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KUNG-CHUNG LIU* AND SHUFENG ZHENG**

Asian IP Law: An Area of Rising Importance

Intellectual property (IP) laws are an important instrument for promoting cooperation and peace in Asia. In their own ways, Japan, Korea, Taiwan, Hong Kong, Singapore, China and India all serve as IP success stories. Structural features of the IP landscape in major Asian jurisdictions include the following: technocrat-driven IP law, national IP strategies and specialized IP or patent judges. In addition, there are five distinctively Asian developments worth noticing: the sweeping criminalization of copyright infringement, an explosion in the number of registered trademarks, the very limited use of compulsory patent licensing and the convergence on certain standards for the licensing of standard essential patents (SEPs). On the other hand, it is notable that an open-ended and general fair use clause has had a mixed reception in Asian copyright and trademark law. Finding ways to enhance cooperation across Asia, steering IP regimes through trade deals and free trade agreements (FTAs), envisioning a fairer (or at least more functional) mechanism for paying creators, and improving the quality and performance of IP or patent judges are among the important issues that need addressing in the continuing effort to leverage IP laws as a tool for prosperity and peace in Asia.

I. Introduction

Asia is an essential piece to the global puzzle of IP law. The Max Planck Institute for Innovation and Competition has long recognized the need to understand Asian IP law. Since its first studies in the 1990s, the Institute has published 17 volumes on the subject in its Series on Asian Intellectual Property Law. There is nevertheless a shortage of literature that looks at Asian IP law across all the major Asian jurisdictions and a surprising dearth of Asian-centric literature on IP law written by Asians.

Of course, no single article can claim to cover Asian IP law in a comprehensive way. Therefore, this article has the more prosaic aim of (1) identifying the importance of Asia and some of its peculiarities, (2) laying out some structural features of the IP landscape in major Asian jurisdictions, (3) highlighting some distinctively Asian developments, and (4) identifying important issues to be addressed in the future. In short, this article provides a general picture rather than a critical analysis of any specific IP questions in Asia.

II. The importance of Asia and some of its peculiarities

1. Colonization by European powers and Japan in the modern age

Asia is located primarily in the eastern and northern hemispheres. It is the largest and most populous continent, comprising roughly 60% of the world's population (4.6 billion people as of July 2019)² and 30% of Earth's land area.³ The modern age in Asia was ushered in by sweeping colonization by European powers in the 19th century, with only Bhutan, China, Japan, Nepal and Thailand (Siam) remaining independent states.

Partly propelled by its embrace of a patent system, Japan quickly rose to world power in the late 19th century. At first, its rise was welcomed by Asians as a sign of hope for liberation from European colonizers. However, this hope soon turned out to be an illusion, as Japan also adopted a colonization policy. It first colonized Taiwan in 1895 and then Korea in

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¹ Christopher Heath, 'Intellectual Property Rights in Asia – An Overview' 28 (3) IIC 303-309 (1997). Heath's seven-page article was a bit too concise to cover twelve jurisdictions. As a follow-up, a special issue on Intellectual Property Rights in Asia II was published in 30 (4) IIC (1999). Shortly thereafter, the Max Planck Series on Asian Intellectual Property Law was launched.

² See the population statistics at https://www.worldometers.info/ world-population/>. Asia has historically been home to the bulk of the planet's population. According to the report from United Nations Population Division, Department of Economic and Social Affairs, 'The World at Six Billion' https://mysite.du.edu/~rkuhn/ints4465/world-atsix-billion.pdf> 4, the world population in 1750 was 791 million, with 64% in Asia.

³ Asia covers an area of 44,579,000 square kilometres and Earth's total land area is around 148,300,000 square kilometres. In this article we do not include Australia and New Zealand as parts of Asia, nor do we deal with the broadly termed Asia-Pacific countries.

⁴ Under the Anglo-Japanese Treaty of Commerce and Navigation, which was signed in 1894 and took effect in July 1899, Britain gave up extrater-ritorial rights in Japan. An alliance with the United Kingdom in 1902 established Japan as an international power. (For more on the Japanese-British alliance, see Phillips O'Brien, *The Anglo-Japanese Alliance*, 1902-1922 (Routledge 2004)).

⁵ According to arts 1 and 2 of the Shimonoseki Treaty, which followed China's defeat to Japan in 1895, China lost its suzerainty of Korea and Taiwan was ceded to Japan, making it the first Japanese colony.

1910.⁶ Japan invaded China in 1931 and occupied South East Asia (SEA) from 1941 onwards until it surrendered unconditionally in 1945. The history of colonization and war continues to have a huge impact on Asia.

2. Underlying tensions after World War II

Communist expansion in China, Korea, Vietnam, Cambodia and Laos after World War II (WWII)⁷ foiled genuine Asian reconciliation, which would have required long-term efforts above and beyond the Tokyo War Crimes Tribunal.⁸ The US hurriedly formed a front with Japan, Korea, Taiwan (which was returned to the Republic of China) and Vietnam to control the spread of communism.

After supporting the North Koreans in the Korean War in the 1950s (with the US supporting the South Koreans), Communist China had military conflicts with Taiwan, the Soviet Union and India in the 1950s-1960s and 'punished' Vietnam in 1979. Vietnam had its own military conflict with Cambodia. In addition, four wars broke out in South Asia between India and Pakistan in 1947, 1965, 1971 and 1999, with lingering territorial skirmishes between the two rivals. Today, Japan has territorial disputes with Korea, Russia, China and Taiwan, while China has similar issues with India, Japan, Vietnam, the Philippines and Taiwan. To make things worse, under the leadership of Kim Jong-un, North Korea has repeatedly provoked the US, Japan and South Korea by firing missiles.

6 Korea became a protectorate of Japan with the Japan-Korea Treaty of 1905; it was then de jure annexed to Japan with the Japan-Korea Treaty of 1910; see https://www.japantimes.co.jp/opinion/2010/08/29/editorials/the-annexation-of-korea/#.XT3PtPZuKXY.

7 Donald Zagoria, 'Communism in Asia' (1965) Commentary https://www.commentarymagazine.com/articles/communism-in-asia>.

8 According to Motoko Rich, 'Survival of the Throne: Episode One -Japan Would Make Akihito Emperor, but She Called Him "Jimmy" The New York Times (New York, 29 April 2019) https://www.nytimes. com/2019/04/29/world/asia/emperor-akihito.html>, 'In the US and other Allied nations, pressure mounted for Hirohito to be indicted as a war criminal. MacArthur had other ideas and decided to spare Hirohito and to use him. With a presidential run in mind, MacArthur saw the emperor as a key to demilitarizing Japan and remaking it as a democratic According to John Dower, Embracing Defeat: Japan in the Wake of World War II (1st ed, W.W. Norton & Company/New Press 1999) 326, 'with the full support of MacArthur's headquarters, the prosecution functioned, in effect, as a defense team for the emperor.' Herbert Bix, Hirohito and the Making of Modern Japan (Harper Perennial 2000) 583 and 585, 'MacArthur's truly extraordinary measures to save Hirohito from trial as a war criminal had a lasting and profoundly distorting impact on the Japanese understanding of the lost war.'

9 The First Taiwan Strait Crisis (1954-1955) and the Second Taiwan Strait Crisis (1996), the Zhenbao Island Incident (1969) between China and the Soviet Union, the Sino-India War in 1962, the Battle of the Paracel Islands (1974) between China and South Vietnam, and the Sino-Vietnamese War (1979).

10 The Cambodian-Vietnamese war was between 1975 and 1978.

11 The violent partition of British India in 1947; the Indo-Pakistani War of 1965 following Pakistan's Operation Gibraltar, designed to infiltrate Jammu and Kashmir to prevent rule by India; the Bangladesh Liberation War of 1971; and the Kargil War in 1999.

12 Takeshima Island is claimed by both Japan and South Korea. The South Kuril Islands are claimed by both Russia and Japan. Areas in Aksai Chin and Nepal are disputed by China and India. The Paracel Islands (Xisha), controlled by China, are also claimed by Vietnam and Taiwan. Scarborough Shoal is claimed both by China and the Philippines. India and Pakistan both claim sovereignty over the former independent princely states of Jammu and Kashmir.

13 Yongho Kim, 'North Korea's Threat Perception and Provocation Under Kim Jong-un: The Security Dilemma and the Obsession with Political Survival' 9 (1) North Korean Review 6-19 (2013).

3. The least integrated of all continents

In terms of integration, the past few centuries of Asian history have left the continent in a difficult situation, despite a short-lived attempt at Pan-Asianism advocated by An Jung-geun (安重根) in 1910.14 As a result, there is simply a lack of truly Asian institutions which can mediate Asian integration. The two 'Asian' institutions that do exist are not truly Asian and have limited coverage: the Asian Development Bank (ADB, 1966), dominated by Japan and the US, ¹⁵ and the Asian Infrastructure Investment Bank (AIIB, 2015), ¹⁶ dominated by China. ¹⁷ The Association of Southeast Asian Nations (ASEAN), with 10 members, ¹⁸ has been a soft institution for SEA specifically (rather than Asia at large) since its inception in 1967, as it follows 'a process of regional interactions and cooperation based on discreteness, informality, consensus building and non-confrontational bargaining styles'. 19 The Asia Pacific Economic Cooperation (APEC, founded in 1989, with 21 member states), 20 the Comprehensive and Progressive Trans-Pacific Partnership (CPTPP)²¹ and the impending Regional Comprehensive Economic Partnership (RCEP)²² are not 'purely' Asian, although the majority of their members are from Asia.

For sure, Asia is the least integrated of all continents. In other words, there is no Asian institution that serves as a venue for Asian economies to sit down and amicably settle their differences. Asia is still absorbed in the struggle to overcome historical hatred and distrust. The recent trade and security brawl between South Korea and Japan triggered by the Korean Supreme Court's decision on compensation for Koreans who were forced to work by

14 An Jung-geun was a Korean independence activist before Japan annexed Korea and assassinated Itō Hirobumi (伊藤博文), four-time prime minister (the 1st, 5th, 7th and 10th) and resident-general of Korea, at the Harbin Railway Station in China on 26 October 1909; he was later executed. An Jung-geun, 'On Peace in East Asia (동양평화론)' foresaw a union of the three East Asian nations of China, Japan and Korea with combined armed forces and joint banknotes in order to fight off European colonialism. See generally also Gi-Wook Shin, Ethnic Nationalism in Korea (Stanford University Press 2006).

15 The ADB was set up on 19 December 1996 with 31 members in Manila. As of 31 December 2018, Japan and the US together subscribed 15.571% of the total capital and enjoyed 12.756% of the voting power, making them the most powerful members in the ADB. See ADB, 'Annual report 2018 – Members, Capital Stock, and Voting Power' (*ADB, Asian Development Bank*, April 2019) https://www.adb.org/documents/adb-annual-report-2018>.

16 Representatives from 57 Prospective Founding Members of the AIIB signed the Bank's Articles of Agreement in 2015; see https://www.aiib.org/en/news-events/news/2015/20150629_001.html.

17 As of 13 July 2019, China subscribed USD 29.78 billion of the AIIB's total subscription, or 30.8913%, and enjoys 26.6576% of the total voting power, making it the most powerful AIIB member; see https://www.aiib.org/en/about-aiib/governance/members-of-bank/index.html.

18 ASEAN's members include Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, the Philippines, Singapore, Thailand and Vietnam. See https://asean.org/asean/asean-member-states.

19 Amitav Acharya, Constructing a Security Community in Southeast Asia: ASEAN and the Problem of Regional Order (2nd ed, Routledge 2009) 64, cited in Sarah Eaton and Richard Stubbs, 'Is ASEAN Powerful? Neo-realist versus constructivist approaches to power in Southeast Asia' 19 (2) The Pacific Review 135 and 138 (2016).

20 Introduction of the APEC <www.apec.org/About-Us/About-APEC>.
21 The CPTPP is a free trade agreement (FTA) among eleven countries, which are all members of the APEC. See ">https://www.mti.gov.sg/en/Improving-Trade/Free-Trade-Agreements/CPTPP>">https://www.mti.gov.sg/en/Improving-Trade/Free-Trade-Agreements/CPTPP>">https://www.mti.gov.sg/en/Improving-Trade/Free-Trade-Agreements/CPTPP>">https://www.mti.gov.sg/en/Improving-Trade/Free-Trade-Agreements/CPTPP>">https://www.mti.gov.sg/en/Improving-Trade/Free-Trade-Agreements/CPTPP>">https://www.mti.gov.sg/en/Improving-Trade/Free-Trade-Agreements/CPTPP>">https://www.mti.gov.sg/en/Improving-Trade/Free-Trade-Agreements/CPTPP>">https://www.mti.gov.sg/en/Improving-Trade/Free-Trade-Agreements/CPTPP>">https://www.mti.gov.sg/en/Improving-Trade/Free-Trade-Agreements/CPTPP>">https://www.mti.gov.sg/en/Improving-Trade/Free-Trade-Agreements/CPTPP>">https://www.mti.gov.sg/en/Improving-Trade/Free-Trade-Agreements/CPTPP>">https://www.mti.gov.sg/en/Improving-Trade/Free-Trade-Agreements/CPTPP>">https://www.mti.gov.sg/en/Improving-Trade/Free-Trade-Agreements/CPTPP>">https://www.mti.gov.sg/en/Improving-Trade/Free-Trade-Agreements/CPTPP>">https://www.mti.gov.sg/en/Improving-Trade/Free-Trade-Agreements/CPTPP>">https://www.mti.gov.sg/en/Improving-Trade/Free-Trade-Agreements/CPTPP>">https://www.mti.gov.sg/en/Improving-Trade/Free-Trade-Agreements/CPTPP>">https://www.mti.gov.sg/en/Improving-Trade/Free-Trade-Agreements/CPTPP>">https://www.mti.gov.sg/en/Improving-Trade-Agreements/CPTPP>">https://www.mti.gov.sg/en/Improving-Trade-Agreements/CPTPP>">https://www.mti.gov.sg/en/Improving-Trade-Agreements/CPTPP>">https://www.mti.gov.sg/en/Improving-Trade-Agreements/CPTPP>">https://www.mti.gov.sg/en/Improving-Trade-Agreements/CPTPP>">https://www.mti.gov.sg/en/Improving-Trade-Agreements/CPTPP>">https://www.mti.gov.sg/en/Improving-Trade-Agreements/CPTPP>">https://www.mti.gov.sg/en/Improving-Trade-Agreements/CPTPP>">https://w

22 The RCEP was built on the ASEAN members and five ASEAN-FTA partners (Australia, China, Japan, Korea and New Zealand). See https://asean.org/?static_post=rcep-regional-comprehensive-economic-partnership>. 15 member countries have decided to sign RCEP on 13 March 2020; see https://theprint.in/economy/with-or-without-india-15-member-countries-decide-to-sign-rcep-on-13-march/332620/>.

Japanese enterprises during WWII is just one vivid example. Confronted with this, Asian people should work together to find ways to enhance regional cooperation and stability. To further these goals, much can and must be done in the IP field. This would be less politically sensitive and of greater mutual benefit if done in a balanced way. Cooperation in IP areas among Asian economies would not only be conducive to the future prosperity of Asia but also contribute to lasting peace on the continent.

4. Many IP success stories in Asia

The first IP laws in Asia were mostly imposed by foreign powers, with the exception of Japan, which willingly embraced patents in 1871 to boost national development.²⁴ The direct imposition of IP laws to protect European interests in Asian colonies was common practice, such as in India,²⁵ Singapore²⁶ and Indonesia.²⁷ Under pressure from the European powers, China started to draft copyright and trademark laws in the final years of the late

23 In 2018, South Korea's Supreme Court ordered certain Japanese firms to compensate Korean forced laborers during World War II. In 2019, Korean courts further approved the seizure of assets from Nippon Steel & Sumitomo Metal Corp. and Mitsubishi Heavy Industries Ltd. in January and March, respectively. In protest, Japan placed export restrictions on chemicals and other materials that South Korea's tech industry needs to produce semiconductors and smart phone screens. In August 2019, Japan and Korea each successively excluded the other from its own trade white list. For relevant news reports, see 'Mitsubishi Heavy ordered to compensate forced S Korean war workers' (BBC News, 29 November 2018) https://www.bbc. com/news/business-46381207>; Kyodo, 'South Korea court approves seizure of Mitsubishi Heavy trademarks and patents over wartime forced labour' (Japan Times, 25 March 2019) https://www.japan times.co.jp/news/2019/03/25/national/south-korea-court-approves-sei zure-mitsubishi-heavy-assets-wartime-labor/#.XUppOOgza1s>; Joohee Cho, 'Japan removes South Korea from trade 'whitelist" (abc News, 2 August 2019) https://abcnews.go.com/International/japan-

removes-south-korea-trade-white-list/story?id=64728582> 24 In 1871, Japan attempted to establish a patent system by temporarily implementing Senbai Ryaku Kisoku (Summary of Rules on Sales Monopoly), a set of 19 provisions that granted a monopoly right over every new invention, but it was abrogated the next year. Paul Goldstein and Joseph Straus, Intellectual Property in Asia: Law, Economics, History and Politics (Springer 2009) 132; Christopher Heath (ed), Intellectual Property Law in Asia (Kluwer Law International 2002) 305. 25 The Indian Literary Copyright Act of 1847, Patent Act No 15 of 1859 and Merchandise Marks Act No 4 of 1889 were controlled by the UK. When India sought to reform its copyright laws, first in 1876 and again in 1885, even though the Government of India had modeled its proposal on a bill drafted in Britain (by Lord John Manners), India was asked not to take action until Britain had been able to produce its own reforms. See Statement of Objects and Reasons: Indian Copyright Bill 1885, from the Gov't of India to the Sec'y of State (5 June 1885) (IOL, L/PJ/6/156, file 1137, para. 1). See Lionel Bently, 'The "Extraordinary Multiplicity" of Intellectual Property Laws in the British Colonies in the Nineteenth Century' 12 (1) Theoretical Inquiries in Law 179 (2011).

26 Singapore's Copyright Act of 1911 was enacted by the Parliament of the UK. Until the second half of the 1980s, Singapore had no IP system of its own. Before 1992, although trademarks could be directly registered in Singapore, trademarks were still protected by the registrations system under the UK Trade Marks Act of 1938. Before 2014, patent applications in Singapore needed to be registered in the UK first and then re-registered in Singapore with no independent examination. See Christoph Antons, Intellectual property law in Southeast Asia: recent legislative and institutional developments' 1 (1) Journal of Information, Law and Technology 1-11 (2006); Alisha Gill, Zsuzsanna Vári-Kovács and Ashish Lall, Lee Kuan Yew School of Public Policy, 'The Development of Singapore's Intellectual Property Rights Regime' (Microsoft Case Studies Series on Information Technology, Public Policy and Society 2014) 7; Ng Siew Kuan, 'Intellectual Property Law in Singapore: A General Overview' Singapore Academy of Law Journal 1992, 32-34.

27 The first provision on IP in the Dutch East Indies (now part of Indonesia) was introduced by the Dutch in 1844 No 28. The first Patent Act in Netherlands East Indies was introduced on the basis of the Dutch legislation of 1910. See Christoph Antons, 'Indonesia' in Christopher Health (ed), *Intellectual Property Law in Asia* (Kluwer Law International 2003) 391, 395-396.

Qing dynasty.²⁸ Most newly independent Asian nations after WWII adopted their versions of IP laws under trade pressure from the US after the 1980s.²⁹ IP success stories include Japan in the 1960s-1970s,³⁰ Korea and Taiwan in the 1990s,³¹ Hong Kong and Singapore after 2000,³² and

28 For example, the 1902 Mackay Treaty with the United Kingdom (《续议通商行船条约》) required the Chinese government to protect trademarks. As a result, the Chinese government in the late Qing Dynasty promulgated Interim Provisions on Registration of Trademarks (《商标注册试办章程》in 1904.

29 The US established the 'Special 301' provisions through the Trade Act of 1974 and Omnibus Trade and Competitiveness Act of 1988, which empower the Office of the United States Trade Representative (USTR) to prepare a Special 301 Report annually to identify countries denying US companies adequate IP protection. 'From the mid-1980s onwards, the US in particular used this to put pressure on countries to better reorganise intellectual property rights.' Christoph Antons, 'Specialised intellectual property courts in Southeast Asia' in Annette Kur, Stefan Luginbühl and Eskil Waage (eds), "...und sie bewegt sich doch! - Patent Law on the Move (Carl Heymanns 2005) 287. In 1991 and 1994, the US initiated a Special 301 investigation against China, forcing it to strengthen legal protection for IP rights, including joining the Berne Convention, revising the Patent Law and Trademark Law and taking measures to crack down on IP infringements. See United States General Accounting Office Washington, D.C. 20548, 'U.S.-China Trade Implementation of Agreements on Market Access and Intellectual Property' https://www.agreements gao.gov/products/GGD-95-61>; Peter Yu, 'Intellectual Property, Economic Development, and the China Puzzle' in Daniel J Gervais (ed.), Intellectual Property, Trade and Development: Strategies to Optimize Economic Development in a TRIPS Plus Era (Oxford University Press 2007) 173. Under US pressure for IPR policy dialogue in 1994, the Japanese government made changes to its Patent Act, which included switching from the pre-grant opposition to the post-grant opposition system and expanding the fast track system of patent examination to allow an applicant with an application filed with a foreign patent office to also enjoy fast-track status. See Sadao Nagaoka, 'Reform of Patent System in Japan and Challenges' in National Research Council etc., 21st Century Innovation Systems for Japan and the United States: Lessons from a Decade of Change: Report of a Symposium (National Academies Press 2009) 153. Christoph Antons, 'Intellectual Property Law in ASEAN Countries: A Survey' 13 (3) European Intellectual Property Review 78 (1991).

30 Japan made innovative achievements between the 1960s and 1980s, including the first programmable desktop calculator, AL-1000, released by Casio in 1967; the first portable self-contained video tape analogue recording system, released by Sony in 1967; solid-state optical fiber, invented by Nishizawa in 1964; etc. By the 1970s, Japan excelled in the production of machine tools, computers and liquid crystal displays (National Research Council, Maximizing U.S. Interests in Science and Technology Relations with Japan (The National Academies Press 1997) 33-35) and became the third largest industrial nation in the world. The ratio of Japanese exports of technology to imports increased from 0.12 in 1971 to 0.30 in 1983. See 'Japan in the 1950s, 60s and 70s under Yoshida, Ikeda, Sato and Tanaka' (Facts and Details, October 2016) https://factsanddetails.com/japan/cat16/sub110/item524.html>.

31 Both South Korea and Taiwan have improved their capacity for technological innovation since the early 1990s. The Korean model of technology acquisition shifted from borrowing and learning from foreign sources to conducting indigenous R&D, and Taiwanese firms became inovative designers of PCs, electronic notebooks and circuit boards. See Jenn-Hwan Wang, 'From technological catch-up to innovation based economic growth: South Korea and Taiwan compared' 43 (6) Journal of Development Studies 1084 (2007); Sungchul Chung, 'Excelsior: The Korean Innovation Story' https://issues.org/chung; Sungchul Chung, 'Innovation, Competitiveness and Growth: Korean Experiences' in Justin Yifu Lin and Boris Pleskovic (eds), Annual World Bank Conference on Development Economics±Global 2010: Lessons from East Asia and the Global Financial Crisis (Bernan Distribution 2011) 333; Haider Khan, 'Technology and economic development: the case of Taiwan' 13 (40) Journal of Contemporary China 507-521 (2004).

32 For Hong Kong see Jacqueline Yuen, HKTDC Research, Innovation and Technology Industry in Hong Kong' (HKTDC Research, 21 August 2019) . For Singapore's successful transition to a developed economy in the 2000s, see Kung-Chung Liu, 'IPR Protection for Asian Development: Opportunities and Challenges from GVCs and Digital Economy – Singapore' in Lurong Chen and others (ed), IPR Protection for Asian Development: Opportunities and Challenges from GVCs and Digital Economy (Routledge, forthcoming 2020); Ng-Loy Wee Loon, Law of Intellectual Property of Singapore (2nd edn, Sweet & Maxwell, 2014) Chapter 4.

China³³ and India³⁴ after 2010. During the initial industrialization stage, they suffered from IP rights and laws, which meant nothing but costs and hindrances to free imitation. After surviving the struggle and reaching a certain level of economic development, these economies painstakingly moved up the global value chain to strive for indigenous technological improvement and innovation and started to benefit from IP rights and laws.³⁵ They have transformed themselves from infringers and pirates to creators and protectors of IP.

Parallel to its IP success stories, over the last 40 years Asia has become the world's factory and growth engine in terms of export and intra-regional trade³⁶ and even innovation.³⁷ Asia is now also home to the world's biggest markets, partially fueled by its population bonus.³⁸ With the support of infrastructure and education, Asia's huge population, which once hindered 'modernization', has become a plus rather than a minus, as it means more people in the labor force, greater consumption, speedy economic growth and massive networks of people and things. Asia is also well positioned for the future, as it has the most netizens and a fast-growing penetration rate for smart mobile phones,³⁹ creating a vast amount of big data that will feed the growth of artificial intelligence.⁴⁰ However,

33 Since it opened up in 1982, China has transformed into the largest manufacturing economy and goods exporter. See Bruce McKern, 'Made in China: three ways Chinese business has evolved from imitation to innovation' (*The Conversation*, 26 October 2016) https://theconversation.com/made-in-china-three-ways-chinese-business-has-evolved-from-imitation-to-innovation-67236; Yanfei Li, 'Understanding China's Technological Rise' (*The Diplomat*, 3 August 2018) https://thediplomat.com/2018/08/understanding-chinas-technological-rise; WIPO, 'Global Innovation Index 2018: China Cracks Top 20. Top Rankings: Switzerland, Netherlands, Sweden, UK, Singapore, U.S.' (WIPO, 10 July 2018) https://www.wipo.int/pressroom/en/articles/2018/article_0005.html>.

34 With the advantages of low labor costs, policy support and English language skills, India has also achieved economic success in the services export sector, business software, etc. after 2000. See generally Kung-Chung Liu and Uday Racherla (eds), Innovation, Economic Development, and Intellectual Property in India and China – Comparing Six Economic Sectors (Springer 2019). India is now developing innovation in fields such as pharmaceutical information technology etc. See 'Science and Technology Development in India' https://www.nasscom.in/knowledge-center/publications/tech-start-ups-india-bright-future;

Rishikesha T Krishnan Shameen Prashantham, 'Innovation in and from India: The who, where, what, and when' 9 (3) Global Strategy Journal 357 (2018); Rakesh Basant and Shuchi Srinivasan, 'Intellectual property protection in India and implications for health innovation: emerging perspectives' 3 Innovation and Entrepreneurship in Health 57 (2016).

35 David Llewelyn, *Invisible Gold in Asia – Creating Wealth Through*

35 David Llewelyn, *Invisible Gold in Asia – Creating Wealth Through Intellectual Property* (Marshall Cavendish Business 2010) provides a convincing account of these Asian IP success stories.

36 According to the United Nations Conference on Trade and Development (UNCTAD), Asian countries had a higher volume of exports than countries in other continents from 2011 to 2018, and developing economies in Asia also had the highest volume of exports compared with developing economies in other continents (see https://unctadstat.unctad.org/wds/TableViewer/tableView.aspx).

37 This should not come as a surprise, as Asia is the birthplace of Indian, Chinese and Buddhist civilizations (see Masakazu Yamazaki, 'Asia, a Civilization in the Making' 75 (4) Foreign Affairs 106 (1996)) as well as some fundamental innovations, such as paper making, printing and explosives.

38 In stark contrast to the dire aging issue in North East Asia, such as China, Japan, Korea and Taiwan, the median age in India between 2015 and 2019 ranged from 29.5 to 30.5; see 'Population Data Online' https://www.populationof.net/india>.

39 As of 30 June 2019, Asia has 2,200,658,148 internet users, accounting for 49.8% of global internet users. See https://internetworldstats.com/stats.htm.

40 According to Kai-Fu Lee, data are the key to the age of AI implementation, and China is the 'Saudi Arabia of data.' See Kai-Fu Lee, AI Superpowers – China, Silicon Valley and the New World Order (2018) 14 and 55

the general lack of a functioning democracy and a weak rule of law have profound impacts on IP regimes in Asia.

III. Some structural features of the IP landscape in major Asian jurisdictions

IP has become a common focal point of discussion in the major Asian economies, ironically thanks to the pressure from the US. In this section, some features of the IP land-scape in major Asian jurisdictions that will structurally affect the future development of IP law in Asia will be identified.

1. National IP strategy as a common phenomenon

Led by Japan (2003), 41 the major Asian economies have adopted national IP strategies to promote the importance and commercialization of IP. For example, China adopted a National IP Strategy in 2008 that will last until 2020 (an extension program to 2035 is now being worked out).42 Korea has launched two Master Plans for National IP (2012-2016, 2017-2021), 43 followed by Taiwan's Intellectual Property Strategy (2012).44 Singapore issued an IP Master Plan (2013, updated in 2017), 45 Cambodia adopted a National IP Strategy (2013-2023, with 6 key sectors and 41 initiatives)⁴⁶ and India introduced its National IPR Policy in 2016.47 The Thai government established a National IP Policy Committee in 2009 and published a 20-year IP Roadmap in 2017.48 Japan has institutionalized its national IP strategy by enacting the IP Basic Act (2002),49 which was

41 Intellectual Property Policy Headquarters, 'Strategic Program for the Creation, Protection and Exploitation of Intellectual Property' (*Kantei*, 8 July 2003) https://japan.kantei.go.jp/policy/titeki/kettei/030708f_e.html In 2002, the Government of Japan set up the Strategic Council on Intellectual Property; since then it has published Intellectual Property Policy Outlines and an annual Intellectual Property Strategic Program. See Japan Patent Office, 'National IP Strategies for Innovation – Experience of Japan' https://www.wipo.int/edocs/mdocs/aspac/en/wipo_reg_ip_sin_14/wipo_reg_ip_sin_14_t3_a.pdf.

42 The State Council of the PRC, 'Outline of the National Intellectual Property Strategy' (Cm Guofa No 18, 2008); The National Intellectual Property Administration made the announcement on 25 April 2019 http://www.xinhuanet.com/fortune/2019-04/26/c_1124417690.htm> 43 Korean Presidential Council on Intellectual Property, First Master Plan for National Intellectual Property (2012-2016) and Second Master

Plan for the National Intellectual Property (2017-2021) http://www.ipkorea.go.kr/frontEn/strategic_plan/strategic_plan.do>.

44 Taiwan Executive Yuan, 'Intellectual Property Strategy' (《智財戰略

44 Taiwan Executive Yuan, 'Intellectual Property Strategy' (《晉財戰略綱領》) https://www.moea.gov.tw/MNS/doit/content/Content.aspx?menu_id=13453.

45 Government of Singapore and Intellectual Property Office of Singapore, 'Update to the Intellectual Property Hub Master Plan' (2017) https://www.ipos.gov.sg/docs/default-source/about-ipos-doc/full-re port_update-to-ip-hub-master-plan_final.pdf>.

46 Cambodian Framework of the Draft National IP Strategy https://www.moc.gov.kh/tradeswap/userfiles/file/uploadedfiles/Job/9.IPStrategy-DetailsObjectives-Initiatives-Final5_21_2013_1_50_54.pdf.

47 Indian Ministry of Commerce and Industry, 'National Intellectual Property Rights Policy 2016' https://dipp.gov.in/policies-rules-and-acts/policies/national-ipr-policy.

48 IBP Inc., *Thailand: Doing Business and Investing in Thailand Guide Volume 1 — Strategic, Practical Information and Contacts* (Int'l Business Publications 2015) 61; 'Intellectual Property Roadmap for Thailand' https://thailand.prd.go.th/ewt_news.php?

nid=4480&filename=index>; Daniel Greif and Dhanasun Chumchuay, 'Thailand: 20-Year IP Roadmap Published' (*Managing Intellectual Property*, 28 April 2017) https://www.managingip.com/Article/3714893/Thailand-20-year-IP-Roadmap-published.html?ArticleId=3714893>.

49 Japanese IP Basic Act (Act No 122 of 2002) https://www.cas.go.jp/jp/seisaku/hourei/data/ipba.pdf>.

followed by the Korean Framework Act on IP,⁵⁰ a move China is contemplating following.⁵¹

Most of these national IP strategies have been driven from the top down. Article 24 of the Japanese IP Basic Act provides:

'In order to promote measures for the creation, protection and exploitation of intellectual property in a focused and systematic manner, the Intellectual Property Strategy Headquarters shall be established in the Cabinet.'

The Headquarters is led by the director-general, which is a post occupied by none other than the prime minister himself (Art. 27 of Japanese IP Basic Act).

2. Driven by statutory laws drafted by IP technocrats

One can reasonably conclude from this that the development of IP laws in Asia is driven by IP technocrats in trade and/or industry ministries and IP offices, and the common law jurisdictions, such as Singapore and Hong Kong, are no exception.⁵² This may be the result of the lack of an active and functioning democracy. However, career IP technocrats are constantly subjected to pressure from special interest and lobby groups in Asia. This has obvious downsides. A consequence is that the same issue is unevenly regulated across different areas of IP law (such as exhaustion, fair use and compulsory licensing) and the public interest in optimizing IP regimes to suit varying developmental needs has often been compromised or even sacrificed as a trade-off for other international trade considerations. IP rights trump all other rights, sometimes even basic human rights and consumer protection.

3. Specialized IP judges, chambers or courts

It is no exaggeration to say that Asia has the world's largest number of specialized IP judges and courts. In 1950, Japan set up a Special Division of the Tokyo High Court (renamed the IP High Court in 2005) to handle patent infringement cases and appeals against decisions made by the Japan Patent Office (JPO).⁵³ For first-instance infringement lawsuits relating to technical IP (patents, utility models, computer programs, etc.), Tokyo and Osaka district courts enjoy exclusive jurisdiction. Thailand set up the Central IP and International Trade Court in 1996.⁵⁴ Korea established the Patent Court in 1998⁵⁵ and

50 Korean Framework Act on IP http://www.ipkorea.go.kr/frontEn/ip_framework.do.

53 The Tokyo High Court established the 5th Special Division in November 1950, specializing in appeals against decisions made by JPO and district courts on IP issues. Subsequently, instead of assigning all IP cases exclusively to the 5th Special Division, four of the civil divisions of the Tokyo High Court were designated as divisions specializing in IP cases. In 2004, the specialized divisions were named 'Intellectual Property Divisions' (1st to 4th). For a history of the IP High Court, see http://www.ip.courts.go.jp/eng/aboutus/history/index.html.

54 In 1996, Thailand passed the Act on the Establishment of and Procedure for IP and International Trade Court, which established its Central IP and International Trade Court. The Court has exclusive jurisdiction over IP matters, covering not only trademarks, copyright and patents but also layout designs of integrated circuits, trade names, geographical indications, trade secrets and plant varieties. The Court tries both civil and criminal cases. See Vichai Ariyanuntaka, 'TRIPS and the

in 2018 allowed international panels to be set up at the Patent Court and the five designated District Courts (i.e. Seoul Central, Daejeon, Daegu, Busan and Gwangju) for IP disputes (i.e. patent, utility model, design, trademark and plant variety cases). Before the international panel, parties may present evidence and arguments in an agreed-upon foreign language, and the court will issue its decision in Korean first and then translate it into that foreign language. Indonesia authorized its Commercial Court to try civil cases related to IP rights in 2000. The Philippines founded its Special Commercial Courts in 2003.

In 2007, Malaysia designated six High Courts to adjudicate IP civil cases and criminal appeals against decisions from 15 Sessions Courts, which deal with only IP criminal cases.⁵⁹ Taiwan set up a stand-alone IP Court in 2008 that deals with civil, criminal and administrative IPrelated cases (so-called three-in-one). It acts both as the first instance for civil and administrative cases and the second instance for civil and criminal cases (so-called two-in-one capacity). 60 Singapore created its Singapore International Commercial Court (SICC) in 2015, with international judges (including an IP specialist, Judge Thorley from the UK) sitting on the bench.⁶¹ India's Commercial Courts Act of 2015 set up divisions in the High Courts to deal with IP disputes where the value exceeds INR 1 crore.⁶² In China, three IP Courts of intermediate level were set up in Beijing, Shanghai and Guangzhou in 2014.⁶³ To further strengthen the protection of IP, the Supreme People's Court set up a centralized IP court in 2019 to exclusively handle appeals against decisions on patent, antitrust and unfair competition

Specialised Intellectual Property Court in Thailand' 30 (4) IIC 360-376 (1999); Antons (n 29) 287.

55 The Patent Court of Korea was established under art 3(1) of the Court Organization Act on 1 March 1998. Since January 2016, the Patent Court has exclusive appellate jurisdiction over all civil actions relating to IP rights, in addition to patent validity cases; see https://patent.scourt.go.kr/patent_new/index_e.work.

56 Kim & Chang Intellectual Property, 'New "International Panel" To Be Established in the Korean Courts' (*IP Newsletter*, Winter 2017/2018) https://www.kimchang.com/newsletter/2018newsletter/ip/eng/html/newsletter_ip_en_winter2018_article04.html.

57 However, criminal cases remain within the jurisdiction of the general courts. Furthermore, the Plant Varieties Act (Law No 29 of 2000) and the Trade Secrets Act (Law No 30 of 2000) are under the civil jurisdiction of the general district courts of first instance. See Antons (n 29) 287.

58 Republic of the Philippines, Supreme Court, *Re: Consolidation of Intellectual Property Courts with Commercial Courts Resolution* (Cm A. M. NO. 03-03-03-SC, 2003) stipulated that all IP cases shall be transferred to the designated Special Commercial Courts except those which have undergone the pre-trial stage in civil cases or those where any of the accused has been arraigned in criminal cases.

59 Fifteen Sessions Courts with criminal jurisdiction, one in each state, including Putrajaya. However, under the Patents Act of 1983, the Session Courts have no jurisdiction in relation to patent infringement or invalidation matters. Only the High Court has such jurisdiction. Six High Courts with civil and appellate jurisdictions were established in Kuala Lumpur, Selangor, Johor, Perak, Sabah and Sarawak. These High Courts exercise jurisdiction over all IP matters, not being restricted to patents only. OECD, 'Boosting Malaysia's National Intellectual Property System for Innovation' (OECD 2015) 84.

60 See introduction of Taiwan Intellectual Property Court at http://ipc.judicial.gov.tw/ipr_english.

61 See introduction of SICC at https://www.sicc.gov.sg/about-the-sicc.

62 The Indian Commercial Courts Act [2015] ch I s 2 (c) (xvii), s 2 (i). **63** Provisions of the Supreme People's Court on the Jurisdiction of the Intellectual Property Courts of Beijing, Shanghai and Guangzhou over Cases (Cm 12, 2014) http://www.lawinfochina.com/display.aspx?id=18117&lib=law.

⁵¹ According to a report by IPRdaily on 4 June 2019, the draft of the IP Basic Act has been tabled in China; see http://www.iprdaily.cn/news_21874.html.

⁵² Heath (n 24) 305.

cases by intermediate courts, including the three IP Courts. 64

IV. Some distinctively Asian IP developments

The section will highlight five distinctively Asian IP developments.

1. Sweeping criminalization of copyright infringement

In Asia, there is clearly an issue of overusing penal punishment for copyright infringement, even though Art. 61 of the Trade-Related Aspects of Intellectual Property Rights (TRIPS) Agreement only requires members to provide criminal penalties for willful trademark counterfeiting or copyright piracy on a commercial scale.65 In Taiwan, for example, copyright infringement, whether for profit or not, can result in up to three years' imprisonment,66 whereas manslaughter is subject only to two years' imprisonment.⁶⁷ On average, criminal cases against copyright infringement exceed civil cases by 300% in Taiwan. 68 Japan is similar and imposes even heavier punishment for copyright infringement: imprisonment of up to 10 years, a fine of up to 10 million yen, or both.⁶⁹ Singapore, since its independence in 1965, has used incarceration as a means to deter copyright infringement. To implement its obligations under the 2003 US-Singapore Free Trade Agreement, Singapore added a new Sec. 136 (3A) to its Copyright (Amendment) Act of 2004⁷⁰ to further expand the scope of the copyright offences by criminalizing willful copyright infringement where the extent of infringement is significant and/or where the person does the act to obtain a commercial advantage.⁷¹

In Malaysia, criminal punishment for copyright infringements has been a standard component of its copyright regime for more than five decades.⁷² Malaysia

64 Provisions of the Supreme People's Court on Several Issues concerning the Intellectual Property Tribunal (Cm 22, 2018) https://cgc.law.stan ford.edu/belt-and-road/b-and-r-texts/20180701-provisions-re-intl-commercial-courts>.

65 Article 61 TRIPS stipulates: 'members shall provide for criminal procedures and penalties to be applied at least in cases of wilful trademark counterfeiting or copyright piracy on a commercial scale... Members may provide for criminal procedures and penalties to be applied in other cases of infringement of intellectual property rights, in particular where they are committed wilfully and on a commercial scale.'

66 Article 91, Taiwanese Copyright Act.

67 Article 271, Taiwanese Criminal Act provides: 'Whoever commits murder shall be sentenced to death, life imprisonment or fixed-term imprisonment of not less than 10 years. Any attempt mentioned in the preceding paragraph shall be punished. Whoever is prepared to commit the crime mentioned in the first sentence shall be sentenced to fixed-term imprisonment of not more than 2 years.'

68 Kung-Chung Liu, Min-Yang Shieh and Jerry Fong, 'Empirical Study on Copyright Decisions of the Taiwan IP Court between 2009-2011' (in Chinese) Taiwan Law Journal No 203 (April 2012) 47-62.

69 Article 119(1) of the Japanese Copyright Act provides: 'A person that infringes a copyright, print rights, or neighboring rights (other than one that personally reproduces a work or performance, etc. for the purpose of private use as referred to in Article 30, paragraph (1)...) is subject to imprisonment for a term of up to ten years, a fine of up to ten million yen, or both.'

70 No 52 of 2004.

71 Ng-Loy Wee Loon, 'The Criminal Offense of Wilful Copyright Infringement Where the Extent is Significant or Where a Commercial Advantage is Obtained' in Kung-Chung Liu (ed), *Annotated Leading Copyright Cases in Major Asian Jurisdictions* (City University of Hong Kong Press 2019) 154-170.

72 The Malaysian Copyright Act of 1969 first applied criminal enforcement measures in s 15 and criminalized traditional offenses such as the sale, distribution and possession of infringing copies. Ainee Adam, 'The

effectively criminalizes the possession of even a single infringing copy not for private and domestic use, with the rebuttable presumption of knowledge of the copyright-infringing nature of possession.⁷³ In India, to target film pirates, some states have expanded laws stipulating preventive detention without trial, meant to curb serious crimes, known as 'Goonda Acts' (referring to violent criminals).⁷⁴ In 2005, the Tamil Nadu police detained a commercial film pirate under the state's Goonda Act. The Madras High Court upheld such use in a decision by Justice Palanisamy Sathasivam, who later became the Chief Justice of India.⁷⁵

In addition, criminal sanctions against P2P file sharing have spread in Asia. In 2007, the Korean Supreme Court held that downloading an MP3 file via a P2P file-sharing protocol constituted a fixing on a tangible object and a reproduction under the Copyright Act. The operators of Soribada, which provided a P2P file-sharing service allowing users to make unauthorized reproductions, were held criminally liable for having aided and abetted users' copyright infringements. The Supreme Court of Japan also held in a 2011 case that providing software constitutes being an accessory when there is a high probability that it will be used to infringe copyright and the provider perceives and accepts that probability. To

However, criminal sanctions are only suitable for crimes that are clearly identifiable from the outset. In the realm of copyright, there is no public notice mechanism, and the boundary between what is legitimate use and what is copyright infringement is often unclear. Only intentional and slavish copying of another's works and pirating for commercial gains (blatant piracy) seem to deserve criminal punishment. In addition, the overuse of penal punishment has a tendency to blur and confuse civil issues on contributory (indirect) infringement and joint infringement with the criminal law issues of aiding and abetting and what constitutes an accomplice. The determination of aiding, abetting and accomplice under criminal law sometimes even replaces discussion of contributory (indirect) infringement.⁷⁸

As a reminder of the rampant criminalization of copyright-related behavior, we also draw attention to the still valid but already obsolete criminal provisions related to optical disk manufacturing, a product long overtaken by streaming via the cloud, which was the result of US

Crime of Possessing Infringing Copies Not for Private and Domestic Use in Malaysia' in Kung-Chung Liu (n 71) 172.

73 Section 41(1)(d) of the Malaysian Copyright Act provides: 'Any person who during the subsistence of copyright in a work ... possesses, otherwise than for his private and domestic use, any infringing copy ... shall, unless he is able to prove that he had acted in good faith and had no reasonable grounds for supposing that copyright ... would or might thereby be infringed, be guilty of an offence. Section 41(2) clarifies what is "private and domestic use": the possession, custody or control of three or more infringing copies of a work or recording in the same form shall, unless the contrary is proved, be presumed to be in possession of ... such copies otherwise than for private and domestic use.'

74 Arpan Banerjee, 'Preventive Detention and Criminal Copyright Enforcement in India' in Kung-Chung Liu (n 71) 184, 185.

75 Madras High Court, Siva v. Commissioner, Indlaw MAD 199 (24 June 2005).

76 Sang Jo Jong, 'Criminal Sanctions Against P2P File Sharing Service in Korea' in Kung-Chung Liu (n 71) 198-211.

77 Takeshi Maeda, 'Requirements for Criminal Accessoryship Liability for Copyright Infringement through Release of a File-sharing Software Program in Japan' in Kung-Chung Liu (n 71) 212-226.

78 Kung-Chung Liu, 'Chapter 1 Introduction Copyright Laws and Cases

in Major Asian Jurisdictions' in Kung-Chung Liu (n 71) 9.

pressure. Manufacturing without a license or registration with the authorities or contrary to the terms of a license or registration; exporting disks or importing/exporting production parts, raw materials or machinery without a license or contrary to the terms of a license; forging license documents; manufacturing/producing disks at a place other than the licensed or registered premises; and failing to apply the required allocated identification code may lead to criminal penalties in South Korea, ⁷⁹ Taiwan, ⁸⁰ Singapore, ⁸¹ Thailand, ⁸² Malaysia ⁸³ and Hong Kong. ⁸⁴

2. Explosion in the number of registered trademarks

It is striking that the trademark landscape in Asia has undergone a sea change, at least since this article's first author edited and published 'The Protection of Well-Known Marks in Asia' in 2000.⁸⁵ Who could have imagined back then that China would have a staggering 5.7 million annual trademark applications in 2017 (a 55.7% increase compared with 2016), 62.5% of the total for the rest of the world, ⁸⁶ and 14.92 million validly registered trademarks by the end of 2017?⁸⁷

This explosion can also be observed in Macau⁸⁸ and the city-state of Singapore – in both, the number of trademarks per 1 million population is even higher than in China.⁸⁹ India has shown a similar fervor, with the number of registered trademarks shooting up almost fivefold between 2013 (67,796) and 2017 (300,913).⁹⁰ Growing

79 In South Korea, violation of the Music Industry Promotion Act can lead to imprisonment of up to two years or a fine not exceeding 20 million won according to arts 26 and 34 of the Music Industry Promotion Act.

80 According to arts 4, 6, 8, 9, 11, 12, 13, 15 and 16, Taiwanese Optical Disk Act, any violation may lead to imprisonment of up to three years and a fine of up to NT\$ 6,000,000.

81 In Singapore, violation of the Manufacture of Optical Discs Act can lead to a fine not exceeding \$\$ 200,000 or imprisonment for a term not exceeding two years or both according to \$ 22 of the Manufacture of Optical Discs Act of 2004 (revised in 2005).

82 In Thailand, any violation can lead to imprisonment for up to five years and/or a fine according to s 29, Thai Manufacture of Optical Discs Act B.E. 2548.

83 In Malaysia, any violation can lead to imprisonment of up to three years or fine; for repeated offence, the imprisonment can be increased to six years according to s 26, Malaysian Optical Discs Act of 2000.

84 In Hong Kong, the punishment for violation is subject to imprisonment for up to four years and a fine. See ss 35 (6A) (6B), 118, and 119, Hong Kong's Cap. 528 Copyright Ordinance; s 21, Hong Kong's Cap. 544 Prevention of Copyright Piracy Ordinance.

85 Christopher Heath and Kung-Chung Liu (eds), *The Protection of Well-Known Marks in Asia* (Kluwer International Law 2000).

86 There were 9.11 million trademark applications worldwide in 2017, according to WIPO, 'World Intellectual Property Indicators: Filings for Patents, Trademarks, Industrial Designs Reach New Records on Strength in China' https://www.wipo.int/pressroom/en/articles/2018/article_0012.html.

87 'China's trademark applications hit record high in 2017' (*XINHUANET*, 20 January 2018) http://www.xinhuanet.com/english/2018-01/20/c_136911172.htm>.

88 In Macau, since the total number of trademark applications reached 10,000 in 2013, the number has been on the rise: 10,084 in 2013, 12,287 in 2014, 13,140 in 2015, 11,507 in 2016, 13,135 in 2017, 16,474 in 2018. See https://www.economia.gov.mo/en_US/web/public/pg_ip_sd.

89 In Singapore, there were 50,218 registered trademarks (9,224 owned by Singaporeans and 40,994 by foreigners) in 2015, 53,000 (10,432 owned by Singaporeans and 42,568 by foreigners) in 2016 and 37,030 (8,595 owned by Singaporeans and 28,435 by foreigners) in 2017. See https://www.ipos.gov.sg/who-we-are/statistics.

90 In India, the number of registered trademarks in India has increased as follows: 67,796 in 2013, 41,583 in 2014, 65,045 in 2015, 250,070 in 2016, 300,913 in 2017. See the Office of the Controller General of

interest in trademarks can be observed in other major Asian economies, such as Japan⁹¹ and Malaysia,⁹² with only Korea experiencing a slight decrease in the number of registered trademarks from 2016 to 2018.⁹³

Worth exploring are the following questions: Will the sheer number of trademarks become a serious issue? Should we try to counter-balance the social waste involved in the application, examination, publication, opposition and invalidation of trademarks which will never be commercially used? Will trademarks become landmines or an entry barrier for latecomers in Asia?

3. Extremely restrained use of compulsory licensing

It is often feared by patent holders that the recognition of compulsory licensing in patent law will automatically lead to its overuse or abuse. However, this has not been the case in Asia at all. Asian jurisdictions have been extremely restrained in their use of such licenses. To date, the total number of issued compulsory patent licenses is a mere 14. Only two are technology-related and the other 12 are pharmaceutical-related. The Philippines issued its first and only compulsory patent license in 1965, which was upheld by the Supreme Court.95 Malaysia was the first Asian country, following the Doha Declaration on TRIPS and Public Health, to issue a government-use license for public health purposes (HIV/AIDS, 2003); it was not challenged and the royalty has not been collected.⁹⁶ Malaysia issued the second compulsory license in 2017 for a ground-breaking hepatitis C medicine to treat as many as 500,000 people, or 2.5% of the general population.⁹⁷ Thailand has issued the largest number of compulsory patent licenses, seven in total, against pharmaceutical product patents between 2006 and 2008,

Patents, Designs, Trademarks and Geographical Indications, Annual Report http://www.ipindia.nic.in/annual-reports-ipo.htm>.

91 There was a double-digit rise in registered trademarks in Japan from 2014 to 2018: 99,896 in 2014, 98,085 in 2015, 105,207 in 2016, 111,180 in 2017, 116,547 in 2018. See https://www.jpo.go.jp/e/resources/statistics/syutugan_toukei_sokuho/index.html>.

92 There was also a double-digit rise in registered trademarks in Malaysia from 2012 to 2018: 26,979 in 2013, 27,428 in 2014, 28,800 in 2015, 32,806 in 2016, 33,225 in 2017, 34,566 in 2018. See http://www.myipo.gov.my/en/statistic-application-registration/#toggle-id-2.

93 The number of trademark applications in Korea has been increasing: 147,667 in 2013, 150,226 in 2014, 185,443 in 2015, 170,347 in 2016, 168,556 in 2017, 185,968 in 2018. However, the number of registered trademarks decreased slightly in the last three years: 100,093 in 2013, 99,791 in 2014, 114,746 in 2015, 119,255 in 2016, 116,704 in 2017, 115,025 in 2018. See https://www.kipo.go.kr/en/HtmlApp?c=60114&catmenu=ek07_01_01_15.

94 Taiwan is the only Asian jurisdiction that issued two compulsory patent licenses for technology products, in addition to issuing one such for avian flu vaccine (Tamiflu, 2005, no royalty designated and never put into practice). One was against a chemical fertilizer patent in 1981. The other was against five CD-R-related patents held by Philips in 2004, which was later annulled by the Taiwan IP Office (TIPO) due to the fact that the need for such a compulsory license ceased to exist. For more, see Kung-Chung Liu, 'Compulsory License and Government Use in Taiwan – A Regress' in Kung-Chung Liu and Reto M Hilty (eds), Compulsory Licensing – Practical Experiences and Ways Forward (Springer 2015) 79-93.

95 Parke, Davis & Company v Doctors' Pharmaceutical, Inc., et al. [965] G.R. NO. L-22221.

96 Kung-Chung Liu, 'Introduction: Asian IP Landscape and Patent Features' in Kung-Chung Liu (n 71) 8.

97 Catherine Saez, 'Intellectual Property Watch, Malaysia Grants Compulsory Licence for Generic Sofosbuvir Despite Gilead Licence' (Intellectual Property Watch 2017) https://www.ip-watch.org/2017/09/15/malaysia-grants-compulsory-licence-generic-sofosbuvir-despite-gilead-licence.

which again were not challenged.⁹⁸ India issued its one and only compulsory patent license in 2012 against Bayer (a drug for kidney and liver cancer). This was challenged by the patentee but upheld by the Supreme Court.⁹⁹

It is very difficult to conclude that pharmaceutical companies in general have been adversely affected to a noticeable extent by compulsory licensing in Asia. In the Philippines in the 1960s, the company Parke-Davis remained largely unaffected during and after the period of granting the compulsory license. The issuance of the compulsory license did not cause big pharma companies to leave India; to the contrary, they streamed in by merging with local generic companies. Rather, the long-term increase in the demand and consumption of medicinal and pharmaceutical products induced by a growing population and the number of hospitals are the most decisive reason for big pharma companies to remain in any given Asian market.

4. The exercise of IP rights

a) Exemption from competition laws

Ever since the inception of their competition laws either after WWII (Japan) or in the 1990s, major Asian economies have had specific legislative provisions exempting the exercise of IP rights from the scrutiny of competition law (unlike the EU and US model, which lacks such a specific legislative provision). Article 21 of the Japanese Anti-Monopolization Act goes the furthest in this regard by providing an unconditional exemption: 'The provisions of this Act shall not apply to such acts recognizable as the exercise of rights under the Copyright Act, Patent Act, Utility Model Act, Design Act or Trademark Act.' The South Korean equivalent follows this verbatim. ¹⁰¹

On the other hand, Taiwan¹⁰² and India¹⁰³ provide a vague conditional exemption. China's Antimonopoly Act of 2008 is clearer in delineating a conditional exemption. Article 55 provides:

'This Law does not govern the conduct of business operators to exercise their intellectual property rights under laws and relevant administrative regulations on intellectual property rights; however,

98 Weerawit Weeraworawit, 'Seven Compulsory Licenses on Pharmaceutical Product Patents' in Kung-Chung Liu (n 71) 115-121. **99** MANU/MH/0986/2014 (15 July 2014).

100 The protection of product patents for pharmaceutical inventions since 2005 and the opening up of the pharmaceutical industry to foreign direct investment in 2002 have led many multinational corporations to acquire or merge with domestic Indian companies. Yugank Goyal, 'Economic and Procedural Constraints of Compulsory Licenses for Medicines' in Kung-Chung Liu and Reto M Hilty (n 94) 452.

101 Article 59 of the Korean Monopoly Regulation and Fair Trade Act provides: 'The provisions of this Act shall not apply to any act deemed to be a justifiable exercise of rights under the Copyright Act, Patent Act, Utility Models Act, Design Act, or Trademark Act.'

102 Article 45 of Taiwan's Fair Trade Act provides: 'No provision of this Act shall apply to any *proper conduct* in connection with the exercise of rights pursuant to the provisions of the Copyright Act, Trademark Act, or Patent Act' (emphasis by the authors).

103 Section 3(5) of the Indian Competition Act (2002) stipulates: 'Nothing contained in this section shall restrict – (i) the right of any person to restrain any infringement of, or to impose *reasonable conditions*, as may be necessary for protecting any of his rights which have been or may be conferred upon him under (a) the Copyright Act; (b) the Patents Act; (c) the Trade and Merchandise Marks Act, or the Trade Marks Act, (d) the Geographical Indications of Goods (Registration and Protection) Act; (e) the Designs Act; (f) the Semi-conductor Integrated Circuits Layout-Design Act' (emphasis by the authors).

business operators' conduct to eliminate or restrict market competition by abusing their intellectual property rights shall be governed by this Law.'

However, given that IP law is part of the broader competition law, the exercise of IPRs is only allowable in ways that are compatible with competition law. Its (at least nominally) 'unconditional' exemption in Japanese and Korean antitrust law is clearly incorrect and not followed in practice. ¹⁰⁴ As a restatement of a self-evident legal position, the vague conditional exemption of the exercise of IPRs by Taiwan and India can only lead to misconceptions and confusion. It is recommended that all four jurisdictions delete their respective provisions and follow the latecomer to antitrust law in Asia, namely China, as it has struck the most sensible balance by pointing out that there will be no exemption if IP is abused to eliminate or restrict market competition.

b) Some standards on FRAND licensing of SEPs

The issue of fair, reasonable and non-discriminatory (FRAND) licensing of standard essential patents (SEPs), a subset of the exercise of IPRs, is of particular importance for Asian economies, as they are standard-takers and SEP-implementers rather than standard-setters. To date, certain standards on FRAND licensing of SEPs have converged in major Asian jurisdictions such as Japan, Korea, China, Taiwan and India. These can be summarized as three 'nos' and one 'yes'.

The first 'no' is a 'no to bundling non-SEPs with SEPs'. Competition authorities in Korea (*Qualcomm II*), China (*NDRC v Qualcomm*), Japan and Taiwan have all blacklisted 'the compelling of the licensee to purchase, accept or use patents or technical know-how that he does not need'. Specifically, these jurisdictions make illegal per se the bundling of licenses of SEPs with those of non-SEPs by SEP holders which have dominant market power.

The second 'no' is 'no to continual payment of royalties after the expiration of SEPs'. A natural consequence of the first 'no' is that once patents, whether SEPs or non-SEPs, expire, the licensees should not be required to continue paying royalties for them. The competition authorities in Korea (*Qualcomm I*), China (*NDRC v Qualcomm*) and Taiwan (*Philips CD-R*) have taken this position. In addition, competition authorities in Japan (*Qualcomm*), Korea (*Microsoft/Nokia*, *Qualcomm II*) and China (*NDRC v Qualcomm*) have said a clear 'no' to royalty-free cross-licensing. The one 'yes' is that competition authorities in Korea, China (*NDRC v Qualcomm*) and Taiwan (*Philips CD-R*) demand that SEP holders provide a patent list when negotiating licensing agreements with willing licensees.

5. Mixed fate of a general fair use clause

In Asia, an open-ended and general fair use clause has had a mixed reception in copyright and trademark law in the major jurisdictions.

104 For more see Kung-Chung Liu, 'A More Economic and Cross-Jurisdiction Study on Patent Pools' 7 (1) NTU Law Review (March 2012) 49-90.

105 Kung-Chung Liu, 'As a Matter of Standard for Asia and Beyond?' in Kung-Chung Liu and Reto M Hilty (eds.), SEPs, SSOs and FRAND – Asian and Global Perspectives on Fostering Innovation in Interconnectivity (Routledge forthcoming 2020) 7-8.

a) Gradual adoption in copyright law

The mechanism of a general fair use clause modeled on the US Copyright Act (Sec. 107) as a defense to copyright infringement has been gradually adopted by major Asian economies. Jurisdictions with a civil law tradition, such as Korea and Taiwan, have transplanted this mechanism into their copyright law. In these two economies, we observe that the general fair use clause is used tentatively, not yet as a functional safety valve that actively balances conflicting interests. ¹⁰⁶

Singapore, as a common law jurisdiction, introduced a similar general fair use clause into its Copyright Act due to the 2003 US-Singapore Free Trade Agreement, however with the addition of a local factor: 'the possibility of obtaining the work or adaptation within a reasonable time at an ordinary commercial price' (Sec. 35(2)(e)). ¹⁰⁷

As of 2019, Japan has adopted a purpose-limited general fair use clause in its Copyright Act to enable machine learning:

'It is permissible to exploit work, *in any way and to the extent considered necessary*, in any of the following cases or other cases where such exploitation is not for enjoying or causing another person to enjoy the ideas or emotions expressed in such work; provided, however that this does not apply if the exploitation would unreasonably prejudice the interests of the copyright owner in light of the natures and purposes of such work, as well as the circumstances of such exploitation:

- exploitation for using the work in experiments for the development or practical realization of technologies concerning the recording of sounds and visuals or other exploitations of such work;
- ii. exploitation for using the work in a data analysis (meaning the extraction, comparison, classification, or other statistical analysis of language, sound, or image data, or other elements of which a large number of works or a large volume of data is composed; the same applies in Article 47-5, paragraph (1), item (ii));
- iii. in addition to the cases set forth in the preceding two items, exploitation for using the work in the course of computer data processing or otherwise that does not involve perceiving the expressions in such work through the human sense (in regard of works of computer programming, the execution of such work on a computer shall be excluded).' (Article 30-4).¹⁰⁸ [emphasis added]

106 For South Korea see 'Changes Induced by Open-Ended Fair Use Clause: Korean Experiences' http://opennetkorea.org/en/wp/1909? ckattempt=1>. For Taiwan see Kung-Chung Liu, 'Limitations and Exceptions in Copyright Law Across the Taiwan Strait' in Haochen Sun, Sham Balganesh, and Weeloon Loy (eds), Comparative Aspects of Limitations and Exceptions in Copyright Law (Cambridge University Press forthcoming 2020).

107 Stanley Tze Chang Lai, 'Fair Dealing in the Digital World: Navigating Unchartered Waters in Singapore' in Kung-Chung Liu (n 71) 269-284. Peter K Yu, 'Customizing Fair Use Transplants' 7(1), 1-15 Laws (2018) https://doi.org/10.3390/laws7010009>.

108 The 2016 IP Strategic Program by the IP Strategy Headquarters of Japan proposed to consider the possibility of introducing flexible provisions on copyright limitation in order to promote new innovation in the digital network era. The Japanese Government submitted a copyright amendment bill in the 196th ordinary Diet session on 23 February 2018.

Copyright laws in the Philippines, Malaysia and China do not yet include a general fair use clause. However, Malaysia, also a member of the common law family, adopted an open-ended list of factors to be considered for the determination of 'fair dealing for purposes of research, private study, criticism, review or the reporting of news or current events' in the Copyright (Amendment) Act of 2012 (Sec. 13(2A)). In the same vein is Sec. 185.1 of the Intellectual Property Code of the Philippines (Republic Act No. 8293). In China, Art. 22 of the Copyright Law designates 12 types of uses that are permitted under the law. However, according to an opinion issued by the Supreme People's Court, judges are required to take into consideration in copyright fair use cases the four factors provided in Sec. 107 of the US Copyright Act. 109

b) Not widely accepted as an overarching trademark infringement defense

We also observe that fair use as a general trademark infringement defense to protect the public interest and market competition, such as Sec. 43(c)(3) of the US Lanham Act, is not widely accepted or used in Asia and remains mostly an academic topic. Section 28(4) of the Singapore Trade Marks Act does mention 'fair use' but only in a narrow sense, when a comparative advertisement is involved:

'(4) Notwithstanding section 27, a person who uses a registered trade mark does not infringe the trade mark if such use – a) constitutes fair use in comparative commercial advertising or promotion.'

India and Malaysia stand out from their Asian peers in that they allow fair use (when 'reasonably necessary') of trademarks by third-party manufacturers of spare parts which are intended to be ancillary or used as an accessory to the core goods of another party. ¹¹⁰ In addition, providing a specific parody defense does not seem to be major Asian economies' cup of tea, as there are few such laws. Only in rare reported cases has parody been successfully accepted as a defense to trademark infringement. ¹¹¹

V. Important future issues for Asian IP laws

Looking forward, there are some important issues that lie ahead in the effort to leverage IP laws as a tool for prosperity and peace in Asia.

1. Finding ways to enhance cooperation across Asia

To date, there has not been much Asian IP cooperation. The ASEAN Patent Examination Co-operation (ASPEC), launched in 2009, is the first sub-regional program

This amendment bill was passed in the 196th ordinary Diet session in 2018 and took effect on 1 January 2019.

109 Point 8, Supreme People's Court 'Opinions on Some Issues Concerning How to Sufficiently Utilize the IP Adjudication Function to Promote the Big Development and Big Prosperity of the Socialism and the Autonomous Coordination of the Economy', 2011 (最高人民法院关于充分发挥知识产权审判职能作用推动社会主义文化大发展大繁荣和促进经济自主协调发展若干问题的意见).

110 Section 30(2)(d) of the Indian Trade Marks Act and s 40(1)(e) of the Malaysian Trade Marks Act of 1976. This follows the EU model.

111 Kung-Chung Liu, 'Some Features of Trademark Laws and Cases in Major Asian Jurisdictions' in Kung-Chung Liu (n 71) 3-22.

among ASEAN IP Offices, with nine of ten members participating (the exception being Myanmar). The program aims to share search and examination results between the participating offices so as to allow applicants to obtain patents faster and more efficiently. The program has not worked out successfully so far, as it has failed to attract enough applications to meet the 5% goal set for 2015. As of 14 September 2018, the total number of requests submitted to ASPEC was only 405 (excluding pending cases). 113

There are several possible reasons. First, mutual filings between ASPEC members are limited.¹¹⁴ Secondly, the differences between ASPEC members' patent systems and examination standards make information from one patent examination office of limited referential value for the other offices. Therefore, harmonization of the positive requirements of patentability (novelty, inventive steps and industrial applicability) seems to be the necessary first step for regional patent cooperation.¹¹⁵

Actually, given the low number of patent applications in ASEAN¹¹⁶ and the huge technical disparity between Asian economies, patents might not be the most suitable area for initiating Asian IP cooperation. By contrast, trademarks are probably the area to go for, as they do not require deep-pocket investment in technical capacity-building and are less controversial than copyright, which involves many aspects of basic fundamental rights, such as the right to access information and the freedom of expression. In addition, the explosion in trademark applications in major Asian jurisdictions is showing no sign of fading. It is probably worth considering an Asia Trademark Treaty that would set up an Asian Trademark Office and allow multiple trademark registrations across borders via one application.

2. Steering IP regimes through trade deals/FTAs

Asian economies such as Singapore, Korea, Japan and Vietnam are also actively pursuing more FTAs. ¹¹⁷ Among the results are CPTPP and RCEP, both of which have an IP chapter. If the pre-grant oppositions and experimental use exceptions in the leaked text of RCEP are eventually adopted, it will be a milestone, because most international agreements focus only on the rights of IP owners. Safeguards against expansive patent rights like pre-grant

 $\begin{tabular}{ll} \bf 112 & See & more & at & ">https://www.aseanip.org/Services/ASEAN-Patent-Examination-Co-operation-ASPEC/What-is-ASPEC>">https://www.aseanip.org/Services/ASEAN-Patent-Examination-Co-operation-ASPEC/What-is-ASPEC>">https://www.aseanip.org/Services/ASEAN-Patent-Examination-Co-operation-ASPEC/What-is-ASPEC>">https://www.aseanip.org/Services/ASEAN-Patent-Examination-Co-operation-ASPEC/What-is-ASPEC>">https://www.aseanip.org/Services/ASEAN-Patent-Examination-Co-operation-ASPEC/What-is-ASPEC>">https://www.aseanip.org/Services/ASEAN-Patent-Examination-Co-operation-ASPEC/What-is-ASPEC>">https://www.aseanip.org/Services/ASEAN-Patent-Examination-Co-operation-ASPEC/What-is-ASPEC>">https://www.aseanip.org/Services/ASPEC>">https://www.ase$

113 See ASPEC Statistics at https://www.aseanip.org/Statistics/ASEAN-Patent-Examination-Cooperation-ASPEC-Statistics).

114 Reto M Hilty and Roberto Romandini, 'Developing a Common Patent System – Lessons to be Learnt from the European Experience', in E Siew-Kuan Ng and GW Austin (eds), International Intellectual Property and the ASEAN Way. Pathways to Interoperability (Cambridge University Press 2017) 254 and 286.

115 Hilty and Romandini (n 114) 254 and 287.

116 Number of patent applications filed in 2015: 1395 in Thailand, 6185 in Singapore, 1178 in Indonesia, 2348 in Malaysia, 736 in the Philippines, and 682 in Vietnam. There are no statistics for Cambodia, Brunei and Lao PDR, which might be zero in reality. See https://www.wipo.int/ipstats/en/statistics/country_profile#C>.

117 Although India has not been able to sign a single major trade deal since joining the WTO Agreement in 1994, Singapore has signed 22 FTAs (), Japan has signed 18 ERA/FTAs (https://www.mofa.go.jp/policy/economy/fta/index.html), Korea has signed 15 FTAs (https://www.tita.go.kr/main/situation/kfta/ov/) and Vietnam has signed 12 FTAs (https://www.vietnam-briefing.com/news/vietnam-free-trade-agreements-opportunities-for-your-business.html).

oppositions and the exceptions for experimental use are almost never the subject matter of discussion at the international negotiation table. Thus, if RCEP incorporates both these provisions it would mark the dawn of a new age where Asia takes the lead in remolding international patent law norms to better balance rights and limitations. ¹¹⁸

3. Exploring a fairer or more functional mechanism of paying creators

Except for a few economies, such as Japan, Hong Kong and perhaps Singapore, Asia lacks effective collective management mechanisms to bridge the transaction gap between rightholders and users. This again reduces the impact of copyright regimes to 'law on the books' and leads to 'rampant piracy' in Asia, which triggers the overuse of criminal sanctions dealt with above. A technical solution to get out of this vicious circle might be found in the ubiquitous deployment and application of information and communications technology (ICT), the internet of things (IoT) and smart mobile phones in Asia, especially in China.

Mobile payment for the enjoyment of copyrighted content is at everyone's fingertips; the speed of online delivery of content sharply reduces its price and can therefore curtail the motivation to commit copyright infringement. 119 Especially in China, the uninhibited cross-platform licensing of copyrighted content is facilitating the maximum utilization of content, market competition and the generation of self-multiplying revenues. Coupled with the requirement that users use their real names, the infrastructure needed for the monetization of works and actual re-payment (distribution) to creators is close to fruition. If a fairer or more functional mechanism to pay creators can be derived from this, the copyright regime in Asia and beyond can be very easily justified, accepted and possibly improved upon.

4. Evaluating IP or patent judges

Thus far, no systematic study has been made of the phenomenon of IP or patent judges (chambers or courts) in Asia. What are their topology and pros and cons, and how do they compare to specialized IP or patent judges outside Asia (such as the German Federal Patent Court, the IP Enterprise Court in the UK, the Boards of Appeal of the European Patent Office, the Swiss Patent Court and the US Court of Appeal for the Federal Circuit)? How should IP expertise be balanced with good common sense? What procedural innovations can be introduced to speed up the process? What impact will there be on substantive IP laws? Are specialized IP judges a passing or transitional arrangement or are they here to stay? Are there any Asian lessons for countries contemplating introducing specialist patent judges? These questions deserve further deliberation.

118 Prashant Reddy Thikkavarapu, 'Will RCEP Redefine Norms Related to Pre-grant Opposition and Experimental Use Exceptions in International Patent Law?' in Kung-Chung Liu and Julien Chaisse (eds), *The Future of Asian Trade Deals and IP Law* (Hart 2019) 160-161.
119 In China, the monthly subscription fee for unlimited online access to thousands of movies, TV series and variety shows can cost only about

USD 2; see for example https://www.youku.com/ and https://film.

VI. Conclusion

In general, the major Asian jurisdictions are moving up the global IP value chain, despite technical setbacks, trade sanctions and IP wars. The importance of Asian IP laws is on the rise and will demand increasing study and investigation. In the near future, it is even foreseeable that some features of IP regimes from Asia will be exported to the rest of the world. Asian people and

economies should become more familiar with Asian IP laws and leverage them as a strategic tool for stimulating prosperity and maintaining peace on this vibrant and ever-changing continent. In this regard, the European Patent Convention, European Patent Office and European IP Office are models for Asia to learn from.