Digital Opportunity: A Review of Intellectual Property and Growth* (Newport: UK Intellectual Property Office, 2011), p.51; Josh Lerner, “The Patent System in a Time of Turmoil” (2010) 2 WIPO J. 28, 32.

<sup>94</sup> Peter K. Yu, “The International Enclosure Movement” (2007) 82 Ind. L.J. 827, 886–892.

<sup>95</sup> On the Beijing Consensus, see Stefan A. Halper, *The Beijing Consensus: How China's Authoritarian Model Will Dominate the Twenty-first Century* (New York: Basic Books, 2010); Joshua Cooper Ramo, *The Beijing Consensus* (London: Foreign Policy Centre, 2004).

<sup>96</sup> Hu Angang, *China in 2020: A New Type of Superpower* (Washington: Brookings Institution Press, 2011), p.17.

<sup>97</sup> Yu, “Sinic Trade Agreements” (2011) 44 U.C. Davis L. Rev. 953, 1006.

<sup>98</sup> William H. Overholt, *Asia, America, and the Transformation of Geopolitics* (Cambridge: Cambridge University Press, 2007), p.118.

<sup>99</sup> Peter K. Yu, “International Enclosure, the Regime Complex, and Intellectual Property Schizophrenia” [2007] Mich. St. L. Rev. 1, 4.

<sup>100</sup> Yu, “The International Enclosure Movement” (2007) 82 Ind. L.J. 827, 863–866.

<sup>101</sup> Peter K. Yu, “Intellectual Property and Human Rights in the Nonmultilateral Era” (2012) 64 Fla. L. Rev. 1045, 1077–1078.

<sup>102</sup> Feng, *Intellectual Property in China* (2003), p.170.

<sup>103</sup> Yu, “From Pirates to Partners” (2000) 50 Am. U. L. Rev. 131, 140–154.

<sup>104</sup> Liang, “Chinese Patent Quality” (2012) 11 J. Marshall Rev. Intell. Prop. L. 478; Prud'homme, *Dulling the Cutting-Edge* (2012).

Fourthly, there seems to be a “crossover point” at which countries go from a pirating nation to a nation respectful of patent rights.<sup>105</sup> As I noted in the inaugural issue of this *Journal*, such crossover took place in many once-developing countries, including the United States, Germany, Japan, Singapore and South Korea.<sup>106</sup> China’s recent improvements in the patent area also suggest that the country will now follow the well-treaded path of other once-developing countries. Thus, even though many developing countries still have an underdeveloped patent system today, they will be in a good position to offer much stronger protection and enforcement as social, economic and technological conditions improve.

Finally, there is no quick and easy solution to the massive piracy problems confronting developing countries. It took developed countries centuries to develop their patent system to its current stage. Considered by most commentators as the world’s oldest, the Venetian patent system was established in 1474, more than half a millennium ago. The British Statute of Monopolies came into existence in 1623, while the first US patent law was enacted in 1790. While it took China only three decades to build its present patent system from the ground up—a feat that no country has ever achieved—its many remaining problems and frequent and continued revisions suggest that China still has a long way to go before its patent system achieves maturity.

Thus, even though government leaders, policy makers and industry executives are often frustrated by the lack of progress in the Chinese intellectual property system—or, for that matter, the intellectual property system in other emerging countries—they need to think hard about what timeframe would be realistic for a country to develop a well-functioning patent system. After all, if it took a highly centralised country like China more than 30 years to develop such a system, is it realistic to expect a smaller, less centralised and less resourceful country to achieve the same feat in such a short period of time? If such development is indeed unrealistic, does it make sense for the current intellectual property powers to continue to rely solely or primarily on external pressure to drive improvements in the intellectual property system?

## Conclusion

In the past three decades, China has been very careful in building a patent ladder to foster economic prosperity and technological proficiency. Although its path has been rugged and it remains subjected to pressure from countries that have already walked through that path, China has finally managed to turn its patent system around. Today, there is no denying that China has slowly emerged as a patent power, with not only the highest quantity of patent filings in the world, but also increasing assertiveness in international norm-setting activities.<sup>107</sup> The Chinese patent system is important not only because it developed at an unprecedented pace, but also because it provides many valuable lessons for other countries in the developing world.

Close to a century ago, Justice Oliver Wendell Holmes wrote, “a page of history is worth a volume of logic”.<sup>108</sup> History, however, does not end on a single page. It comes back to haunt us in hundreds of volumes. More importantly, history loves to repeat itself. It is not “just one fucking thing after another”, as playwright Alan Bennett reminded us colourfully and memorably in *The History Boys*.<sup>109</sup> History has a penchant for reinforcing the logic to which Justice Holmes alluded. As philosopher George Santayana rightly cautioned us, “Those who cannot remember the past are condemned to repeat it.”<sup>110</sup>

Today, history remains one of the most favourite pastimes of intellectual property scholars. From conducting archive-based research to publishing scholarly literature to participating in symposia in specialised journals, these scholars have devoted a considerable amount of time, effort, energy and resources

<sup>105</sup> Peter K. Yu, “The Global Intellectual Property Order and Its Undetermined Future” (2009) 1 WIPO J. 1, 10–15.

<sup>106</sup> Yu, “The Global Intellectual Property Order and Its Undetermined Future” (2009) 1 WIPO J. 1, 13.

<sup>107</sup> Peter K. Yu, “The Middle Kingdom and the Intellectual Property World” (2011) 13 Or. Rev. Int’l L. 209, 237–258.

<sup>108</sup> *New York Trust Co v Eisner* 256 U.S. 345, 349 (1921).

<sup>109</sup> Alan Bennett, *The History Boys* (New York: Faber and Faber, 2004), p.85.

<sup>110</sup> George Santayana, *The Life of Reason: Or the Phases of Human Progress* (New York: Charles Scribner’s Sons, 1932), p.232.

to studying intellectual property history. History has provided us with important lessons and directions for both the present and the future. As *The WIPO Journal* celebrates its fifth anniversary and looks forward to the future, I invite you to join us in reflecting on the past through the many interesting articles a highly select group of contributors have put together. I hope you will enjoy this special issue.