



POINT

An institution-based view of global IPR history

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Abstract

Leveraging the use of history to advance international business research, this article focuses on the crucial debate over intellectual property rights (IPR) between the United States and China. Ironically, during the 19th century the United States was not a leading IPR advocate as it is today, but was a leading IPR violator. Developing an institution-based view of IPR history, we identify three underlying theoretical mechanisms that help to explain IPR in the two countries – path dependence, long-term processes, and institutional transitions. We argue that both the US refusal to protect foreign IPR in the 19th century and the current Chinese lack of enthusiasm to meet US IPR demands embody rational responses to their respective situations. However, given long-term processes with intensifying isomorphic pressures, institutional transitions in favor of better IPR protection are quite possible. Finally, going above and beyond these two countries, we draw on the IPR history in over ten other countries to develop a more globally generalizable framework, which in turn contributes to the key question of how history matters.

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INTRODUCTION

Most international business (IB) scholars are likely to agree that “history matters” (Jones & Khanna, 2006). Yet how does history matter? How can we use history to build and improve theory? There is somewhat less agreement among scholars regarding these questions (Christensen, 2006; Evans, 2000; Gaddis, 2002). This article endeavors to leverage the history of intellectual protection rights (IPR) around the world to develop an institution-based view of IPR in an effort to explain its development and predict its future. An historical analysis does so by extending cross-sectional analysis to look at historical processes in illuminating conceptual issues such as the institution-based view (Ahuja & Yayavaram, 2011; Meyer & Peng, 2016; Peng, Wang, & Jiang, 2008).

While the institution-based view is broad, we focus on one important debate that is relatively underexplored in the IB literature and that can benefit tremendously from an historical perspective – the debate over IPR between the United States and China. IPR is one of the active areas in IB research (Allred & Park, 2007; Belderbos, Leten, & Suzuki, 2013; Bucheli & Kim, 2015;

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Coeurderoy & Murray, 2008; Di Minin & Bianchi, 2011; Hagedoom, Cloudt, & van Kranenburg, 2005; Ivus, 2015; Khoury & Peng, 2011; Kotabe, 1992). But few IB scholars have engaged with this crucial debate over IPR. Given the scale and scope of IPR violation in China, the United States has repeatedly sought better IPR protection in China and has been frustrated by the lack of improvements. By focusing on contemporary IPR infringement in China that is often characterized as “unprecedented”, critics have often painted a gloomy picture with a pessimistic outlook (Hubbard & Navarro, 2010; Li, 2004; Reid & MacKinnon, 2008; Zimmerman, 2013). Yet what does the institution-based view have to say about the future of IPR protection in China? Can the historical evidence as viewed through an institutional lens show that China’s IPR development may be similar to the experience of the United States over a century ago? Apart from the United States and China, what insights does the institution-based view provide to countries struggling with IPR protection and to multinational enterprises (MNEs) that need to strategically respond to an evolving IP environment?

We argue that a key to assessing the present and predicting the future of IPR lies in a deeper understanding of IPR’s history (Ahlstrom & Wang, 2010; Cummings & Bridgman, 2016). Ironically, in the 19th century, the United States was not an IPR champion, but a leading IPR violator much as China is today. Leveraging this period of US history, we endeavor to develop an institution-based view of global IPR history. Extending Peng (2013) and Peng, Ahlstrom, Carraher, and Shi (2017), we identify three underlying theoretical mechanisms: path dependence, long-term processes, and institutional transitions. This view focuses on why US institutions first supported and then reduced IPR violation. Overall, the US shift from an IPR violator to a leading IPR champion is a fascinating chapter in history that, we argue, can help inform the contemporary debate over different IPR systems. Finally, going above and beyond the specific US–China debate, we build a more globally generalizable framework that not only explains the past, but also informs the future of the debate around the world.

DEVELOPING THE INSTITUTION-BASED VIEW

The institution-based view in the IB literature has roots from sociological and organizational institutionalism (DiMaggio & Powell, 1983; Scott, 2014)

and economic institutionalism (North, 1990; Williamson, 1985). Institutions’ most fundamental role is to reduce uncertainty, stipulate decision guidelines, and provide meaning (Scott, 2014). The institution-based view “focuses on the dynamic interaction between institutions and organizations and considers strategic choices as the outcome of such an interaction” (Peng, Sun, Pinkham, & Chen, 2009, p. 66). Thus a key proposition of the institution-based view is that individuals and organizations (such as firms and governments) “rationally pursue their interests and make strategic choices within the formal and informal constraints in a given institutional framework” (Peng et al., 2009, p. 67). In addition, given the pace of change with increased economic growth, trade, and technological discontinuity, firms and governments must not only be able to adjust to, but also seek changes in institutions. Firms are not simply recipients of institutional changes, but may also influence these changes in a process referred to as co-evolution (Lewin & Koza, 2001; Lewin & Volberda, 1999).

Following Pierson’s (2004, p. 9) integrative approach, we further develop the institution-based view by identifying and leveraging three underlying theoretical mechanisms: path dependence, long-term processes, and institutional transitions (Figure 1). *Path dependence* refers to historical trajectories with positive feedback that become inherently difficult to reverse or alter (Arthur, 1994; David, 1985; Klochikhin, 2012). *Long-term processes* call for a focus on the long spans of time during which institutional effects unfold and accumulate (Bellaïche, 2010; Pierson, 2004). *Institutional transitions* are “fundamental and comprehensive changes introduced to the formal and informal rules of the game that affect organizations as players” (Peng, 2003, p. 275). They primarily deal with shifts in “the costs and benefits of alternative courses of institutional development” (Pierson, 2004, p. 147). While our arguments seek to examine and explicate these mechanisms, it is helpful to first discuss two “popular” explanations concerning IPR in China.

INTELLECTUAL PROPERTY RIGHTS IN CHINA

During China’s early economic reform period of the 1980s and the 1990s, IPR violation was widespread. The Western media was full of reports that “counterfeiting and piracy remain common” (Reid & MacKinnon, 2008), and researchers suggested that the future looks bleak (Hubbard & Navarro, 2010; Li, 2004). “Almost every product imaginable

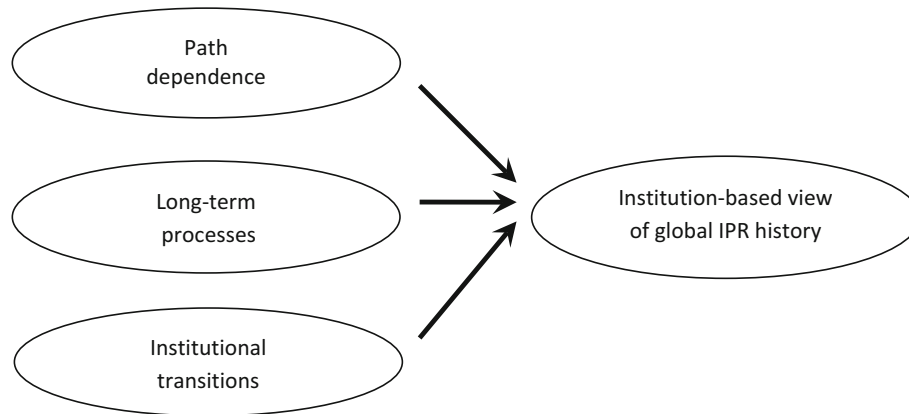


Figure 1 Three theoretical mechanisms for an institution-based view of global IPR history.

is being copied and manufactured in China”, and despite recent improvement, “the issue of piracy remains a daunting one” (Zimmerman, 2013, p. 54). At the heart of the IPR discussion lie two “popular” explanations: culture and politics.

The cultural argument holds that Chinese culture, dating back at least 2500 years to Confucianism, is conducive to a lack of respect for IPR (Alford, 1995). Despite recent reforms, “Chinese culture still seems to have trouble valuing intangible assets” (Suttmeier & Yao, 2011, p. 19). However, China is not the only country that has shown disrespect for IPR (Peng, 2013; Robinson, 2016). Numerous swings in IPR protection occurred in Europe from Roman times where plagiarism such as appropriating poems and plays was common (Bugbee, 1967; Jaffe & Lerner, 2007) up to today whereby music piracy occurs everywhere (Hill, 2007; Yu, 2008). In short, IPR violation is not confined to China.

The political argument suggests that “Chinese political culture did not lend itself to the concept of IP ownership” (Zimmerman, 2013, p. 142). Throughout much of China’s history, the emphasis on public (state) ownership is at odds with the emphasis on private rights inherent in IPR. The political argument, however, needs to explain why, for example, during the Beijing Olympics in 2008, the sale of fake Olympic merchandise completely disappeared (Yu, 2014). Did the counterfeiters suddenly become more cognizant of the importance of IPR protection? Or did the government politically demonstrate that IPR protection was feasible? Regardless of the answer, the upshot is that the Chinese can be politically motivated and capable of eradicating IPR violation. Moreover, in other economies that are heavily ethnic Chinese such as Hong Kong and Singapore, IPR protection is

much stronger (Peng, 2013). Thus the political argument – just like the cultural argument – can also be rejected.

In summary, culture and politics, on their own, cannot explain the IPR situation in China. The key, we argue, lies in institutions – a concept much broader than culture and politics (Peng et al., 2017).

INSTITUTIONS AND IPR IN CHINA

As “rules of the game”, IPR institutions provide the incentive structure that affects the costs and benefits of doing business (Peng, 2003, 2013; Peng et al., 2017; Yu, 2014). Given an institutional environment of weak IPR protection, thousands of firms have made a rational decision (from their standpoint) to be involved in IPR violation (DiRienzo, Das, Cort, & Burbridge, 2007; Hill, 2007).

The institution-based view first focuses on the path-dependent nature of IPR development (David, 1985; North, 1990). Path dependence holds that the choices one faces for any given circumstance are affected by related decisions made in the past, even though past circumstances may no longer be relevant or operative (Arthur, 1994; Klochikhin, 2012). An early history of not respecting IPR is likely to be reflected in more recent practices and values that continue to disrespect IPR. In other words, initial conditions and earlier practices of not paying sufficient attention to IPR likely cast a long shadow in China.

Second, from a long-term perspective, China’s IPR system “has indeed come a very long way” (Yu, 2013, p. 88). From humble beginnings in 1985, China’s IPR system has been handling about one million patent applications annually since 2010 (Suttmeier & Yao, 2011; WIPO, 2016). Today China

is the world *champion* in the number of domestic patent applications (*The Economist*, 2014, p. 73), and is one of the world's leaders in international (ICT) patent applications as well (Yu, 2013, p. 88).

In terms of institutional transitions, it is important to note that institutions such as an effective IPR protection and enforcement regime have both benefits and costs (Mazzoleni & Nelson, 1998; Moser, 2013; Peng, 2003). While recent progress in IPR protection is noted (McKinsey, 2015; Lewin, Kenney, & Murmann, 2016), current law imposes a maximum fine of only one million RMB (\$160,000) per violation, and the average is only 190,000 RMB (\$30,000) – hardly enough to deter violations or to cover legal costs (McKinsey, 2015, p. 115). The reluctance of China to increase IPR penalties is likely to stem from the concern that at this stage of China's development, satisfying US IPR demands would result in foreign IP rights holders benefiting more (Liang & Xue, 2010, p. 490; Yu, 2013, p. 97). In other words, the costs may exceed the benefits.

How does China's future development of IPR protection look? We argue that the history of US IPR development reveals interesting historical parallels and insights to help inform today's debate. We further suggest that the three theoretical mechanisms of the institution-based view can shed considerable light on the history of IPR development in the United States. Next, we start with the first theoretical mechanism – path dependence.

PATH DEPENDENCE OF IPR VIOLATION IN THE UNITED STATES

"Path dependence has to mean", according to Levi (1997, p. 28), "that once a country or region has started down a track, the costs of reversal are very high". Nineteenth-century America was a veritable Wild West of IPR violation (Khan & Sokoloff, 2004; Raustiala & Sprigman, 2013). Although widely known to scholars (Chaudhry & Zimmerman, 2009, p. 175; Khan, 2013, p. 67; Lopes & Casson, 2012, p. 308), the US role as a leading IPR violator during that era is essentially unknown outside academia and is seldom mentioned in contemporary IPR discourse. From a path-dependence standpoint, questions include: Why did IPR violation abound in nineteenth-century America? Why did the US government support IPR violation for over a century, and then abruptly change its mind (and the IPR law) in 1891?

From the very beginning, US lawmakers were aware of the importance of IPR and the country was

politically capable of protecting IPR – *when it chose to do so* (Sokoloff, 1988; Wood, 2011). The Founding Fathers had a conceptualization of IPR. The 1787 Constitution of the United States included an explicit provision on the protection of the IPR of authors and inventors (Article I, Section 8).

However, this provision only protected *US-based* authors and inventors (Khan & Sokoloff, 2001; Lohr, 2002). The subsequent 1790 Copyright Act, Section 5 further stated (Ingersoll, 1821, p. 151):

Nothing in this Act shall be construed to extend to prohibit the importation, or vending, reprinting, or publishing, within the United States, of any map, chart, book or books, written, printed, or published by any person not a citizen of the United States, in foreign parts or places without the jurisdiction of the United States.

In short, the IPR of foreigners could be legally violated at will in the United States. Given this incentive structure, not surprisingly during much of the 19th century, American pirates were busy appropriating British designs for looms and mills, and American publishers and producers extensively pirated foreign publications, art, and drama – with assistance from the US government (Khan & Sokoloff, 2001; Raustiala & Sprigman, 2013).

Charles Dickens, on his first trip to the United States in 1842, was aghast to learn of the widespread pirating of his work. He quickly called for better IPR protection in the United States. The US media, while extensively pirating enough British content to fill its increasing number of newspapers and magazines, opined that Dickens should have instead shown gratitude for the popularity afforded him by the piracy and that he should not be so "greedy" (Tomalin, 2011, pp. 128–132). Although Dickens made money from lectures and other activities in the United States, he was not able to collect any royalty from US sales prior to his passing in 1870 (Meckier, 1990, p. 222). Generally, calls by writers, artists, and governments for Americans to become more ethical and respectful of foreign IPR went nowhere.

A cost-benefit analysis suggests that given a country's low level of literary and economic development, the protection of foreign IPR would simply benefit foreign authors (such as Dickens) and firms (such as British publishers) at the expense of domestic consumers who would face higher prices for books, media, and other innovative goods. Once in place, path-dependent institutions supporting the violation of foreign IPR would be difficult to change (Arthur, 1994; Levi, 1997).



However, in the long run institutions can change (Acemoglu & Robinson, 2013). The next section illustrates how.

LONG-TERM PROCESSES

Institutions are not static (Lawrence, Suddaby, & Leca, 2010). Long-term processes often feature institutional isomorphism, which asserts pressures on individuals, organizations, and even countries to conform. In the long run, such isomorphic processes also affect the formal institutional properties of nation-states such that “nation-states, subject to only modest coercion or control, adopt standard identities and structural forms” (Meyer, Boli, Thomas, & Ramirez, 1997, p. 174).

In the IPR arena, the United States did eventually switch from violating to respecting foreign IPR, and enacted major institutional changes. In late 19th century America, IP holders sought to take advantage of the significant improvements in communication, transportation, and scale production to start selling their products outside of the United States. This led to a major conference in 1884 in Switzerland of academics, writers, and diplomats, to develop a multilateral copyright treaty. This conference and subsequent treaty in part formed the basis for minimum national standards and led to major institutional changes in the United States (Goldstein, 2003). In 1891, the United States *voluntarily* strengthened its IPR laws with the passing of the International Copyright Act (known as the Chace Act named after Senator Jonathan Chace from Rhode Island), for the first time extending IPR protection to foreign works. From an institution-based view, an interesting question is: What led to such major institutional transitions?

While sociologists working on the long-term processes of institutional development emphasize external isomorphic pressures (DiMaggio & Powell, 1983; Meyer et al., 1997), more rational choice oriented scholars highlight particular strategic choices made by entrepreneurs within commercial and political organizations, who believe that “they could do better by altering the existing institutional framework at some margin” (North, 1990, p. 8). An integration of these claims suggests that institutional transitions not only take place because of exogenous change pressure (Jandhyala, 2015). Transitions can also take place in the presence of *internal* champions and change agents who deliberately push for institutional change (Greif & Laitin, 2004; Smets, Morris, & Greenwood, 2012).

In other words, in the long run, some institutional change does endogenously occur based on changing incentives (Acemoglu & Robinson, 2013).

INSTITUTIONAL TRANSITIONS

By the end of the 19th century, rapid economic development turned the United States from being a net consumer to a net producer of intellectual products (Fisher, 1999; Khan & Sokoloff, 2001). As more Americans wrote books and more American publishers and producers marketed their products overseas (a major market was the UK and its Dominions), they demanded better IPR protection from foreign governments. However, foreign governments would not grant US rights holders IPR protection without reciprocal treaties.

Further, as the United States nurtured more authors, inventors, and publishers in the 19th century, their IP started to be pirated elsewhere – most notably in Canada in the late 19th century. The Canadians similarly offered IPR protection to domestic (Canadian and British Dominion) authors, inventors, and publishers, but did *not* offer IPR protection to foreigners. Therefore, pirated copies of US-authored books were numerous in Canada, causing an uproar among American authors, inventors, and publishers. Given the increasing scale and scope of US intellectual and media production, it was rational for the US government to change the IPR laws to start offering IPR protection in the United States to foreign authors, inventors, and publishers. Only by doing that would Americans have any hope of having their IPR *reciprocally* protected overseas.

Overall, IPR protection, both domestic and foreign, involves both a cost–benefit analysis and a quest for legitimacy (Mazzoleni & Nelson, 1998). Being an international outlier in IPR does not enhance the legitimacy of a country and its firms that aspire to be respected globally – a situation that applies to both 19th-century America and 21st-century China. Ultimately, a compelling case for institutional transitions can be made only when supported by a hard-nosed cost–benefit analysis as well.

Traditional arguments allege that IPR violation misallocates resources to illegal activities and may retard economic development (Jaffe & Lerner, 2007). But in 19th-century America, such piracy “*promoted* domestic publishing output” (Khan, 2013, p. 67, emphasis added) by fostering the emergence of a critical mass of indigenous authors, inventors, and publishers. For Americans in the 1800s (and people in many developing economies

today), strong IPR “to primarily protect the rights of foreigners hindered their ability to imitate the technologies of the advanced countries and to learn by doing” (Khan, 2013, p. 68; see also Kumar, 2003, p. 209). From a cost–benefit analysis, only when US IPR production was sufficiently developed and its economy sufficiently strong could the United States entertain the notion of strengthening IPR protection.¹ In the area of IPR, “when the United States was just beginning its rise to wealth and power, it was every bit as much as China is today” (Raustiala & Sprigman, 2013, p. 29).

TOWARD A MORE GLOBALLY GENERALIZABLE FRAMEWORK

Going above and beyond the US–China case, we argue that an institution-based view of IPR history – underpinned by the three theoretical mechanisms – can be developed into a more globally generalizable

framework (Figure 1). Tables 1 and 2 summarize the history of IPR evolution in over ten developed and developing countries. Certain common and interesting patterns emerge.

From a path dependence perspective observed over time, it turns out that the history of IPR development in the United States and China during comparative stages in their development have a lot in common with other countries (Khan & Sokoloff, 2001, 2004). During the initial stage of economic development, most countries have chosen to *disrespect* IPR. For example, Switzerland had rejected patent laws until 1888 (Saiz & Pretel, 2014). Denmark had not enacted a patent law until 1894 (Moser, 2013). The Netherlands *rescinded* patent laws between 1869 and 1912, after a political victory of the free trade movement in an effort to encourage technological imitation (Moser, 2013).

Discrimination against *foreign* IPR is extensive (Hagen, 1997). For example, before 1883, the

Table 1 History of IPR protection in select developed countries (year patent law established)

BRITAIN (1624) The Statute of Monopolies in 1624 laid the foundation of Britain’s modern system of IPR protection, which was established in the early 1800s. By international standards, it was very costly. For foreign inventors, application needed to be filed in person. This was changed by the 1883 Patent Act, which reduced the filing fee and renewal fee considerably and allowed foreign inventors to mail in their applications. In the 1907 Patents and Design Act, a patent would be revoked when the patent holder did not manufacture the patented good within the borders of Britain. This was different from the 1883 Patent Law. The new law required that foreign patents had to be used in the UK to be remain in force. As a result, German firms (particularly those in the chemical industry) began to set up plants as a defensive measure to safeguard their British patents.

DENMARK (1894) Denmark took advantage of non-existence of patent law to liberally copy foreign technology prior to 1874. Denmark provided limited patent protection for up to five years in 1874 (while patents in other countries lasted for a minimum of 12 years), but waited until 1894 to enact an official patent law.

GERMANY (1877) Both the 1877 and the 1891 patent laws stated that a patent could be revoked if the patent holder did not manufacture the patented good within Germany. The purpose was to prevent foreign patent holders from using their German patents only to secure their monopoly in this country but did not employ German labor and did not stimulate German industry. These patent laws thus discriminated against foreign patent holders. Patent officials also delayed the granting of patents to foreign applicants.

JAPAN (1885) The first major patent law was passed in 1885. Japan joined the Paris Convention for the Protection of Industrial Property in 1899. Between 1885 and 1899, foreign firms and individuals were prohibited from patenting in Japan with the exception of those protected by a few bilateral treaties. Food, beverage, pharmaceutical products, and chemical compounds were excluded from the scope of patent protection until 1975.

THE NETHERLANDS (1817) The Netherlands rescinded patent laws between 1869 and 1912 after a political victory of the free trade movement in an attempt to encourage technology imitations. The goal was to stimulate catching-up processes and to take advantage of innovation activity spillovers. This actually reflected a common view of patents as a form of protectionism and rejected them as a restriction on trade.

SPAIN (1878) The Spanish patent law of 1878 guaranteed two years of priority rights to foreign patents (but limiting them to a 10-year rather than a 20-year extension). The system was conceived to assure a basic normative framework to attract foreign inventors who wanted to extend their rights to Spain, as well as to limit that protection if it did not turn into actual innovation and economic growth. A compulsory licensing regime had been maintained until 1986, when Spain joined the EU.

SWITZERLAND (1907) Switzerland had rejected patent laws until 1888. It adopted a rudimentary patent system in 1888 and switched towards a full-fledged system in 1907.

Sources: Adapted from Hagen (1997), Khan (2013), Kotabe (1992), Kumar (2003), Moser (2013), Nicholas (2011), Richter & Streb (2011), and Saiz & Pretel (2014).

Table 2 History of IPR protection in select developing countries (year patent law established)

BRAZIL (1830) As a colony of Portugal, Brazil set up a licensing system in 1809. In 1824 it was included in the Constitution when Brazil became independent. In 1830 a specific patent law was passed. At the beginning of the 20th century, Brazil was characterized by a relatively strong IPR regime, granting both process and product patents. It enhanced IPR protection by removing process patents in 1969 and by immediately rectifying TRIPS in 1996, without invoking the clause that would permit developing countries to delay TRIPS implementation until 2005 – as India did. However, incentives were provided for second innovators from 1945 by limiting patentability to processes only. This was further reinforced from 1969 with patents being entirely prohibited in the pharmaceutical sector for upstream activity in order to promote production by local firms and improve self-sufficiency. When facing a grave economic crisis in the 1980s and the 1990s, the Brazilian government intensified protectionist measures such as import substitution and reverted back to support acts of IPR violation. Specifically, compulsory licensing in pharmaceuticals was extensively used against foreign drug makers, triggering a US complaint to the WTO in 2001 (which was eventually dropped).

INDIA (1911) After independence in 1947, India adopted the 1911 British Patents and Design Act. Such a strong IPR protection regime protected multinational pharmaceutical firms that held a 68% market share in 1970. To help local firms (especially pharmaceutical firms), the Indian Patent Act of 1970 – in force starting in 1972 – allowed firms to patent only one method for one drug and shortened patent life from 14 to 5–7 years. Other producers were free to produce the same product, as long as they used a different production process. This significantly weakened the patent regime and enhanced the development of an indigenous pharmaceutical industry in India at the expense of multinationals. In 1995, under pressures from developed countries, the Indian government signed TRIPS in order to join the WTO. This significantly strengthened the patent law again. However, it was not until 2005 when India finally implemented the revised TRIPS-compliant patent law. By that time, India already had an established pharmaceutical industry, producing generic drugs at very low cost and being a net exporter of generic drugs. But foreign firms have continued to complain.

RUSSIA (1812) The first patent law was adopted in 1812. By 1896 the Russian patent legislation was quite well developed. After the Bolshevik Revolution in 1917, the patent system was completely eliminated in 1919. The new legislation adopted by the Soviet government provided for the right of the state to expropriate IPR. Between 1919 and 1992, the general level of IPR protection was very limited. After the collapse of the Soviet Union in 1991, the patent law was enacted in 1992. The new law had many shortcomings because it was prepared very fast in the state of legislative crisis and the government had insufficient experience in the field of IPR protection. In 2008, Russian further revised its patent law by introducing Part Four of the Civil Code. The duration of the protection of a utility model provided by the new law was raised up to 10 years, and the duration of the industrial design protection up to 15 years – the 1992 Patent Law provided for the duration of protection of 5 and 10 years, respectively. The duration of the invention protection remained the same: 20 years. Compared to the 1992 Patent Law, the substantial changes introduced by the 2008 Civil Code were relatively minor.

SOUTH KOREA (1961) South Korea established its first IPR system in 1961, protecting both conventional and minor innovations – also called utility models. Utility models were different from patents in a sense that utility models did not require substantive examination for novelty, non-obviousness, and industrial applicability – as would be the case for patents. Utility models were considered as a second-tier protection for minor inventions, such as devices, tools, and implements, particularly in the mechanical, optical, and electronic fields. The perceived threshold inventive step of utility models was much lower than that of patents. Between 1961 and the mid-1980s, utility models were extensively exploited by South Korea firms, which became more competitive at the expense of foreign rivals. Major IPR reforms were legislated in 1987. The new revised patent law extended product patent protection to new chemical and pharmaceutical products, adopted a comprehensive copyright law, and extended copyright protection to computer software. The patent term was also extended from 12 to 15 years.

Sources: Adapted from Arora et al. (2008), Eugster (2010), Godinho & Ferreira (2012), Guennif & Ramani (2012), Kim et al. (2012), Klochikhin (2012), and Kumar (2003).

British patent system was costly, and applications by foreign inventors needed to be filed in person (Nicholas, 2011). In Japan, foreign patent applications took much longer to process than domestic applications (Kotabe, 1992). As recently as 1988, each patent in Japan was limited to a single narrow claim. Any patent that had not been used in manufacturing in Japan for more than three years could be subject to compulsory licensing (Kumar, 2003, p. 214). In fact, Britain, Germany, and Spain all practiced compulsory licensing – essentially

expropriation of foreign IPR when their economies were taking off.

Stronger IPR protection may “choke the knowledge spillovers from industrialized countries to developing countries” (Kumar, 2003, p. 209). In 1970, India deliberately *weakened* its IPR protection from the 1911 British Patents and Design Act. The new (1970) Indian Patent Act shortened patent protection from 14 to 5–7 years and protected only one production method for a medicine. Since the same medicine could be produced using different

methods, the new law “dramatically weakened patent protection – in many cases, effectively nullified it” (Arora et al., 2008, p. 5). The upshot? Foreign multinational drug makers’ market share in India dropped from 68% in 1970 (Arora et al., 2008) to 25% in 2007 (Guennif & Ramani, 2012). Therefore:

Proposition 1 (path dependence) In the early stage of economic development, most countries will choose to disrespect IPR, especially foreign IPR.

However, the long-term processes of IPR development tend to foster enhanced protection of IPR, including foreign IPR. Powerful forces of isomorphism push many countries to aspire to first obtain and then enhance their legitimacy (Meyer et al., 1997). While countries initiating IPR reforms do not usually acknowledge the influence of foreign pressures, in the long run no self-respecting country likes to be named and shamed in the global media as well as international forums such as the WTO.

By definition, the long-term processes trending toward better IPR protection take place over a long span of time – at least 104 years for the United States (between 1787 when the US Constitution was adopted and 1891 when the Chace Act was enacted) and several decades for Brazil, India, Japan, and Germany. Sometimes it took even longer. The Netherlands had rudimentary patent protection in the 1600s, but did not create an effective enforcement regime until the end of the 1800s.

Such transformation has also been taking place in India. Specifically, by the early 1990s, as over 100 countries were prepared to join the newly created WTO (to be launched in 1995), the legitimacy of being a WTO member outweighed the “bitter medicine” that India – especially its pharmaceutical firms – would have to endure being a non-member. As a result, in 1994 the Indian government reluctantly signed the Treaty on Trade-Related Aspects of Intellectual Property Rights (TRIPS), which was a precondition for joining the WTO (Arora et al., 2008, p. 8). In 2005 (after a 10-year grace period), the new TRIPS-compliant IPR regime eventually came into effect in India. Overall:

Proposition 2 (long-term processes) In the long run, expected trends are toward better protection of IPR, including foreign IPR.

However, the long-term processes are not likely to be linear, and setbacks are likely. Take, for example, the behavior of German machine tool

maker J. E. Reinecker (Richter & Streb, 2011). By 1900, J. E. Reinecker had pirated (reverse engineered) dozens of leading US machine tools. Such piracy enabled J. E. Reinecker to grow from being an imitator to an innovator in its own right. By 1900, J. E. Reinecker had applied for 37 patents in Germany and five in the United States. Prior to World War I (WWI), J. E. Reinecker largely stopped knocking off US designs because it had a strong interest in having its own patents respected there (Richter & Streb, 2011).

J. E. Reinecker’s new interest in innovation was short-lived. During WWI, J. E. Reinecker was cut off from world markets, which demanded higher-end, innovative machines (Ahlstrom, 2014). Instead, it produced large quantities of low-end machinery for weapons and ammunition production. A lot of its experienced machine tool makers were drafted into the military and killed or injured. As a result, J. E. Reinecker again fell far behind its US rivals. It responded by reverting back to IPR violation by knocking off cutting-edge US designs throughout the 1920s (Richter & Streb, 2011, p. 1020).

J. E. Reinecker was not alone. “The practice of copying American machinery has extended much more widely since the war [WWI] than it was even before”, according to the American commercial attaché in Berlin in 1926 (Richter & Streb, 2011, p. 1016). US firms responded by intensifying their patenting in Germany. However, they faced discrimination in the German patent office, which took 3.6 years to grant a patent to a US firm vis-à-vis 2.3 years to a German firm (Richter & Streb, 2011).

Globally, such setbacks are not uncommon. After the Russian Revolution in 1917, Russia gave up a relatively advanced IPR regime and replaced it with a new regime that simply expropriated IPR (Eugster, 2010). For example, Mikhail Kalashnikov, the inventor of the legendary Automatic Kalashnikov (AK) 47 rifle, made nothing from his gun designs – his IPR were *completely* expropriated by the Soviet state.

In another example, Brazil enhanced IPR protection by removing process patents in 1969 and by immediately rectifying TRIPS in 1996 without invoking the clause that would permit developing countries to delay TRIPS implementation until 2005 as India did (Guennif & Ramani, 2012, p. 434). However, when facing a grave economic crisis, the Brazilian government intensified protectionist measures such as import substitution and reverted back to support IPR violations. Specifically, compulsory licensing in pharmaceuticals was

extensively used against foreign drug makers, triggering a US complaint to the WTO in 2001 (which was eventually dropped) (Guennif and Ramani, 2012). In short, setbacks in IPR protections are not uncommon. Thus:

Proposition 3 (long-term processes) In the short run, reverting back to IPR violation is likely to occur during certain periods of time and in certain industries and countries.

As noted, while institutions are resilient, changes are not impossible. While *external* pressures due to isomorphism forces generally push countries and firms to become more respectful of IPR, institutional transitions are ultimately enabled by the strategic choices made by *internal* champions and change agents (Jandhyala, 2015). Underpinning such strategic choices fostering institutional transitions in favor of better IPR protection is typically a cost–benefit analysis (Mazzoleni & Nelson, 1998).

In the years prior to WWI, as German firms enhanced their competitiveness, the German government was more willing to protect foreign IPR. “A key reason for this policy change,” according to Richter and Streb (2011, p. 1028), “came from German firms who now had to fear retaliatory measures in their growing export markets when violating foreign property right within Germany”. Similarly, it was only by the 1970s when Japanese firms had sufficiently developed their own technological capabilities and needed protection for their own IPR was Japan’s IPR protection improved (Kotabe, 1992). In South Korea, such institutional transitions took place in the 1980s, with “an abrupt rise in the strength of patent protection and an enlarged scope of protection” (Kim, Lee, Park, & Choo, 2012, p. 360). Such transitions took place largely because South Korea began to “have valuable patentable assets of its own to protect” (Kim et al., 2012, p. 360). Therefore:

Proposition 4 (institutional transitions) Institutional transitions in favor of better IPR protection – especially better protection of foreign IPR – will not take place until the perceived benefits to the adopting countries and firms outweigh the perceived costs.

Returning to our crucial US–China debate, how does the more globally generalizable framework contribute to this debate? We contend the more pessimistic interpretation regarding the “bleak” outlook of IPR in China, as suggested in the cultural and

political views discussed earlier, is overly influenced by the first theoretical mechanism: path dependence. Propelled by the two other theoretical mechanisms, an institution-based view predicts that despite the pull of path dependence, in the long run countries such as China will become genuinely interested in better IPR protection and enforcement when perceived benefits outweigh costs. More specifically, just like the United States and numerous other countries, China will become respectful of IPR, including foreign IPR (Peng et al., 2017).

Since such institutional transitions do not happen overnight, experts call for a “long view” (Yu, 2011, p. 1122). A relevant question is: how long is the long view? In other words, at what point will China reach a “crossover point” crossing from being disrespectful to becoming more respectful of IPR (Yu, 2013, p. 107)? It is understood that patent law harmonization in the 19th century redistributed income toward the strongest patenting countries in terms of commercially viable patents (Kumar, 2003). Thus institutional transitions are more likely when China produces more commercially productive patents (Godinho & Ferreira, 2012; Lewin et al., 2016; Williamson & Yin, 2014). Eventually, China will become an IPR power when its IPR are pirated *outside* of China (Lohr, 2011; Peng, 2013).

DISCUSSION

Contributions

Overall, at least two contributions emerge. First, by developing an institution-based view of global IPR history, we join Peng et al. (2017) in demonstrating how history can be directly relevant in informing a crucial debate that is still ongoing and that has important ramifications for IB scholarship and practice. Our approach also resonates with the recent call for a better understanding of how history matters, particularly in IB (Cummings & Bridgman, 2016; Jones & Khanna, 2006; Friedman & Jones, 2011; Rowlinson, Hassard, & Decker, 2014). Moreover, if we focus on how institutional processes unfold *over time*, “we will ask questions that we might not otherwise ask, identify flaws in possible explanations that we otherwise would not see, and find answers that we otherwise would not find” (Pierson, 2004, p. 167). If we embrace a more global and longer view of history, we can see gradual improvement in IPR in many countries. This indicates that historical evidence can help us

“avoid spurious labeling of some phenomena as ‘new’, or the behavior of some countries as ‘unprecedented’” (Jones & Khanna, 2006, p. 453).

Second, by leveraging historical processes to identify and extend the three theoretical mechanisms, this article also broadens the institution-based view (Ahuja & Yayavaram, 2011; Meyer & Peng, 2016; Peng et al., 2008, 2009). Specifically, we suggest that economic development in China and other developing countries along with continued globalization are likely to facilitate improved IPR protection just as economic development in the United States and other (today's) developed countries did in the 19th century. The poorest countries currently allocate little to invention or innovation, and thus do not have IPR to protect. As incomes grow, some inventive capacity emerges, but competition in these countries tends to remain based on imitation (Cuervo-Cazurra & Un, 2010). As a result, the mainstream economic and political interests prefer weak IPR protection (Kim et al., 2012; Kumar, 2003). Yet as an economy develops further, additional inventive capacity, wider diffusion of innovations, and demands for high-quality products emerge (Comin & Ferrer, 2013; Yip & McKern, 2016). Commercial and professional lobbies start to form to demand stronger IPR protection. The interest of a domestic stakeholder group increasingly coincides with the foreign interest in better IPR protection and harmonization of laws (Khoury & Peng, 2011; Lewin et al., 2016). Beyond the United States and China, our generalizable framework – underpinned by the three theoretical mechanisms – suggests that despite the initial path dependence in favor of disrespecting (especially foreign) IPR, institutional transitions are likely to propel countries toward better IPR protection.

The pace of change in developing countries requires firms and institutions to adjust to faster economic growth, technological discontinuities, and increasing globalization (Khoury, Cuervo-Cazurra, & Dau, 2014). Countries undertaking reforms understand the importance of institutional transitions to create inclusive institutions that promote economic growth as opposed to extractive institutions that hinder growth and prosperity (Acemoglu & Robinson, 2013). In this challenging institutional setting, firms must not only be able to adjust to, but also encourage institutional change in a co-evolutionary fashion (Lewin & Koza, 2001; Lewin & Volberda, 1999; Yip & McKern, 2016).

Policy and Managerial Implications

In terms of public policy, Raustiala and Sprigman suggest that “the United States should consider its own history as a pirate nation – and relax” (2013, p. 30). With an historical mindset, we can appreciate that differences in the IPR debate are not as significant as the media portrays. Instead, a good deal of similarities exists, “especially when one compares the two countries cross-temporarily based on their respective stage of development” (Yu, 2011, p. 1128). Our historical excursion has also found significant similarities in IPR history with numerous other developed and developing countries. Thus a valuable lesson from a greater appreciation of history is to look for similarities in order to overcome differences.

Policymakers require a clear and comprehensive understanding of IPR history, and particularly key matters such as the IPR crossover point whereby benefits start to outweigh the costs of a strong IPR regime (Yu, 2008). The WTO requires that developing countries improve the level of IPR protection to that of developed countries upon accession negotiations (Kumar, 2003). Developed country firms argue that they have lost billions of dollars due to IPR infringement. However, by examining the social welfare implications of protecting IPR, Kim et al. (2012) and Naghavi (2007) argue that *prior to the crossover point*, following the highest standards in IPR protection is not necessarily optimal. Kumar (2003) adds that harmonizing patent laws redistributes income toward more developed countries with more established, strongest patenting regimes. This difference is reduced as countries develop more innovation and indigenize acquired technologies (Kim et al., 2012).

In terms of managerial implications, Teece (1986) examines why firms that hold IPR often fail to profit from their innovations, while imitators benefit more greatly. Innovators often fail to possess the necessary manufacturing abilities and complementary skills to benefit from their own IPR and move down the value chain (Buckley & Verbeke, 2016; Lamin & Ramos, 2016). A “copycat” strategy has been successfully employed by a number of Chinese firms, which have transformed themselves to become more innovative on their own (Shenkar, 2010; Williamson & Yin, 2014). How to encourage such “copycats” to transform themselves to become more innovation-driven is important (Buckley & Verbeke, 2016). Organizational routines to properly deploy IP resources



must be developed (Bucheli & Kim, 2015; Steensma, Chari, & Heidl, 2016).

In contemporary China, numerous multinational enterprises (MNEs) have adapted to the Chinese IPR system and maximized their economic benefits (McKinsey, 2015). Specifically, they aggressively file patents, copyrights, and trademarks in China as soon as possible (Liang & Xue, 2010), split IPR-intensive processes such as R&D in multiple locations (Zhao, 2006), and set up strategic alliances with trustworthy Chinese partners right away (Ahlstrom, Levitas, Hitt, Dacin, & Zhu, 2014; Shi, Sun, Pinkham, & Peng, 2014). Chinese patents held by foreign firms significantly outnumber patents held by local firms (Keupp, Friesike, & von Zedtwitz, 2012; McKinsey, 2015). Such aggressive patenting in China “makes major patent infringement very difficult” (Liang & Xue, 2010, p. 491).

Limitations and Future Research Directions

Regarding historical research, a key question is: How far back do scholars need to go to better appreciate a major phenomenon (Evans, 2000; Wood, 2008)? Similarly, what is the impact of the recency effect – the emphasis on the more abundant material and memory on recent events? This article has endeavored to overcome this by drawing on the not-too-distant IPR history of the United States. But we have only broadly surveyed IPR development around the world. Following Peng et al. (2017), future research will need to probe deeper.

From an institution-based view, one challenge is how to measure institutions and their impact (Banalieva, Eddleston, & Zellweger, 2015; Holmes, Miller, Hitt, & Salmador, 2013; Meyer & Peng, 2016). While formal laws, rules, and regulations are relatively transparent and measurable (Papageorgiadis, Cross, & Alexiou, 2014), informal institutions manifested in norms and values create a more lasting change in business and consumer behavior in terms of more respect for IPR (Hill, 2007; McCloskey, 2010). Unfortunately, such informal institutions are typically harder to measure, necessitating additional efforts. This is because in situations where formal constraints are unclear – such as when formal IPR rules are undergoing transitions (e.g., pre-1891 and post-1891 US regarding copyright protection) – “informal constraints will play a larger role in reducing uncertainty, providing guidance, and conferring legitimacy and rewards to managers and firms” (Peng et al., 2009, p. 68).

Finally, research should explore policies that reward IPR and encourage innovation (Braguinsky

& Hounshell, 2016; Jaffe & Lerner, 2007; Jandhyala, 2015; Robinson, 2016; Yu, 2014). It is generally assumed the higher the level of IPR protection, the better. However, an emerging literature suggests that the relationship between IPR protection and innovation is *not* necessarily linear (Di Minin & Bianchi, 2011; Kumar, 2003; Moser, 2013). Firms and industry sectors can work to shape appropriability regimes even in countries with weak IPR (Keupp et al., 2012; Pisano & Teece, 2007). Patent wars and patent sharks (trolls) are some manifestation of dysfunctional behavior, which needs to be examined more closely (Cohen, Gurun, & Kominers, 2016; Steensma et al., 2016).

CONCLUSION

This article has developed an institution-based view of global IPR history by demonstrating how the transformation of the United States from a leading IPR violator to a leading IPR champion can inform the contemporary US–China debate. Leveraging this period of US history (as well as the IPR history of over ten other countries), we have developed a globally generalizable framework that we believe has ramifications for many managers, firms, and countries struggling with IPR protection. In conclusion, history matters. Understanding historical processes helps researchers avoid the problem of isolated cross-sectional analyses or episodic studies when comparative and historical cases should be assessed under conditions of similar development (Elliot, 2007; Jones & Khanna, 2006). When confronting the seemingly intractable problem of contemporary IPR involving the United States and China, it is useful to quote Nobel laureate Douglass North in his presidential address to the Economic History Association over four decades ago: “Few of man’s economic problems are new – that most have recurred endlessly in the past” (1974, p. 5).

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NOTE

¹In IB, another hotly contested policy area is free trade, which enjoys a great deal of legitimacy (Coeurderoy & Murray, 2008). However, echoing the old infant industry argument of US founder Alexander Hamilton (Nair & Ahlstrom, 2008), Chang (2008) argues that developing countries must practice some protectionism if they aspire to develop their own industries. Chang points out that all the countries championing free trade today practiced significant protectionism when their economies were starting to take off.



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