

2012

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Recommended Citation

Peter K. Yu, *The Rise and Decline of the Intellectual Property Powers*, 34 CAMPBELL L. REV. 525 (2012).

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The Rise and Decline of the Intellectual Property Powers

PETER K. YU*

INTRODUCTION

Since its reopening to foreign trade in the late 1990s, China has been the poster child of intellectual property piracy and counterfeiting.¹ Virtually every year, the Office of the United States Trade Representative (USTR) lists China on its watch list or priority watch list.² The country's piracy and

* Copyright © 2012 Peter K. Yu. Kern Family Chair in Intellectual Property Law and Director, Intellectual Property Law Center, Drake University Law School. This Article was presented at the *Campbell Law Review* Symposium on “The New Global Convergence: Intellectual Property, Increasing Prosperity, and Economic Networks in the Twenty-First Century” at Norman Adrian Wiggins School of Law, Campbell University. Earlier versions of the Article were also presented as a keynote luncheon address at the *John Marshall Review of Intellectual Property Law* Symposium on “Applications of Intellectual Property Law in China” at John Marshall Law School, as keynote presentations at the Intellectual Property Research Institute of Australia Conference on “The Rise of Innovative China: Implications for the Region” at the University of Technology, Sydney and the University of Melbourne, and as presentations at the 2012 IPR Nanhu Forum in Shenzhen, China organized by Zhongnan University of Economics and Law, the Conference on “China's New Environment for Intellectual Property” at Fordham University School of Law, and the *University of Detroit Mercy Law Review* Symposium on “The Future of Intellectual Property” at University of Detroit Mercy School of Law. The Author is grateful to Howard Abrams, Mark Cohen, Benjamin Liu, and Lucas Osborn for their kind invitations and hospitality and the participants of these events for their valuable comments and suggestions. He would like to thank Michael Crook, Teresa Blake, and their highly efficient staff for patience and thoughtful editing, and Lindsey Purdy for excellent research and editorial assistance. Part I of this Article draws on research from the Author's earlier article in the *Cardozo Law Review*.

1. For the Author's earlier discussions on piracy and counterfeiting in China, see generally Peter K. Yu, *From Pirates to Partners: Protecting Intellectual Property in China in the Twenty-First Century*, 50 AM. U. L. REV. 131 (2000) [hereinafter Yu, *From Pirates to Partners*]; Peter K. Yu, *From Pirates to Partners (Episode II): Protecting Intellectual Property in Post-WTO China*, 55 AM. U. L. REV. 901 (2006) [hereinafter Yu, *From Pirates to Partners II*]; Peter K. Yu, *Intellectual Property, Economic Development, and the China Puzzle*, in INTELLECTUAL PROPERTY, TRADE AND DEVELOPMENT: STRATEGIES TO OPTIMIZE ECONOMIC DEVELOPMENT IN A TRIPS PLUS ERA 173 (Daniel J. Gervais ed., 2007) [hereinafter Yu, *China Puzzle*]; Peter K. Yu, *The Middle Kingdom and the Intellectual Property World*, 13 OR. REV. INT'L L. (forthcoming 2012) [hereinafter Yu, *Middle Kingdom*].

2. The notable exception is during the honeymoon period following China's accession to the World Trade Organization in December 2001. In April 2005, the USTR elevated

counterfeiting problems have also been frequently mentioned in connection with international intellectual property enforcement initiatives, such as the highly controversial Anti-Counterfeiting Trade Agreement³ (ACTA) and the equally problematic domestic legislative proposals for heightened copyright enforcement.⁴ In a recent report, the International Trade Commission estimated that “firms in the U.S. [intellectual property]–intensive economy that conducted business in China in 2009 reported losses of approximately \$48.2 billion in sales, royalties, or license fees due to [intellectual property rights] infringement in China.”⁵

While piracy and counterfeiting have been the focus of U.S. policymakers and the mainstream media for the past two decades, recent years have seen the emergence of another very interesting debate concerning China’s rapid technological rise and its focus on alternative forms of innovation.⁶ As John Orcutt and Shen Hong recently observed, China has made many notable achievements in space technology, biotechnology (including genomics and stem cell research), information technology, nanotechnology, and advanced energy technology:

China back to the Priority Watch List. See Yu, *From Pirates to Partners II*, *supra* note 1, at 925.

3. Anti-Counterfeiting Trade Agreement, *opened for signature* May 1, 2011, available at http://www.mofa.go.jp/policy/economy/i_property/pdfs/acta1105_en.pdf [hereinafter ACTA]. See generally Peter K. Yu, *ACTA and Its Complex Politics*, 3 WIPO J. 1 (2011) (criticizing the use of the “country club” approach to negotiate ACTA); Peter K. Yu, *Enforcement, Enforcement, What Enforcement?*, 52 IDEA (forthcoming 2012) [hereinafter Yu, *What Enforcement?*] (suggesting ways to improve the design of an anticounterfeiting trade agreement); Peter K. Yu, *Six Secret (and Now Open) Fears of ACTA*, 64 SMU L. REV. 975 (2011) [hereinafter Yu, *Six Secret Fears*] (discussing the serious concerns about ACTA).

4. Stop Online Piracy Act (SOPA), H.R. 3261, 112th Cong. (2011); Preventing Real Online Threats to Economic Creativity and Theft of Intellectual Property Act of 2011 (PIPA), S. 968, 112th Cong. (2011). For criticisms of SOPA and PIPA, see generally Peter K. Yu, *The Alphabet Soup of Transborder Intellectual Property Enforcement*, DRAKE L. REV. DISCOURSE, June 2012, at 16, available at <http://students.law.drake.edu/lawReview/docs/lrDiscourse201206-yu.pdf> [hereinafter Yu, *Alphabet Soup*]; Letter from Prof. John R. Allison et al. to Members of the U.S. Cong. (July 5, 2011) (opposing PIPA). In the interest of full disclosure, the Author has signed on to the law professors’ letter in opposition to PIPA.

5. U.S. INT’L TRADE COMM’N, PUBLICATION NO. 4226, CHINA: EFFECTS OF INTELLECTUAL PROPERTY INFRINGEMENT AND INDIGENOUS INNOVATION POLICIES ON THE U.S. ECONOMY xiv (2011), available at <http://www.usitc.gov/publications/332/pub4226.pdf>.

6. For discussions of innovation in China, see generally DAN BREZNITZ & MICHAEL MURPHREE, *RUN OF THE RED QUEEN: GOVERNMENT, INNOVATION, GLOBALIZATION, AND ECONOMIC GROWTH IN CHINA* (2011); JOHN L. ORCUTT & SHEN HONG, *SHAPING CHINA’S INNOVATION FUTURE: UNIVERSITY TECHNOLOGY TRANSFER IN TRANSITION* (2011); TAN YINGLAN, *CHINNOVATION: HOW CHINESE INNOVATORS ARE CHANGING THE WORLD* (2011); ZENG MING & PETER J. WILLIAMSON, *DRAGONS AT YOUR DOOR: HOW CHINESE COST INNOVATION IS DISRUPTING GLOBAL COMPETITION* (2007).

- China is one of only three countries to put a person in space with its own rockets (and China recently conducted its first spacewalk).
- Chinese research teams helped to map the genome for rice and have since helped to extend genomic sequencing to other plants, as well as a variety of insects and parasites.
- China passed the United States as the leading exporter of information-technology goods in 2004.
- China has become a world leader in the field of nanotechnology—producing major nanotechnology breakthroughs (e.g., improved production of carbon nano-tubes) and generating a significant portion of the world’s nanotechnology publications and patents and new nanotechnology firms.
- China has long been a leader in nuclear technology and is positioned to become a leader in a number of other energy fields, including clean coal and hydropower.⁷

Today, China is already among the top five countries filing patent applications through the Patent Cooperation Treaty (PCT).⁸ In 2011, the number of applications filed under that treaty increased by 33.4% to 16,406, earning China the fourth spot, behind only the United States, Japan, and Germany.⁹ Among all the applicants, ZTE Corp. and Huawei Technologies, respectively, had the largest and third largest number of PCT applications, while Panasonic ranked the second.¹⁰ With significant backing from the Chinese government and the anticipated involvement of the world’s largest public sector, China will likely catch up with the existing intellectual property powers more quickly than many are prepared for.

Notwithstanding these many impressive economic and technological developments, the narrative about piracy and counterfeiting in China is rarely linked to the narrative about China’s technological rise. In fact, commentators who recount developments concerning these two narratives rarely talk to each other. To provide a more comprehensive picture, and a deeper understanding of the implications of China’s improvements in the intellectual property arena, this Article brings together these two different narratives to explore what their combination would mean for the United States and its intellectual property industries.

7. ORCUTT & SHEN, *supra* note 6, at ix.

8. Press Release, World Intellectual Prop. Org., International Patent Filings Set New Record in 2011 (Mar. 5, 2012), *available at* http://www.wipo.int/pressroom/en/articles/2012/article_0001.html.

9. *Id.* The estimated figures for the United States, Japan, and Germany are 48,596, 38,888, and 18,568, respectively.

10. *Id.*

Part I delivers some good news for intellectual property rights holders from around the world that conduct business in China. It points out that China is at the cusp of crossing over from a pirating nation to a country respectful of intellectual property rights. This Part draws on the historical developments of intellectual property protection in the United States and other once-developing countries.

Part II bears some bad news for intellectual property rights holders. It shows that, even though China will finally experience improvements in the protection and enforcement of intellectual property rights when it hits the proverbial crossover point, such improvements will bring some disappointments. This Part focuses on three unintended consequences brought about by rapid and dramatic improvements in the Chinese intellectual property system: (1) an intellectual property litigation explosion in China; (2) the United States' reduced competitive edge over China; and (3) barriers to future intellectual property reform in the United States.

In light of both the good and bad news delivered in the first two Parts, Part III offers suggestions on three types of policy changes that could help prepare U.S. industries for the challenges identified in the Article. Specifically, this Part examines the need to revamp domestic, bilateral, and multi-lateral policies. Although this Part focuses primarily on U.S. policies, it is important to remember that a satisfactory response to the challenges identified in Part II will require more than unilateral action on the part of the United States.

Part IV concludes on a more comforting note. This Part explains why, despite all these challenges, the United States may still have time and wiggle room to decide its course of action in the near future. It nevertheless underscores the need for intellectual property policymakers to take seriously China's technological rise and the challenges identified in the Article.

I. THE CROSSOVER POINT

A. *The Chinese Experience*

Piracy and counterfeiting has been the subject of a perennial dispute between China and the United States since the former's re-opening to foreign trade in the late 1980s. While the U.S. administration and American rights holders were initially patient, especially in view of the potential for opening up what could be the world's largest market for U.S. goods and services, their patience slowly eroded.¹¹ During the 1980s and 1990s, the

11. See Warren H. Maruyama, *U.S.-China IPR Negotiations: Trade, Intellectual Property, and the Rule of Law in a Global Economy*, in CHINESE INTELLECTUAL PROPERTY LAW AND PRACTICE 165, 186 (Mark A. Cohen et al. eds., 1999) ("At a 1985 meeting to the U.S.-

United States repeatedly threatened China with economic sanctions, trade wars, nonrenewal of most-favored-nation status, and opposition to China's entry into the World Trade Organization (WTO).¹² In response, China made several major revisions to its intellectual property laws.¹³ The country also undertook considerable institutional reforms while joining more than a dozen international intellectual property treaties.¹⁴ In December 2001, China finally became the 143rd member of the WTO,¹⁵ assuming obligations under the Agreement on Trade-Related Aspects of Intellectual Property Rights¹⁶ (TRIPS Agreement).

As of this writing, the levels of protection and enforcement of intellectual property rights in China still have not met the satisfaction of the U.S. government and its supportive intellectual property rights holders. Nevertheless, such protection and enforcement has dramatically improved. In fact, the biggest challenge for intellectual property rights holders in China is no longer about the low standards of protection, but the limited effectiveness in enforcement.¹⁷ Enforcement problems have created challenges for rights holders in not only the intellectual property area, but across the board in the whole country.¹⁸ As far as intellectual property rights are concerned, the enforcement problems are well illustrated by the complaint the United States filed before the WTO Dispute Settlement Body in April 2007.¹⁹

China Joint Committee on Commerce and Trade (JCCT), the U.S. for the first time expressed concerns about weak Chinese IPR standards. In 1987, the U.S. put IPR protection on the agenda for U.S.-China market access talks.”)

12. See Yu, *From Pirates to Partners*, *supra* note 1, at 140–51.

13. See Yu, *From Pirates to Partners II*, *supra* note 1, at 975–99 (examining the progress China has made in the intellectual property area); Yu, *China Puzzle*, *supra* note 1, at 185–88 (tracing the development of the intellectual property regime in China).

14. See Yu, *Middle Kingdom*, *supra* note 1 (identifying the various international treaties of which China is a member).

15. *Members and Observers*, WORLD TRADE ORG., http://www.wto.org/english/thewto_e/whatis_e/tif_e/org6_e.htm (last visited June 22, 2012).

16. Agreement on Trade-Related Aspects of Intellectual Property Rights, Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1C, 108 Stat. 4809, 869 U.N.T.S. 299 (1994).

17. See OFFICE OF THE U.S. TRADE REP., 2005 NATIONAL TRADE ESTIMATE REPORT ON FOREIGN TRADE BARRIERS 95 (2005) (“[W]hile China has made significant progress in its efforts to make its framework of laws, regulations and implementing rules WTO-consistent, serious problems remain, particularly with China’s enforcement of intellectual property rights.”).

18. See generally CHEN JIANFU, CHINESE LAW: CONTEXT AND TRANSFORMATION 653–92 (2008) (providing an excellent discussion of the implementation and enforcement problems within the Chinese legal system).

19. See Request for Consultations by the United States, *China—Measures Affecting the Protection and Enforcement of Intellectual Property Rights*, WT/DS362/1 (Apr. 16, 2007).

Notwithstanding these enforcement problems, China has actively pursued an intellectual property agenda. In June 2008, the State Council adopted a pioneering National Intellectual Property Strategy,²⁰ which provides a comprehensive plan to improve the protection and management of intellectual property rights while emphasizing the need for active development of home-grown intellectual property (*zizhu zhishi chanquan*).²¹ The top Chinese leadership has also increasingly recognized the economic and strategic importance of a well-functioning intellectual property system. As President Hu Jintao remarked in the Group Study of the Political Bureau of the Central Committee of the Chinese Communist Party in May 2006:

Strengthening the building of China's system of intellectual property right and vigorously upgrading the capacity of creation, management, protection and application regarding intellectual property are our urgent need for the purpose of enhancing independent and self-driven innovation capabilities and building an innovation-oriented country.²²

Taking the lead of President Hu and other leaders, the State Intellectual Property Office (SIPO) set very ambitious goals for its *National Patent Development Strategy (2011–2020)*.²³ Included in the 2015 targets are the following goals:

The annual quantity of applying for patents for inventions, utility models and designs [in China] will reach 2 million. China will rank among the top two in the world in terms of the annual number of patents for inventions granted to the domestic applicants, and the quality of patents filed will further improve. The number of owning patents every one million people and

For the panel report on and further discussions of the dispute, see Panel Report, *China—Measures Affecting the Protection and Enforcement of Intellectual Property Rights*, WT/DS362/R (Jan. 26, 2009); Peter K. Yu, *The TRIPS Enforcement Dispute*, 89 NEB. L. REV. 1046 (2011); Peter K. Yu, *TRIPS Enforcement and Developing Countries*, 26 AM. U. INT'L L. REV. 727 (2011).

20. STATE COUNCIL, COMPENDIUM OF CHINA NATIONAL INTELLECTUAL PROPERTY STRATEGY (2008).

21. See *id.* ¶ 7; see also Wu Handong, *One Hundred Years of Progress: The Development of the Intellectual Property System in China*, 1 WIPO J. 117, 121 (2009) (discussing the importance of “self-driven” intellectual property).

22. Wu, *supra* note 21, at 120; see also PANG LAIKWAN, CREATIVITY AND ITS DISCONTENTS: CHINA'S CREATIVE INDUSTRIES AND INTELLECTUAL PROPERTY RIGHTS OFFENSES 8 (2012) (“If *gaige kaifang* (reform and open) was the dominant policy principle of the PRC government in the 1980s and 1990s, the recent Hu Jintao government has shifted its attention to *gaige chuangxin* (reform and innovation), emphasizing the importance of innovation and production of the new.” (Chinese characters omitted)); Yu, *From Pirates to Partners*, *supra* note 1, at 189–96 (discussing the need to convince Chinese leaders of the benefits of intellectual property protection).

23. STATE INTELLECTUAL PROP. OFFICE, NATIONAL PATENT DEVELOPMENT STRATEGY (2011–2020) (2011), translated at <http://graphics8.nytimes.com/packages/pdf/business/SIPONatPatentDevStrategy.pdf>.

the number of overseas patent applications filed by Chinese applicants will double. The proportion of patent applications in industrial enterprises above designated size will reach 8% and the quantity of owning patent rights will significantly rise. . . . The patent transaction services will be established in major cities of China with annual patent transaction amounts reaching 100 billion yuan. . . . The patent examiner[s] will reach 9,000. . . . The talents in the patent service industry will be greater and the professional categories will be more complete, with certified patent agents reaching 10,000.²⁴

In addition, SIPO has been very active in developing professional ties with patent offices from around the world. In 2007, for example, its officials met their counterparts from the European Patent Office, the Japanese Patent office, the Korean Intellectual Property Office, and the United States Patent and Trademark Office to discuss ways to “improv[e] the efficiency of their examination systems and to harmonize their office systems.”²⁵ These so-called “IP5” discussions, which are ongoing, further strengthen SIPO’s status as “a player in the top tier of patent offices that will dominate the emerging system of global patent administration.”²⁶

While questions remain concerning what a country could do with two million patents per year and whether such ambitious goals would result in low patent quality,²⁷ it is hard not to be amazed by the quick turnaround China has experienced in the intellectual property area in less than three decades. Although the country did not have its first patent law until 1984, it is now on track to have the world’s largest volume of patent filings. When questioned by *The New York Times* about SIPO’s 2015 targets, David Kappos, the director of the United States Patent and Trademark Office, could not help but describe those numbers as “mind-blowing.”²⁸

In sum, ample evidence suggests that China is now at the cusp of crossing over from the less promising side of the intellectual property divide to the more promising one.²⁹ Nevertheless, it remains to be seen when

24. *Id.* at 4–5.

25. PETER DRAHOS, *THE GLOBAL GOVERNANCE OF KNOWLEDGE: PATENT OFFICES AND THEIR CLIENTS* 236 (2010).

26. *Id.* at 233; *see also id.* (noting that, since 1994, the Chinese Patent Office, and later SIPO, has served as an international searching authority for PCT purposes).

27. *See* ADAM B. JAFFE & JOSH LERNER, *INNOVATION AND ITS DISCONTENTS: HOW OUR BROKEN PATENT SYSTEM IS ENDANGERING INNOVATION AND PROGRESS, AND WHAT TO DO ABOUT IT* 12 (2004) (“[T]he rapid increase in the rate of patenting has been accompanied by a proliferation of patent awards of dubious merit.”).

28. Steve Lohr, *When Innovation, Too, Is Made in China*, *N.Y. TIMES*, Jan. 1, 2011, <http://www.nytimes.com/2011/01/02/business/02unboxed.html> (quoting USPTO Director David Kappos).

29. *See* Yu, *China Puzzle*, *supra* note 1, at 175 (“[H]istory suggests that China is now simply following the economic development paths of Hong Kong, Japan, Singapore, South

China will hit the proverbial crossover point. It is also unclear whether China will experience multiple crossover points, which arise as a result of the country's highly uneven developments across geographical regions and economic and technological sectors.³⁰

B. *The U.S. Experience*

To better understand how China crosses over from one side of this divide to the other, and the implications of such a crossover, it is instructive to revisit the early development of intellectual property protection for foreign authors in the United States. Although the United States offered intellectual property protection to domestic authors since the founding of the Republic—through state laws initially and federal laws less than a decade later³¹—it did not offer similar protection to foreigners. Section 5 of the 1790 Copyright Act, the country's first copyright law, explicitly stated:

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 cit-*

Korea, Taiwan—or even Germany and the United States. It is only a matter of time before China is converted from a pirating nation to a country that respects intellectual property rights.”); see also Peter K. Yu, *The Global Intellectual Property Order and Its Undetermined Future*, 1 WIPO J. 1, 10–15 (2009) [hereinafter Yu, *Global Intellectual Property Order*] (discussing the existence of a “crossover point” where countries consider it to be in their self-interest to move from a pirating nation to one that strongly respects intellectual property rights). Noted China scholar Kenneth Lieberthal concurred:

Every current advanced industrial economy went through a phase of development characterized by widespread theft of intellectual property. But over time in each such economy some domestic players developed their own intellectual property and became sufficiently powerful in the political system that they moved the system toward more effective IP [intellectual property] protection. The question is whether a similar process is unfolding in China and whether it may take hold as Chinese producers move up the technology innovation ladder with government encouragement and support.

There are clear indicators that China's evolution is following the IP paths that others have trod.

KENNETH LIEBERTHAL, *MANAGING THE CHINA CHALLENGE: HOW TO ACHIEVE CORPORATE SUCCESS IN THE PEOPLE'S REPUBLIC* 26–27 (2011).

30. See Yu, *Global Intellectual Property Order*, *supra* note 29, at 13–14 (“Because of their complex economic situations, these countries may also have more than one crossover point, depending on whether one focuses on a specific geographical region or the relevant economic sector.”).

31. See Peter K. Yu, *The Copyright Divide*, 25 CARDOZO L. REV. 331, 338–40 (2003). The first state to enact copyright legislation was Connecticut. An Act for the Encouragement of Literature and Genius (Jan. 1783), *reprinted in* COPYRIGHT ENACTMENTS OF THE UNITED STATES 1783–1906, at 11 (Thorvald Solberg ed., 2d rev. ed. 1906). The first federal Copyright Act was enacted in 1790. Act of May 31, 1790, ch. 15, 1 Stat. 124.

*izen of the United States, in foreign parts or places without the jurisdiction of the United States.*³²

Although commentators have used the specific needs of a developing country to justify the early development of U.S. copyright law,³³ it is worth noting that copyright protection to foreign authors was uncommon in the late eighteenth and early nineteenth centuries.³⁴ At that time, many countries “did not . . . regard the piracy of foreign authors’ works as unfair or immoral. Some countries, in fact, openly countenanced piracy as contributing to their educational and social needs and as reducing the prices of books for their citizens.”³⁵

While the lack of copyright protection to foreign authors in the 1790 Copyright Act hurt all foreign authors, such a lack was particularly damaging to English authors,³⁶ who write in the same language as their American

32. Act of May 31, 1790, § 5, ch. 15, 1 Stat. 124 (emphasis added).

33. See, e.g., RALPH S. BROWN & ROBERT C. DENICOLA, *CASES ON COPYRIGHT: UNFAIR COMPETITION, AND OTHER TOPICS BEARING ON THE PROTECTION OF LITERARY, MUSICAL, AND ARTISTIC WORKS* 859 (10th ed. 2009) (“[I]t is perhaps not surprising that a have-not country should permit and even encourage poaching on foreign works, but the same policy continued even as the nation grew.”); LYMAN RAY PATTERSON, *COPYRIGHT IN HISTORICAL PERSPECTIVE* 199 (1968) (noting the need to protect the new nation against the established trade in England); EDWARD W. PLOMAN & L. CLARK HAMILTON, *COPYRIGHT: INTELLECTUAL PROPERTY IN THE INFORMATION AGE* 16 (1980) (“Complete with a piracy provision it can be viewed as the action of a developing country to protect its burgeoning culture while exploiting the cultural products of more developed nations.”); Thomas Bender & David Sampliner, *Poets, Pirates, and the Creation of American Literature*, 29 N.Y.U. J. INT’L L. & POL. 255, 255 (1997) (arguing that the United States did not afford intellectual property protection for non-U.S. citizens until it became a major industrial power).

34. See EDWARD SAMUELS, *THE ILLUSTRATED STORY OF COPYRIGHT* 231 (2000) (noting that “the copyright law of many other countries at that time was not any more protective of the rights of foreign authors” than the 1790 Copyright Act); Henry G. Henn, *The Quest for International Copyright Protection*, 39 CORNELL L.Q. 43, 43 (1953) (“Until a century ago, the general rule, with a few standout exceptions, was that domestic works were eligible for protection and foreign works were not.” (footnote omitted)); Sam Ricketson, *The Birth of the Berne Union*, 11 COLUM.-VLA J.L. & ARTS 9, 12 (1986) (noting that piracy activities “had been a long-established feature of European social and cultural life”); Barbara A. Ringer, *The Role of the United States in International Copyright—Past, Present, and Future*, 56 GEO. L.J. 1050, 1051 (1968) (“[I]nternational copyright protection was the exception rather than the rule.”).

35. SAMUELS, *supra* note 34, at 231; see also STEPHEN P. LADAS, *THE INTERNATIONAL PROTECTION OF LITERARY AND ARTISTIC PROPERTY* 25 (1938) (“[I]n Belgium the general belief was that such unauthorized reprints of French books without any payment to the authors was a perfectly honorable thing.”).

36. See S.M. STEWART, *INTERNATIONAL COPYRIGHT AND NEIGHBOURING RIGHTS* 25 (2d ed. 1989); see also LADAS, *supra* note 35, at 26 (noting that “systematic piracy was committed in the United States of works published in all foreign countries, especially in England”); Henn, *supra* note 34, at 52 (“The United States had been among the most parochial of na-

readers. In the post-revolutionary period, English literature was extensively read throughout the United States.³⁷ Between 1800 and 1860, almost half of the bestsellers in the United States were pirated, mostly from English novels.³⁸ As Sydney Smith rhetorically questioned in the *Edinburgh Review* in January 1820, “In the four quarters of the globe, who reads an American book?”³⁹

In the beginning, some English authors were able to secure from American publishers the so-called “courtesy copyright”—an unwritten custom of self-restraint whereby each major publishing house refrained from publishing editions of a foreign work that was already the subject of an agreement between its author and another publishing house.⁴⁰ This system not only “protected the first American publisher of a foreign work from the unfettered copying of his edition, [but also] gave the author the opportunity of earning some remuneration, even if he were unable to prevent the American publication of his work in the first place.”⁴¹ By virtue of this arrangement, some English authors, such as Charles Dickens and Anthony Trollope, “received large sums in respect of the American sales of their works, although they did not enjoy protection under United States copyright law.”⁴²

As competition in the United States heated up and as more publications came from smaller publishing houses, courtesy copyright became ineffective.⁴³ Among the English authors who were greatly concerned about

tions so far as copyright protection for published works is concerned. For over a hundred years, this nation not only denied copyright protection to published works by foreigners, . . . but appeared to encourage the piracy of such works.”)

37. See S. REP. NO. 134, 24th Cong., 2d Sess. (1837), reprinted in R.R. BOWKER, COPYRIGHT, ITS HISTORY AND LAW: BEING A SUMMARY OF THE PRINCIPLES AND LAW OF COPYRIGHT, WITH SPECIAL REFERENCE TO BOOKS 341 (1912) [hereinafter CLAY’S REPORT]; see also SAMUELS, *supra* note 34, at 231 (noting that very few American authors were accorded serious attention in England in the early nineteenth century).

38. See STEWART, *supra* note 36, at 25 (quoting JOHN WILLIAM TEBBEL, A HISTORY OF BOOK PUBLISHING IN THE UNITED STATES (1972)).

39. Sydney Smith, *Who Reads an American Book?*, EDINBURGH REV., Jan. 1820, at 68, 79, quoted in *United Dictionary Co. v. G. & C. Merriam Co.*, 208 U.S. 260, 264 (1908).

40. See Ricketson, *supra* note 34, at 13–14; see also SIVA VAIDHYANATHAN, COPYRIGHTS AND COPYWRONGS: THE RISE OF INTELLECTUAL PROPERTY AND HOW IT THREATENS CREATIVITY 52 (2001) (discussing courtesy copyrights).

41. Ricketson, *supra* note 34, at 14.

42. *Id.*

43. See VAIDHYANATHAN, *supra* note 40, at 52–53 (discussing the emergence of cheap library editions). As Professor Vaidhyathan described:

The paper was uniformly cheap and flimsy, the typesetting sloppy, and the format hard to read. Some of the earlier editions lacked covers to keep their costs low. But soon the cheap publishers realized that the spine was in many cases the most

the lack of copyright protection in the United States were Dickens, Trollope, and the famous operetta duo of Gilbert and Sullivan.⁴⁴

In 1838, after the passage of the first International Copyright Act in Britain,⁴⁵ Lord Palmerston, the British prime minister, initiated high-level contacts with the United States to explore the establishment of a bilateral copyright treaty.⁴⁶ This effort failed, to the disappointment of British authors.⁴⁷ A few years later, Charles Dickens traveled to the United States to plead for greater protection of British works.⁴⁸ That effort also failed. As Dickens recounted in frustration his unsuccessful trip to America:

I spoke, as you know, of international copyright, at Boston; and I spoke of it again at Hartford. My friends were paralysed with wonder at such audacious daring. The notion that I, a man alone by himself, in America, should venture to suggest to the Americans that there was one point on which they were neither just to their own countrymen nor to us, actually struck the boldest dumb! It is nothing that of all men living I am the greatest loser by it. It is nothing that I have to claim to speak and be heard. The wonder is that a breathing man can be found with temerity enough to suggest to the Americans the possibility of their having done wrong. I wish you could have seen the faces that I saw, down both sides of the table at Hartford, when I began to talk about [Sir Walter] Scott. I wish you could have heard how I gave it out. My blood so boiled as I thought of the monstrous injus-

attractive—and most visible—part of a book. So by the 1880s, most of the cheap books libraries appeared in cloth bindings at a slightly higher price, but with the same cheap paper inside. Needless to say, none of these publishers were part of the eastern seaboard elite club of publishers who were led by Henry Holt [a leading publisher at the time]. So none of them conformed to the courtesy principle.

Id. at 53.

44. See SAMUELS, *supra* note 34, at 232–34, 238–39 (discussing Anthony Trollope's and Gilbert and Sullivan's copyright problems in the United States); Gerhard Joseph, *Charles Dickens, International Copyright, and the Discretionary Silence of Martin Chuzzlewit*, 10 CARDOZO ARTS & ENT. L.J. 523 (1992) (demonstrating how *Martin Chuzzlewit* reflects Dickens's distress over the United States' lack of copyright protection to British authors); see also *Carte v. Evans*, 27 F. 861 (C.C.D. Mass. 1886) (concerning the infringement on copyright in *The Mikado*); *Carte v. Duff*, 25 F. 183 (C.C.S.D.N.Y. 1885) (concerning the infringement on copyright in *The Mikado*); *Carte v. Ford*, 15 F. 439 (C.C.D. Md. 1883) (concerning the infringement on copyright in *Iolanthe*).

45. International Copyright Act, 1 & 2 Vict. ch. 59 (1838).

46. See Geo. Haven Putnam, *Literary Property: An Historical Sketch, in THE QUESTION OF COPYRIGHT: A SUMMARY OF THE COPYRIGHT LAWS AT PRESENT IN FORCE IN THE CHIEF COUNTRIES OF THE WORLD* 35, 66 (1891) [hereinafter QUESTION OF COPYRIGHT].

47. See VAIDHYANATHAN, *supra* note 40, at 51.

48. See Hamish Sandison, *The Berne Convention and the Universal Copyright Convention: The American Experience*, 11 COLUM.-VLA. J.L. & ARTS 89, 92 (1986).

tice that I felt as if I were twelve feet high when I thrust it down their throats.⁴⁹

Contemporaneous with these external efforts, local support for greater protection for foreign authors slowly grew in the United States. In 1837, Senator Henry Clay submitted a report recommending the enactment of international copyright legislation to extend copyright protection to British and French authors in the United States.⁵⁰ The report included an address and petition by fifty-six prominent British authors, maintaining that their fellow authors were “exposed to injury in their reputation and property.”⁵¹ The petition further stated that British works were “liable to be mutilated and altered, at the pleasure of [American] booksellers, or of any other persons who may have an interest in reducing the price of the works, or in conciliating the supposed principles or prejudice of purchasers in [the United States].”⁵²

In addition, the petition appealed to the national interests of American authors, noting the lack of incentives for American publishers to afford local authors a fair remuneration for their labors when these publishers could obtain foreign works “by unjust appropriation, instead of by equitable purchase.”⁵³ At the time of the petition, an American pirated edition was priced at about a quarter of the cost of a legitimate English edition; the price could go down to even a tenth of that cost.⁵⁴ As Siva Vaidhyanathan recounted: “A London reader who wanted a copy of Charles Dickens’s *A Christmas Carol* would have to pay the equivalent of \$2.50 in 1843 [while a]n American Dickens fan would have to pay only six cents per copy.”⁵⁵

Finally, the petition warned that the lack of effective protection for foreign authors might confuse the American public “as to whether the books presented to them as the works of British authors . . . [were] the actual and complete productions of the writers whose names they bore.”⁵⁶ The petition also provided an emotional reminder about Sir Walter Scott, the author of *Ivanhoe*. Scott was extensively read in the United States, but died in destitute despite his wild success as an author. As the petition surmised, Scott would have survived from “the burden of debts and destruc-

49. Letter from Charles Dickens to John Foster (Feb. 24, 1842), *reprinted in* Sandison, *supra* note 48, at 92.

50. CLAY’S REPORT, *supra* note 37.

51. *Id.* ¶ 1.

52. *Id.* ¶ 4.

53. *Id.* ¶ 8.

54. *See* STEWART, *supra* note 36, at 25.

55. VAIDHYANATHAN, *supra* note 40, at 50.

56. CLAY’S REPORT, *supra* note 37, ¶ 9.

tive toils” had he received remuneration from the American public for his creative endeavors.⁵⁷

Despite the efforts of Senator Clay and other supporters, Congress did not grant any protection to foreign authors until the 1870s.⁵⁸ Indeed, the attitudes toward protecting foreign authors in the United States did not dramatically improve until a critical mass of local stakeholders emerged. In the mid-nineteenth century, many American authors, such as James Fenimore Cooper, Ralph Waldo Emerson, Nathaniel Hawthorne, Washington Irving, Henry Wadsworth Longfellow, Herman Melville, Edgar Allan Poe, Harriet Beecher Stowe, Henry David Thoreau, and Walt Whitman, began attracting readership in England and other European countries.⁵⁹ Because most copyright laws were made conditional on reciprocity in other countries, the lack of protection for foreign authors resulted in American authors being denied similar rights under foreign law.⁶⁰

57. *Id.* ¶ 10.

58. See VAIDHYANATHAN, *supra* note 40, at 51. As Professor Vaidhyathan recounted:

Clay submitted a bill five times between 1837 and 1842. All five attempts failed. Booksellers and typesetters opposed the bills. Several prominent American authors and political leaders, including Washington Irving, Edward Everett, and John Quincy Adams, supported the bills. Only two major publishing houses, Appleton and Putnam, supported Clay’s bills.

Id.; see also Ringer, *supra* note 34, at 1055 (“The Clay bill was reintroduced several times between 1837 and 1842, but never reached a vote.”). Likewise, “unsuccessful attempts to establish copyright treaty relations with Great Britain were made in 1837, 1863, and again in 1880–81, foundering each time on the opposition of American publishers who believed that their financial success depended upon being able to sell cheap reprints of British books.” Sandison, *supra* note 48, at 92.

59. See SAMUELS, *supra* note 34, at 231.

60. See *id.* at 232; see also VAIDHYANATHAN, *supra* note 40, at 56 (“Twain started studying copyright laws during the 1870s when he lost substantial money to Canadian pirates who had recopied his work without offering him compensation.”). Max Kempelman noted the lack of protection granted to American authors in England:

Longfellow asserted a few years before his death that he had twenty-two publishers in England and Scotland, but that “only four of them took the slightest notice of my existence, even so far as to send me a copy of the book.” Harriet Beecher Stowe too is reported to have received no return whatever for her *Uncle Tom’s Cabin*, even though it sold more than 1/2 million copies in Great Britain during its first year alone.

Max Kempelman, *The United States and International Copyright*, 41 AM. J. INT’L L. 413, 413 (1947). Nonetheless, as Professor Samuels pointed out:

It was apparently possible under the existing laws for particularly resourceful Americans to obtain protection in England by simultaneous publication there, or for resourceful British citizens to obtain protection in the United States by simultaneous publication here, but protection apparently required that the author travel to the other country and reside there at the time of publication. Or an author

Even worse for these authors, the lack of copyright protection for foreign authors had created a lot of cheap imports that competed unfairly and directly against works written by local authors.⁶¹ Alarmed by the situation, a growing number of American authors and publishers began to seek “a more level playing field for their editions of American works.”⁶² Some openly discussed how the then-copyright policy had failed to serve the interests of the American people by keeping foreign works cheap. As Mark Twain wrote in *Century Magazine* in 1886:

The statistics of any public library will show that of every hundred books read by our people, about seventy are novels—and nine-tenths of them foreign ones. They fill the imagination with an unhealthy fascination with foreign life, with its dukes and earls and kings, its fuss and feathers, its graceful immoralities, its sugar-coated injustices and oppressions; and this fascination breeds a more or less pronounced dissatisfaction with our country and form of government, and contempt for our republican commonplaces and simplicities; it also breeds a longing for something “better” which presently crops out in the diseased shams and imitations of the ideal foreign spectacle: Hence the “dude.”⁶³

Just as local stakeholders began to emerge in the United States, the conditions and protections of authors also greatly improved across the Atlantic in the mid-nineteenth century. As Stephen Ladas recounted:

The nineteenth century brought profound changes in the conditions upon which the rights of authors were based. In the political field, the liberty of

might be able to convey the publication rights to a citizen of the other country before publication; but that rarely led to a very reasonable payment.

SAMUELS, *supra* note 34, at 232.

61. Max Kempelman explained in detail the plight of American authors:

The practice hurt American authors . . . for their works had to meet the unfair competition of British books which were cheaper because they were not paid for. American readers were less inclined to read the novels of Cooper or Hawthorne for a dollar when they could buy a novel of Scott or Dickens for a quarter. . . . American men of letters were, therefore, apart from any other considerations, unable to rely on literature for a livelihood. Longfellow and Lowell were college professors; Hawthorne was in the government service; Emerson engaged in lecturing. And American readers were weaned on a literature not their own.

Kempelman, *supra* note 60, at 413; *see also* VAIDHYANATHAN, *supra* note 40, at 59 (“While the first American edition of *The Adventures of Tom Sawyer* sold by subscription for \$2.75 in 1876, the Canadian pirated editions sold for 50 cents to \$1 per copy. Meanwhile, readers had to choose between buying an emerging American author’s new work for at least 50 cents per copy, or Sir Walter Scott’s *Ivanhoe* for 10 to 15 cents.”); Ringer, *supra* note 34, at 127 (“By protecting only works of American authors, the new law sanctioned the unrestrained reprinting of popular English writers, to the disastrous competitive disadvantage of the very indigenous American literature it was pledged to encourage.”).

62. SAMUELS, *supra* note 34, at 235.

63. VAIDHYANATHAN, *supra* note 40, at 61 (quoting Mark Twain).

the press, the destruction of the division of social classes, the dissemination of education, the reinforcement of national unity by the use of national languages instead of separate dialects; in the social and economic field, new processes of reproduction of literary and artistic works, the expansion of the press, the creation of new universities, libraries, museums and expositions, the development of bookselling and the wider circulation of books, the learning of foreign languages and the more general travelling of people from one country to another—all these facts created new conditions for the works of authors and artists. Writing and the cultivation of the arts came to be a real profession and those engaged in it expected to be supported by it and no longer by Maecenas and Royal Courts. As a result authors began to demand a fuller protection of their rights, and to raise much outcry against the injustice done them by the pirating of their works in foreign countries.⁶⁴

In 1886, the major European powers and a few other like-minded countries succeeded in establishing the Berne Convention for the Protection of Literary and Artistic Works⁶⁵ (Berne Convention). Although the United States only participated in the negotiation conference as an observer⁶⁶ and did not join the Convention until more than a century later,⁶⁷ Congress, in the face of strong pressure from American authors and some local publishers, actively considered proposals to provide reciprocal copyright protection to foreign authors within the United States.⁶⁸ Meanwhile, countries in the American continents also explored the possibility of creating Pan-American copyright conventions similar to what European countries established in Berne.⁶⁹

64. LADAS, *supra* note 35, at 23–24.

65. Berne Convention for the Protection of Literary and Artistic Works, Sept. 9, 1886, 288 U.N.T.S. 221 (revised at Paris July 24, 1971). The text of the original Berne Convention is reprinted in LADAS, *supra* note 35, at 1123–34.

66. Although the United States did not sign the original Berne Convention, its delegate, Boyd Winchester, held out the promise of accession if the circumstances should become appropriate:

Whilst not prepared to join the proposed Convention as a full Signatory, the United States does not thereby wish to be understood as opposing the measure in any way, but on the contrary, desires to reserve without prejudice the privilege of future accession to the Convention, should it become expedient and practicable to do so This position and attitude of the United States is one of expectancy and reserve.

LADAS, *supra* note 35, at 29–30 (quoting Winchester).

67. See Berne Convention Implementation Act of 1988, Pub. L. No. 100-568, 102 Stat. 2853 (1988) (codified in scattered sections of 17 U.S.C.). The Berne Convention entered into force in the United States on March 1, 1989.

68. See LADAS, *supra* note 35, at 27.

69. See Ringer, *supra* note 34, at 1060.

In 1891, the United States Congress finally enacted the International Copyright Act of March 3, 1891.⁷⁰ Under what was commonly referred to as the Chace Act,⁷¹ foreign authors received copyright protection when the President of the United States proclaimed that their home country provided American citizens with “the benefit of copyright on substantially the same basis as its own citizens” or that such a country was a party to an international agreement that provided reciprocal copyright protection to its members and to which “the United States may, at its pleasure, become a party.”⁷² By offering protection to foreign authors (in addition to local authors), the United States finally crossed over from the unpromising side of the intellectual property divide to the more promising one.⁷³

Today, the United States is no longer the notorious pirate that it was in the eighteenth and nineteenth centuries. Rather, it has actively championed the cause for greater protection of copyrighted works throughout the world. It has also become one of the predominant intellectual property powers pushing for stronger levels of protection and enforcement around the world.⁷⁴ Not only was the United States instrumental in establishing the TRIPS Agreement,⁷⁵ it has also applied continual pressure to induce devel-

70. International Copyright Act of March 3, 1891 (Chace Act), Ch. 565, 26 Stat. 1106.

71. The statute’s longer name is Chace-Breckinridge-Adams-Simonds-Platt Copyright Act of 1891. *Analysis of the Provisions of the Copyright Law of 1891*, in QUESTION OF COPYRIGHT, *supra* note 46, at 176.

72. Section 13 of the Chace Act provides:

That this act shall apply to a citizen or subject of a foreign state or nation when such foreign state or nation permits to citizens of the United States of America the benefit of copyright on substantially the same basis as its own citizens; or when such foreign state or nation is a party to an international agreement which provides for reciprocity in the granting of copyright, by the terms of which agreement the United States may, at its pleasure, become a party to such agreement.

Chace Act § 5. “This system [of Presidential proclamations] has proved cumbersome and ineffective in comparison with the simplicity, certainty, and other advantages offered by multilateral arrangements.” Ringer, *supra* note 34, at 1058.

73. It is worth noting that the United States, at that time, already provided strong protection to local authors. The United States’ crossover experience was therefore not identical to that of China. Nevertheless, one could make a strong argument that discriminating against foreign authors is far worse than not offering adequate protection to all types of author—both local and foreign. While the former favors the discriminating country, the latter involves the sacrifice of local authors. The latter therefore incurs greater political costs on the part of the country’s leadership.

74. For an interesting discussion of why the United States underwent a 180-degree change in its approach toward intellectual property protection, see J. Thomas McCarthy, *Intellectual Property—America’s Overlooked Export*, 20 U. DAYTON L. REV. 809 (1995).

75. For excellent discussions of the TRIPS negotiations, see generally DANIEL GERVAIS, *THE TRIPS AGREEMENT: DRAFTING HISTORY AND ANALYSIS* 3–26 (2d ed. 2003) (describing the origins and development of the TRIPS Agreement); JAYASHREE WATAL, *INTELLECTUAL*

oping countries to reform their intellectual property systems. Of great recent concern to the international community is the United States' active push for the establishment of bilateral, plurilateral, and regional trade, investment, and intellectual property agreements, including the highly controversial ACTA⁷⁶ and the equally problematic Trans-Pacific Partnership Agreement (TPP).⁷⁷

If experiences from countries like the United States—and, for that matter, Germany, Japan, Singapore, and South Korea—can be generalized, China will experience a crossover in the near future. Indeed, one can already observe many similarities between the path taken by the United States in the nineteenth century and the path that the major developing countries are now taking. While the United States went through three different stages of development—“from pirate to holdout to enforcer”⁷⁸—many developing countries have already experienced the first two stages.⁷⁹

PROPERTY RIGHTS IN THE WTO AND DEVELOPING COUNTRIES 11–47 (2001) (recounting the negotiation process for the TRIPS Agreement); Peter K. Yu, *TRIPS and Its Discontents*, 10 MARQ. INTELL. PROP. L. REV. 369, 371–79 (2006) (examining four different accounts of the origins of the TRIPS Agreement).

76. For the Author's criticisms of ACTA, see generally Yu, *ACTA and Its Complex Politics*, *supra* note 3; Yu, *What Enforcement?*, *supra* note 3; Yu, *Six Secret Fears*, *supra* note 3.

77. See *Trans-Pacific Partnership*, OFFICE OF THE U.S. TRADE REPRESENTATIVE, <http://www.ustr.gov/tpp> (last visited June 22, 2012) (providing up-to-date information about TPP). See generally Meredith Kolsky Lewis, *The Trans-Pacific Partnership: New Paradigm or Wolf in Sheep's Clothing?*, 34 B.C. INT'L & COMP. L. REV. 27 (2011) (discussing TPP); Yu, *Alphabet Soup*, *supra* note 4 (explaining why TPP is likely to be more dangerous than ACTA from a public interest standpoint).

78. See JULIE E. COHEN ET AL., COPYRIGHT IN A GLOBAL INFORMATION ECONOMY 34 (2d ed. 2006); see also SAMUELS, *supra* note 34, at 230 (“The role of the United States in the international copyright community has gone from that of outlaws to outsiders to ‘strangers at the feast’ to leading members of the club.”).

79. As I wrote earlier:

When one examines the development paths of many former less-developed countries, one could identify three distinct stages of development: (1) isolation; (2) emergence; and (3) crossover. The first stage began with the establishment of the international intellectual property regime. For most countries, this stage ended when countries declared independence and entered into relations with other countries on their own volition. The isolation stage lasted a little longer for those who relied on import substitution and similar strategies, such as those in the Communist bloc and South America. Unless there is a major setback to the international legal order, such as a movement to abandon existing international treaties, this stage is over for virtually all countries today.

The second stage occurred when less-developed countries pushed for the establishment of the old development agenda in the 1960s and early 1970s, such as the revision of the Paris and Berne Conventions, the transformation of WIPO [World Intellectual Property Organization] into a specialised agency of the United Na-

Thus, it is only a matter of time before China and other latecomers in the developing world reach a crossover point where stronger protection will be in their self-interests.⁸⁰

In sum, China will likely provide some good news to intellectual property rights holders. After fighting hard for more than two decades and suffering considerable financial losses from piracy and counterfeiting, these rights holders and their supportive governments will finally begin to see the light at the end of the tunnel. Nevertheless, as the next Part shows, the rapid and dramatic improvements in the intellectual property arena may bring some unintended consequences. The United States and its intellectual property industries may therefore be in for a rude awakening. While greater protection and enforcement will certainly provide some benefits, such improvements will also create an intellectual property power against which the United States may not be interested in competing.

II. UNINTENDED CONSEQUENCES

Although the protection and enforcement of intellectual property rights in China is important, competition is not only about such protection and enforcement.⁸¹ In fact, as the British Commission on Intellectual Prop-

tions, and the establishment of the New International Economic Order. Except for WIPO's inclusion in the United Nations, most of these efforts ended with failure, due in no small part to the internal economic crises in these countries, the successful divide-and-conquer strategies deployed by the United States and other developed countries, and the successful launch of the [General Agreement on Tariffs and Trade]/WTO negotiations. The ongoing development agendas also fit within this stage and could be considered a continuation of past pro-development efforts. At this point, however, it is premature to evaluate the success of these recent efforts.

The last stage is where a less-developed country crosses over from a pirating nation to one that shows a strong respect for intellectual property rights. This stage is set to begin for some high-income developing countries, such as Brazil, China and India. It unfortunately will begin much later for low-income developing and least-developed countries. Indeed, for countries with very low imitative capacity or an insufficiently developed market, sufficient empirical evidence has suggested that stronger intellectual property protection may not be in the best interest of these countries.

Yu, *Global Intellectual Property Order*, *supra* note 29, at 11–12 (footnote omitted).

80. See Peter K. Yu, *Access to Medicines, BRICS Alliances, and Collective Action*, 34 AM. J.L. & MED. 345, 391 (2008); Yu, *China Puzzle*, *supra* note 1, at 202.

81. As Jerome Reichman observed:

[I]ntellectual property rights are but one component of overall economic growth; that different states have different factor endowments; and that in many countries, especially those at an early stage of development, a sound agricultural policy or a sound pro-competitive industrial policy with a supportive political and legal infra-

erty Rights rightly recognized, intellectual property rights should be regarded “as instruments of public policy which confer economic privileges on individuals or institutions solely for the purposes of contributing to the greater public good.”⁸² Because the conferred privileges should be “a means to an end, not an end in itself,”⁸³ it is important for policymakers to focus on the broader picture of innovation and competition, as opposed to a narrower picture of intellectual property protection and enforcement. Focusing on this broader picture, this Part discusses three potential unintended consequences caused by rapid and dramatic improvements in the Chinese intellectual property system: (1) an intellectual property litigation explosion in China; (2) the United States’ reduced competitive edge over China; and (3) the barriers to future intellectual property reform in the United States.

A. *Litigation Blowback*

For more than two decades, commentators have criticized China for its lack of respect for the rule of law and inadequately developed legal system.⁸⁴ Even though China has yet to respect the rule of law the same way as Western democracies, its legal system has greatly improved, especially after its accession to the WTO.⁸⁵ Although much room for improvement still exists, and although most rights holders would rather see more litiga-

structure are more likely to stimulate economic growth than intellectual property laws.

Jerome H. Reichman, *Intellectual Property in the Twenty-First Century: Will the Developing Countries Lead or Follow?*, 46 HOUS. L. REV. 1115, 1117 (2009) [hereinafter Reichman, *Twenty-First Century*].

82. COMM’N ON INTELLECTUAL PROP. RIGHTS, INTEGRATING INTELLECTUAL PROPERTY RIGHTS AND DEVELOPMENT POLICY 6 (2002) [hereinafter IPR COMMISSION REPORT]. Similarly, Marco Ricolfi stated:

A closer reading of TRIPs . . . shows that IP protection and enforcement are seen as means rather than ends in themselves both because the larger ends encompass freedom of trade . . . and because the international community is committed to taking into account other non-trade and non-IP factors while shaping IP protection.

Marco Ricolfi, *Is There an Antitrust Antidote Against IP Overprotection Within TRIPs?*, 10 MARQ. INTELL. PROP. L. REV. 305, 326 (2006).

83. IPR COMMISSION REPORT, *supra* note 82, at 6.

84. For discussions of rule-of-law developments in China, see generally JUDICIAL INDEPENDENCE IN CHINA: LESSONS FOR GLOBAL RULE OF LAW PROMOTION (Randall Peerenboom ed., 2009); RANDALL P. PEERENBOOM, CHINA’S LONG MARCH TOWARD RULE OF LAW (2002); THE LIMITS OF THE RULE OF LAW IN CHINA (Karen G. Turner et al. eds., 2000).

85. See Shi Guangsheng, *Introduction: Working Together for a Brighter Future Based on Mutual Benefit*, in CHINA’S PARTICIPATION IN THE WTO 15, 15 (Henry Gao & Donald Lewis eds., 2005) (“After joining the WTO, China first and foremost sorted out over 2,300 laws and regulations nationwide.”).

tion than less at this point in time, policymakers should begin thinking about what will happen if the volume of litigation continues to increase in China. After all, while the United States has strong respect for the rule of law, commentators have heavily criticized the country for its litigiousness.⁸⁶

Moreover, when things happen in China, they tend to happen on a gigantic scale. This is true regardless of piracy and counterfeiting or intellectual property litigation. If insufficient safeguards are built into the legal system to prevent frivolous lawsuits and abuse of rights, the greater use of the legal system could eventually backfire on foreign rights holders. For firms that manufacture all their goods in China, litigation-related disruption could be quite damaging.⁸⁷ In fact, an injunction in China could easily result in the shutting down of *all* the production of a defendant firm.

In an earlier work, I discussed how the challenge of Pfizer's patent in sildenafil citrate, a key ingredient of Viagra, before SIPO in July 2003 portended an emerging trend of growing litigiousness among Chinese firms.⁸⁸ Taking the opposite perspective, some commentators quickly classified this challenge as yet another attempt to pirate American intellectual property rights. As a former director of policy planning at the USTR wrote:

Faced with rising global pressure to crack down on patent infringement, Beijing may be in the process of redefining patent criteria effectively to safeguard Chinese drug-makers from accusations of illegal infringements. The removal of patents on Viagra or Avandia would offer Chinese companies free rein to manufacture homegrown copycat drugs without fear of prosecution. If these cases continue in their current direction, China may in the process violate its obligations to the WTO.

For the global research pharmaceutical industry, the ruling carries the significant threat of a Chinese government tacitly supporting the production of counterfeit drugs by domestic Chinese companies. For China's trading partners worldwide, the ruling demonstrates China's somewhat cautious embrace of the WTO's rules-based system, which it joined in 2002.⁸⁹

86. For discussions of litigiousness in American society, see generally JETHRO K. LIEBERMAN, *THE LITIGIOUS SOCIETY* (1981); WALTER K. OLSON, *THE LITIGATION EXPLOSION: WHAT HAPPENED WHEN AMERICA UNLEASHED THE LAWSUIT* (1991).

87. See Wang Xiang, Partner, Orrick, Herrington & Sutcliffe LLP, Remarks at the 2012 Asia Law Society Symposium, University of Michigan Law School (Mar. 24, 2012).

88. See Yu, *From Pirates to Partners II*, *supra* note 1, at 984–91 (discussing the challenge of Pfizer's patent in sildenafil citrate before SIPO).

89. Naotaka Matsukata, *China's Counterfeit Commitment to Patents*, *FIN. TIMES*, Aug. 5, 2004, at 17; see also *China's Viagra Heist*, *WALL ST. J.*, July 12, 2004, at A16 (“The decision in favor of a group of Chinese pharmaceutical companies who had petitioned the SIPO demonstrates a troubling pattern. Although it is under international pressure to respect intellectual property rights, China is acceding to the demands of its own companies for pa-

While it is not hard to understand the views expressed by those concerned about the SIPO challenge, especially Pfizer and other similarly situated foreign firms, their views overlooked the fact that the local challengers were actually relying on the legal process to invalidate the patent granted by SIPO.

To be certain, the outcome was unfavorable to Pfizer (and likely many other foreign rights holders). One could also debate about the appropriate legal basis for reviews granted by SIPO. Nevertheless, it is hard to ignore the fact that the use of the SIPO process to invalidate a patent was exactly what intellectual property rights holders should expect in a country making a transition to become more respectful of intellectual property rights. As Doug Clark, a noted intellectual property attorney formerly from Lovells, declared, “[A]s long as people are interested in dealing with commercial disputes through court, it is a sign that a country is developing a proper legal system rather than ignoring it.”⁹⁰

A decade ago, local firms would simply ignore the law and manufacture counterfeit products. Many still do today. This time, however, local firms went to SIPO first, asking for the invalidation of Pfizer’s patent for its failure to satisfy the novelty requirement.⁹¹ That was indeed an improvement.

If this trend continues and accelerates, however, it may eventually lead to an unhealthy explosion of intellectual property challenges and litigation. Consider the patent area, for example. While some challenges will undoubtedly be mounted as a result of the low or inconsistent quality of

tent-nullification.”); Dudley Schleier, *Pfizer Clarifies China’s Reversal of Viagra Patent*, STRAITS TIMES (Sing.), Aug. 6, 2004, at 24 (maintaining that “China’s decision to overturn the Viagra patent . . . does indeed break new and unsettling legal ground . . . [and] sends a very disturbing message to all who are concerned about China’s commitment to intellectual property right”).

90. Yu, *From Pirates to Partners II*, *supra* note 1, at 986 n.394 (quoting *Pfizer v. China*, RED HERRING, Aug. 26, 2004).

91. It is worth noting that the Viagra patent has also been invalidated in the United Kingdom and South America as well as by the European Patent Office. *See, e.g.*, Tony Chen, *Western Ways, Good and Bad*, FIN. TIMES (Asia), July 21, 2004, at 10 (providing a brief history of the development of Viagra and discussing the revocation of the Viagra patent in the United Kingdom and by the European Patent Office); Andy Ho, *The Hoopla Over Viagra Patenting in China*, STRAITS TIMES (Sing.), July 14, 2004, at 16 (reporting the invalidation of the Viagra patent in the United Kingdom, Colombia, and Venezuela as well as by the European Patent Office); Phelim Kyne et al., *China Voids Pfizer’s Viagra Patent*, WALL ST. J., July 8, 2004, at A3 (reporting that “in 2001, the patent was disallowed in Bolivia, Colombia, Ecuador, Peru and Venezuela over a different issue”).

Chinese patents,⁹² other litigants may seek to test the boundaries of the intellectual property system. Some may even abuse the system, hoping to obtain opportunistic gains. Eventually, the increased litigation in China may make it very costly for foreign rights holders or new local firms to enter the market. In fact, the growing volume of lawsuits in the country has already led some commentators to “wonder whether China is becoming a place where business disputes are resolved by rule of law or whether it is simply adopting a ‘bad’ habit of the west.”⁹³

At the macro-level, an explosion of intellectual property litigation in China can easily become a trade barrier. This is particularly true when courts begin to grant high damage awards against foreign firms. In the widely-reported 2006 case of *Chint v. Schneider Electric*, for example, the Wenzhou Intermediate People’s Court awarded the Chinese plaintiff damages of 330 million RMB (about \$48 million) for infringement on a utility model patent.⁹⁴ That case provided the largest damage award ever granted for patent infringement in China. Although the case was eventually settled, it has caught considerable attention from foreign policymakers, firms, and commentators, due in part to the award’s unprecedented size and the fact that *Schneider Electric* was a foreign firm.

Today, many intellectual property rights holders in China have already actively incorporated litigation into their business strategies.⁹⁵ Commentators have also noted that China now has the world’s largest volume of intellectual property litigation.⁹⁶ As Chinese firms continue to buy intellectual

92. See generally Mark Liang, *Chinese Patent Quality: Running the Numbers and Possible Remedies*, 11 J. MARSHALL REV. INTELL. PROP. L. 478 (2012) (questioning the quality of Chinese patents and offering suggestions for reform).

93. Chen, *supra* note 91.

94. For discussions of *Chint v. Schneider Electric*, see generally Wayne C. Jaeschke, Lu Zhun & Paul Crawford, *Comparison of Chinese and U.S. Patent Reform Legislation: Which, If Either, Got It Right?*, 11 J. MARSHALL REV. INTELL. PROP. L. 567, 576 (2012); Symposium, *Chinese Intellectual Property Judges Panel*, 15 SMU SCI. & TECH. L. REV. 61, 64–66 (2011).

95. See Jameson Berkow, *Patent Dragon Awakes*, FIN. POST (Nov. 7, 2011, 6:39 PM), <http://business.financialpost.com/2011/11/07/patent-dragon-awakes/>. As Mike Elmer, a senior counsel at Finnegan, Henderson, Farabow, Garrett & Dunner, LLP, explained:

Historically, when we represented a Chinese company at Finnegan it was almost always as a defendant But now, the Chinese are starting to develop their own portfolios, and these are defensive portfolios so if you get sued you can turn around and sue somebody else. Ultimately, [their] game plan will become an offensive one.

Id. (quoting Elmer) (internal quotation marks omitted); see also Chen, *supra* note 91 (“Intellectual property disputes have . . . mushroomed. Chinese companies are incorporating litigation into their business strategy. Over 9,000 lawsuits were filed in China in 2003.”).

96. As Xuan-Thao Nguyen documented:

property assets and foreign firms holding those assets,⁹⁷ Chinese firms could initiate intellectual property litigation in not only China, but also throughout the world. As a result, an intellectual property litigation explosion in China could easily spread to other parts of the world.

To some extent, one could tie the growing volume of Chinese intellectual property lawsuits to the ongoing concern about patent trolls in the United States.⁹⁸ If the patent troll problem takes place in China, the scale of the problem is likely to be very significant. In fact, some commentators have already noted the difference between patent trolls in the United States and those found in China. As Chris Bailey, Rouse's deputy China country manager, observed, the term "patent cockroaches" better describes the smaller but more numerous patent trolls in China:

China doesn't have patent trolls, it has patent cockroaches. That's not my name, but it is one that I've heard over here before. It's the perfect expression, really. It describes an individual inventor or company that has a cheap utility model patent, probably invalid, which in many cases was probably invented during their time in another company. They then assert

In 2005, there were 12,159 patent, copyright, and trademark cases filed in the United States, compared to 10,825 cases in China. In 2006, the United States saw 11,486 cases, while China witnessed 11,436 intellectual property cases. The trend continues, as demonstrated by the fact that the number of intellectual property cases filed in 2007 for the United States totaled 10,761, whereas China's was 15,159.

Xuan-Thao Nguyen, *The China We Hardly Know: Revealing the New China's Intellectual Property Regime*, 55 ST. LOUIS L.J. 773, 775 (2011); see also Berkow, *supra* note 95 ("In Canada, you have maybe 60 patent infringement cases filed per year, maybe 80, and in the United States there are 3,000. . . . China now has more than 3,000 . . . probably closer to 4,000 now.") (quoting Mike Elmer, Senior Counsel, Finnegan, Henderson, Farabow, Garrett & Dunner, LLP); Doug Tsuruoka, *Intellectual Property in China*, INVESTOR'S BUS. DAILY, Mar. 29, 2010, at A1 (stating that "Chinese courts heard more than 4,000 new cases in 2008 vs. 2,800 for the U.S. and 200 for Japan" and reporting the description by Tony Chen, a partner in the Shanghai office of Jones Day, of China as "No. 1 in terms of patent infringement lawsuits between private parties").

97. See SHAUN REIN, *THE END OF CHEAP CHINA: ECONOMIC AND CULTURAL TRENDS THAT WILL DISRUPT THE WORLD* 167 (2012) ("Chinese firms tend to acquire companies to buy brands for introduction into China, to cut the time needed for building brands, and to import technological know-how and management expertise."); ZENG & WILLIAMSON, *supra* note 6, at 139–40 ("[T]he Chinese are strategically acquiring companies that will help them overcome the impediments to winning market share in industries where cost innovation is difficult to exploit complementary local knowledge or technology"); *id.* at 140 (stating that China's SGSB Group "acquired a strong brand, a wealth of customer relationships, and advance technology" through the acquisition of Duerkopp Adler, the German producer of industrial sewing machines); see also PETER NOLAN, *IS CHINA BUYING THE WORLD?* (2012) (critically examining the claim that "China is buying the world").

98. See Mark A. Lemley & Carl Shapiro, *Patent Holdup and Royalty Stacking*, 85 TEX. L. REV. 1991, 2008–10 (2007) (discussing patent trolls).

this against, ideally, a foreign company or big corporation. It should be remembered that it has cost them very little to attain this patent or to file, so even a damages award that is just a few thousand dollars is worth it for them, as the cost of litigation is also very low.⁹⁹

B. *New Competitive Edge*

The TRIPS Agreement has been widely recognized as a strategic tool deployed by the United States, members of the European Communities, Japan, and other developed countries to protect their important interests in intellectual property-based goods and services. As Ha-joon Chang pointed out in his attractively titled book, the rules in the existing international trading system have enabled developed countries to “kick away the ladder” needed by developing countries to catch up economically and technologically.¹⁰⁰ Even today, many U.S. policymakers and firms subscribe to the view that strengthening intellectual property protection will be critically important to the success of those firms and the American economy.

While this proposition has been true for most of the past two decades, it has become increasingly questionable today. After all, intellectual property protection has always been about striking an appropriate balance. As Judge Alex Kozinski warned us in his famous dissent in *White v. Samsung Electronics America, Inc.*, “Overprotecting intellectual property is as harmful as underprotecting it.”¹⁰¹ Likewise, Josh Lerner wrote in a special issue of *The WIPO Journal*: “Almost all economists would agree that some intellectual property protection is better than no intellectual property protection at all. But this does not mean that very strong protection is better than a more moderate level of protection.”¹⁰²

To some extent, the push for China to strengthen intellectual property protection has resulted in the slow and paradoxical erosion of the United States’ competitive position.¹⁰³ This point sounds counterintuitive, but it

99. *NPEs, Chinese Style*, IAM MAG. BLOG, <http://www.iam-magazine.com/blog/detail.aspx?g=6c5ae124-8052-40e3-873d-805cbb5d0e17> (last visited June 22, 2012) (quoting Chris Bailey, Rouse’s deputy China country manager).

100. HA-JOON CHANG, *KICKING AWAY THE LADDER: DEVELOPMENT STRATEGY IN HISTORICAL PERSPECTIVE* 4 (2002) (tracing the phrase to FREIDRICH LIST, *THE NATIONAL SYSTEM OF POLITICAL ECONOMY* 39 (Sampson Lloyd trans., 1885)).

101. *White v. Samsung Elecs. Am., Inc.*, 989 F.2d 1512, 1513 (9th Cir. 1993) (Kozinski, J., dissenting).

102. Josh Lerner, *The Patent System in a Time of Turmoil*, 2 *WIPO J.* 28, 32 (2010); see also Peter K. Yu, *Anticircumvention and Anti-anticircumvention*, 84 *DENV. U. L. REV.* 13, 17 (2006) (“More [copyright protection] is not always better, and small can be beautiful.”).

103. As I wrote earlier:

It is no coincidence that many research and development (R & D) intensive industries remain located in the United States—and for that matter, other countries with

actually makes a lot of sense. From a long-term competition standpoint, greater intellectual property protection will make China more innovative and therefore more competitive. Such increased competitiveness will slowly erode the competitive advantage the United States has traditionally enjoyed as a result of its much higher intellectual property standards.

In fact, if all countries offer the same level of intellectual property protection and enforcement, other location factors will be determinative. These factors may include the size and growth of the market, and the costs of labor,¹⁰⁴ transportation, and raw materials.¹⁰⁵ As China offers stronger in-

a strong intellectual property system. It is also worth noting that many researchers and highly educated people choose to stay in the country. To some extent, weaker intellectual property protection abroad may have helped keep US jobs in the R & D intensive industries, especially amid the current global economic crisis. Stronger intellectual property protection and enforcement in China, therefore, is a double-edged sword: it can help and hurt the US economy at the same time.

Peter K. Yu, *Enforcement, Economics and Estimates*, 2 WIPO J. 1, 12–13 (2010). Similarly, Jerome Reichman noted:

[H]igh standards of protection that seem to lock in economic advantages today can turn against those who promoted them tomorrow. When market power shifts and states having newly acquired economic capabilities arrive on domestic markets demanding respect for their internationally guaranteed proprietary rights, today's maximalists could well find themselves hoisted on their own petards.

J.H. Reichman, *Intellectual Property in International Trade: Opportunities and Risks of a GATT Connection*, 22 VAND. J. TRANSNAT'L L. 747, 889 (1989); see also Amy Kapczynski, *Harmonization and Its Discontents: A Case Study of TRIPS Implementation in India's Pharmaceutical Sector*, 97 CAL. L. REV. 1571, 1584 (2009) ("TRIPS may . . . have perverse implications for the multinational firms that advocated for it. Although they aimed to push Indian competitors out of the low-value Indian market, they may have also pushed Indian companies into the U.S. and EU markets on which their profits much more substantially rely."); Keith E. Maskus, *Strengthening Intellectual Property Rights in Asia: Implications for Australia*, 37 AUSTRALIAN ECON. PAPERS 346, 358 (1998) ("One problem particularly facing small, open economies that already have comprehensive [intellectual property rights] in place is that as Asian systems become more protective their markets become relatively more attractive to foreign investors and licensors."); Reichman, *Twenty-First Century*, *supra* note 81, at 1119 ("[A]s often happens in international law, efforts to rig a regime for short-term advantages may turn out, in the medium- and long-term, to boomerang against those who pressed hardest for its adoption.").

104. See REED E. HUNDT, IN CHINA'S SHADOW: THE CRISIS OF AMERICAN ENTREPRENEURSHIP 23 (2007) ("[T]heir sheer numerosity means that many Chinese entrepreneurs can hire new employees at low wages for the indefinite future.").

105. Examples of other location factors include local demand patterns, distance from markets, access to natural resources, trade protection, education and training of the local workforce, the condition of the financial sector, the health of the legal system, and the transparency of governmental procedures. See Paul J. Heald, *Mowing the Playing Field: Addressing Information Distortion and Asymmetry in the TRIPS Game*, 88 MINN. L. REV. 249, 258–59 (2003); Keith E. Maskus, *The Role of Intellectual Property Rights in Encouraging*

lectual property protection, more American and multinational firms may consider relocating to China to take advantage of its lower production costs and considerable market potential.¹⁰⁶ More technology will be transferred as a result, and more U.S. jobs—a key focus of the present administration—will be outsourced.¹⁰⁷

It is no coincidence that many research and development (R & D) intensive industries remain located in the United States—and for that matter, other countries with a strong intellectual property system. It is also worth noting that many researchers and highly educated individuals chose to stay in the country, due in large part to the high remuneration for their creative and inventive activities.¹⁰⁸ In a perverse way, weaker intellectual property protection abroad may have helped keep U.S. jobs in the R & D intensive industries, especially amid the current global economic crisis. Stronger intellectual property protection and enforcement in China, therefore, is a double-edged sword: it can help and hurt the U.S. economy at the same time.

When I advance in conferences the argument that strengthening intellectual property protection in China could result in more outsourcing or offshoring¹⁰⁹ and thereby greater reduction of U.S. jobs, that argument of-

Foreign Direct Investment and Technology Transfer, 9 DUKE J. COMP. & INT'L L. 109, 123 (1998).

106. See Peter K. Yu, *Trade Barriers Won't Contain China's Cars*, DETROIT NEWS, Oct. 25, 2007, at 15A; Yu, *Global Intellectual Property Order*, *supra* note 29, at 14 (“[I]f everything (including intellectual property standards) is the same, what would prevent multinational corporations from relocating their operations to countries that have drastically lower production, labour and distribution costs?”).

107. Some commentators, however, have pointed out that outsourcing to China will be less attractive in the future, due to the increased costs of living (and therefore costs of production). See REIN, *supra* note 97, at xiii (“Companies can no longer manufacture cheaply in China, and may need to rethink their strategies and shift manufacturing to lower-cost production centers like Vietnam or Indonesia—or even back to the United States in some cases.”). *But see id.* at 26 (recounting the view of the president of a Shanghai furniture factory that “Chinese workers overall have more experienced line managers, and more drive and ability to produce more sophisticated products”).

108. See ROBERT M. SHERWOOD, *INTELLECTUAL PROPERTY AND ECONOMIC DEVELOPMENT* 156 (1990); Edmund W. Kitch, *The Patent Policy of Developing Countries*, 13 UCLA PAC. BASIN L.J. 166, 173–76 (1994).

109. As Thomas Friedman explained:

Offshoring . . . is different from outsourcing. Outsourcing means taking some specific, but limited, function that your company was doing in-house—such as research, call centers, or accounts receivable—and having another company perform that exact same function for you and then reintegrating their work back into your overall operation. Offshoring, by contrast, is when a company takes one of its factories that it is operating in Canton, Ohio, and moves the whole factory offshore to Canton, China. There, it produces the very same product in the very

ten invites responses claiming that the United States should engage in a race to the top, not a race to the bottom. While aspiring to engage in a race to the top is correct, positive, and admirable, today's major U.S. firms—or more correctly, multinational corporations—seem to be focusing more on their bottom line than on helping the country to engage in a race to the top. What is good for General Motors may not be good for America. In fact, if firms continue to outsource or offshore in an effort to widen the profit margin, helping China strengthen intellectual property protection and enforcement will certainly give the country a *new* competitive edge, assuming China can continue to maintain, on balance, its existing comparative advantages.¹¹⁰

Even more problematic for U.S. policymakers, multinational firms have now been actively investing in R & D facilities in China.¹¹¹ Despite

same way, only with cheaper labor, lower taxes, subsidized energy, and lower health-care costs.

THOMAS L. FRIEDMAN, *THE WORLD IS FLAT: A BRIEF HISTORY OF THE TWENTY-FIRST CENTURY* 114–15 (2005).

110. See ODED SHENKAR, *COPYCATS: HOW SMART COMPANIES USE IMITATION TO GAIN A STRATEGIC EDGE* 63 (2010) (“Globalization and outsourcing increase the number and diversity of competitors while at the same time knowledge is becoming more codified and transferable.”); ZENG & WILLIAMSON, *supra* note 6, at 46 (“The rise of outsourcing in the global economy has clearly been an important factor in allowing Chinese companies to unlock the door to the global market at an early stage in their development.”). Although the costs of living (and production) will certainly increase, see REIN, *supra* note 97, at xiii, the Chinese market still has not reached its full potential. If this market continues to grow, the increase in market size may offset some of the location disadvantages brought about by increasing production costs.

111. As Zeng Ming and Peter Williamson wrote:

[Since 1993], Motorola has built sixteen R&D centers with more than eighteen hundred people. In 1999, Motorola set up its China Research Institute in Beijing, which is among the largest facilities of its type in China, and also a world-class center within Motorola. Between 1985 and 2003, Motorola has applied for 2,305 patents, making it among the biggest patent applicants in China. . . .

Recognizing that it needs to leverage Chinese advantages at every stage of the value chain in order to strengthen its global competitiveness, Korea's LG group has gone even further, moving key R&D to China. In 2005 LG hired two thousand engineers and scientists into its Chinese R&D center, making it LG's largest R&D site outside Korea. LG has submitted more worldwide patent applications based on research conducted in China than any other company, with the exception for Huawei. By placing such emphasis on China-based R&D, LG is tapping into the secrets of how to deliver high technology at low cost to strengthen and differentiate its competitive position against rivals such as Sony, Matsushita, and its archrival Samsung.

ZENG & WILLIAMSON, *supra* note 6, at 178. As they continued:

[Since the mid-1990s, Intel] has built five plants in China, all using the latest technologies. To tap into China's distinctive technological developments, Intel

their repeated complaints about inadequate and ineffective intellectual property protection in China, these firms have also increased their efforts to secure intellectual property rights in that country.¹¹² According to the World Bank, the volume of patent and trademark applications in 2010 by nonresidents amounted to 98,111¹¹³ and 67,838, respectively.¹¹⁴ These figures stand in sharp contrast to 22,478 and 39,633 in Australia, a country clearly more respectful of intellectual property rights.¹¹⁵ It is therefore no surprise that Reed Hundt, the former chairman of the Federal Communications Commission, includes the following warning in his book *In China's Shadow*:

If the United States offshores technology leadership along with jobs and investment capital, the firms left behind will not necessarily find big winners around which to cluster. They will become more tentative. They may not keep pace with Chinese technology development, or even obtain equally good service from Chinese technology sellers, as when California taught American business how to obtain the productivity gains of the 1990s. The left-behind will struggle with the airline schedules to China and the language and mores of the Chinese. They may slow the pace of the investment and lose competitive advantage in markets where foreigners can compete against them.¹¹⁶

C. Point of No Reversal

Macroeconomic structures constantly change. In the near future, the economic structure of the United States—and for that matter, members of the European Union, Japan, or other existing developed countries—could depend more on innovation than existing forms of intellectual property rights. If firms like Apple, Google, and Facebook—as opposed to, say, the U.S. film and pharmaceutical industries—are driving the U.S. economy in

Capital has invested in almost fifty companies in China and in 2005 it set up a \$200 million Intel Capital China Technology Fund to take shares in promising technologies emerging there.

Id. at 181.

112. See HUNDT, *supra* note 104, at 49–50 (“American firms fear theft of intellectual property in China. Nonetheless, they routinely file for copyrights, trademarks, and patents in many countries.”); ZENG & WILLIAMSON, *supra* note 6, at 178 (describing the active filing of patent applications in China by Motorola and LG).

113. *Patent Applications, Nonresident*, WORLD BANK, <http://data.worldbank.org/indicator/IP.PAT.NRES> (last visited May 11, 2012).

114. *Trademark Applications, Direct Nonresident*, WORLD BANK, <http://data.worldbank.org/indicator/IP.TMK.NRES> (last visited May 11, 2012).

115. *Patent Applications, Nonresident*, *supra* note 113; *Trademark Applications, Direct Nonresident*, *supra* note 114.

116. HUNDT, *supra* note 104, at 50 (footnote omitted).

the future, one has to wonder how much the existing international intellectual property system will still benefit the United States.¹¹⁷

This point indeed came up during the discussion of ACTA. One major charge against this flawed and controversial plurilateral agreement is that, by locking in the existing high standards, the agreement may foreclose the opportunity for Congress to revise laws in the near future. While Congress can always ratchet *up* intellectual property standards, using the ACTA standards as the floor, the Agreement may prevent Congress from ratcheting *down* those high standards.

Exemplifying this concern was the question Senator Ron Wyden raised in his letter to the USTR.¹¹⁸ In that letter, he questioned whether ACTA would lock the United States into the existing model under the Digital Millennium Copyright Act¹¹⁹ (DMCA). In response to his question, Ronald Kirk, the United States Trade Representative, wrote: “We envision that the provisions of the DMCA would be relevant to U.S. compliance with future ACTA obligations. However, we are aware of concerns about retaining flexibility to legislate in the future in this field, and have written our proposals with those concerns in mind.”¹²⁰

Ambassador Kirk’s response is particularly telling, because it reveals the potential challenge in locking all the ACTA negotiating parties into the current high standards for intellectual property protection and enforcement while at the same time retaining flexibility and autonomy to allow each country to undertake future legislative reform that may lower the protection or create additional limitations and exceptions.¹²¹ That challenge becomes

117. As Christopher May wrote:

[A]s the balance of technical leadership starts to move, perhaps accelerated by the impact of the recession on research and innovation in the most-developed countries (the US, Europe, and Japan), it is not clear that those states that previously argued for robust protection of [intellectual property rights] will necessarily find themselves so advantaged by the current settlement. If the TRIPs agreement and the work of WIPO has largely in the past privileged the interests and benefits of the technological leaders in the global economy, what happens when this leadership starts to shift?

Christopher May, *Afterword* to IMPLEMENTING THE WORLD INTELLECTUAL PROPERTY ORGANIZATION’S DEVELOPMENT AGENDA 170, 172 (Jeremy de Beer ed., 2009).

118. See Letter from Ron Wyden, U.S. Senate, to Ron Kirk, U.S. Trade Rep. (Jan. 6, 2010).

119. Digital Millennium Copyright Act of 1998, Pub. L. No. 105-304, 112 Stat. 2860 (1998) (codified as amended in scattered sections of 17 U.S.C.).

120. Letter from Ron Kirk, U.S. Trade Rep., to Ron Wyden, U.S. Senate (Jan. 28, 2010).

121. In fact, this concern is not only limited to ACTA. It has been raised during the negotiation of other bilateral and regional free trade agreements. As Senators Patrick Leahy and Arlen Specter reminded the USTR, “ACTA, if not drafted with sufficient flexibility, could limit Congress’s ability to make appropriate refinements to intellectual property law

even more important considering that limitations and exceptions have always been an integral part of the U.S. intellectual property system.¹²² They arguably have helped the United States achieve phenomenal success in developing innovative start-ups, including those in Silicon Valley and Route 128.¹²³

Thus, as the structure of the U.S. economy continues to evolve, the country may need more flexibility and autonomy to adjust the levels of intellectual property protection to those demanded by the local economy and innovative start-ups. As these demands are increasingly made, the greater intellectual property protection in China and other developing countries pushed by the United States could ultimately come back to haunt U.S. policymakers. Indeed, the exceedingly high protective standards adopted across the world and the related international commitments could make it difficult for the United States to roll back some of its existing protections.

Ironically, some commentators have now questioned whether China in the future will become the champion of the existing maximalist system, which could suit China better than other developed countries. The changing dynamics in the global economy and the improved technological capa-

in the future”—an institutional concern raised by the Senators earlier in relation to the implementation of the United States–Peru Free Trade Agreement. Letter from Patrick Leahy, Chairman, U.S. Senate Comm. on the Judiciary & Arlen Specter, Ranking Member, U.S. Senate Comm. on the Judiciary, to Susan C. Schwab, U.S. Trade Rep. (Oct. 2, 2008), *available at* <http://www.publicknowledge.org/pdf/senate-acta-letter-20081002.pdf>; accord JANICE T. PILCH, *THE ANTI-COUNTERFEITING TRADE AGREEMENT 3* (Library Copyright Alliance, Issue Brief, 2009), http://www.librarycopyrightalliance.org/bm~doc/_issuebriefactafinalrev102609.pdf (“Intellectual property law is dynamic, constantly being shaped by social and economic needs and technological advances. A rigid plurilateral system of enforcement could hinder the flexibility of the U.S., as well as other nations, to adapt their intellectual property laws to future needs and scenarios.”); Eddan Katz & Gwen Hinze, *The Impact of the Anti-Counterfeiting Trade Agreement on the Knowledge Economy: The Accountability of the Office of the U.S. Trade Representative for the Creation of IP Enforcement Norms Through Executive Trade Agreements*, 35 *YALE J. INT’L L. ONLINE* 24, 34 (1999) (“[U]sing an international agreement to lock in a particular interpretation of issues that are in dispute in U.S. courts precludes future policy options by creating foreign obligation barriers to domestic legislative reform.”).

122. See JAMES BOYLE, *SHAMANS, SOFTWARE AND SPLEENS: LAW AND THE CONSTRUCTION OF THE INFORMATION SOCIETY* 138 (1996) (noting that exceptions and limitations are “just as important as the grant of the right itself”); see also P. BERNT HUGENHOLTZ & RUTH L. OKEDIJI, *CONCEIVING AN INTERNATIONAL INSTRUMENT ON LIMITATIONS AND EXCEPTIONS TO COPYRIGHT: FINAL REPORT* (2008), *available at* <http://www.ivir.nl/publicaties/hughenoltz/finalreport2008.pdf> (providing an important study on limitations and exceptions).

123. YouTube provides a good example. See generally Peter K. Yu, *Digital Copyright and Confuzzling Rhetoric*, 13 *VAND. J. ENT. & TECH. L.* 881, 897–99 (2011) (discussing the benefits of YouTube).

bilities in China therefore could result in a role reversal.¹²⁴ In a recent article, Jerome Reichman also questioned whether developing countries should still follow the developed countries' lead in adopting their intellectual property system, as opposed to leading in the knowledge economy by building their own comparative advantages.¹²⁵

III. POLICY OPTIONS

The Previous Part identifies three unintended consequences brought about by the strengthening of intellectual property protection and enforcement in China. This Part suggests the policy changes needed to respond to the challenges caused by those unintended consequences. Specifically, this Part discusses the need for adjustments to domestic, bilateral, and multilateral policies. Although this Part focuses on U.S. policies, it is important to note that a satisfactory response to the challenges identified in the Article will require more than unilateral action on the part of the United States.

A. Domestic Policy

In *A Strategy for American Innovation*, President Barack Obama outlined ways to “harness the inherent ingenuity of the American people to ensure that [the United States’] economic growth is rapid, broad-based, and sustained.”¹²⁶ Although some people quickly, and arguably incorrectly, equate innovation and ingenuity with intellectual property protection and enforcement, the latter is not a prerequisite to achieving the President’s goals. As commentators have repeatedly shown, one could promote creativity and innovation without pushing for broader and stronger intellectual

124. Thanks to Pedro Roffe for making this insightful observation.

125. See Reichman, *Twenty-First Century*, *supra* note 81, at 1126. As Professor Reichman wrote:

To the extent that intellectual property laws do play an ancillary but important role, there are, roughly speaking, two different approaches on the table. One is to play it safe by sticking to time-tested IP solutions implemented in OECD [Organisation for Economic Co-operation and Development] countries, with perhaps a relatively greater emphasis on the flexibilities still permitted under TRIPS (and not overridden by relevant [free trade agreements]). The other approach is to embark on a more experimental path . . . that advanced technology countries currently find so daunting.

Id.

126. *A Strategy for American Innovation: Securing Our Economic Growth and Prosperity*, WHITE HOUSE, <http://www.whitehouse.gov/innovation/strategy> (last visited May 11, 2012).

property rights.¹²⁷ In fact, if the push for broader and stronger rights leads to the development of an unbalanced intellectual property system, such effort could even stifle creativity and innovation.¹²⁸

In both the United States and other developed countries, policymakers have a tendency to assume that a push for stronger intellectual property protection and enforcement will always be in their country's best interest. However, that assumption is not always valid. Whether stronger protection will necessarily create a competitive edge depends largely on whether such protection will actually drive innovation and economic development.

As China continues to push for an annual filing of millions of patents, and as it obtains more intellectual property assets from abroad, U.S. policymakers need to question whether a focus on greater protection will always be in their country's best interest. They also need to think more about the changing nature of the increasingly knowledge-based economy. For instance, an economy that is dependent on Apple, Google, and Facebook will likely need a very different intellectual property system than an economy relying on Paramount Pictures, Time Warner, and Viacom.

Moreover, commentators have widely noted that the protection of intellectual property rights is only a means to an end. If the country's end goal is to maintain a competitive edge over its major trading partners, policymakers may be better off focusing on other issues, such as education and innovation. Indeed, in the wake of the global economic crisis, many com-

127. See BREZNITZ & MURPHREE, *supra* note 6, at 4 (“[I]n an era of fragmented production in which each country specializes not only in specific industries but also in specific stages of production, and in which truly novel products are produced or sourced globally without being produced in the counties where they are developed, there are many modes of innovation that contribute to sustainable long-term economic growth.”). For discussions of alternative innovation models, see generally INCENTIVES FOR GLOBAL PUBLIC HEALTH: PATENT LAW AND ACCESS TO ESSENTIAL MEDICINES 133–283 (Thomas Pogge et al. eds., 2010) (collecting articles discussing prizes, patent pools, and open source drug discovery); GENE PATENTS AND COLLABORATIVE LICENSING MODELS: PATENT POOLS, CLEARINGHOUSES, OPEN SOURCE MODELS AND LIABILITY REGIMES (Geertrui Van Overwalle ed., 2009) (collecting articles discussing patent pools, clearinghouses, open source models, and liability regimes); UMA SUTHERSANEN ET AL., INNOVATION WITHOUT PATENTS: HARNESSING THE CREATIVE SPIRIT IN A DIVERSE WORLD (2007) (exploring the extent to which innovations should or should not be protected as intellectual property).

128. See, e.g., LAWRENCE LESSIG, THE FUTURE OF IDEAS: THE FATE OF THE COMMONS IN A CONNECTED WORLD (2001) (lamenting how the recent expansion of intellectual property laws have stifled creativity and innovation); VAIDHYANATHAN, *supra* note 40 (describing how the increasing corporate control over the use of software, digital music, images, films, books, and academic materials has steered copyright law away from its historical design to promote creativity and cultural vibrancy).

mentators have emphasized the urgent need for policymakers to focus attention on these issues.¹²⁹

In recent literature, commentators questioned the appropriateness of funding cuts in both education¹³⁰ and R & D at a time when the country needs to become more competitive.¹³¹ They also lamented the reduced academic performance of American students vis-à-vis students from other parts of the world, including China.¹³² In fact, educational reform is so critically important that Thomas Friedman and Michael Mandelbaum wrote in their new book that, when President Obama offered Hilary Clinton the Secretary of State position, she should have declined and responded: “Today . . . more than ever before, our national security depends on the quality

129. See, e.g., NATIONAL SUMMIT ON COMPETITIVENESS, STATEMENT OF THE NATIONAL SUMMIT ON COMPETITIVENESS: INVESTING IN U.S. INNOVATION (2005), available at http://oregonmanufacturing.org/files/NAM_Investing_in_Innovation.pdf (calling for efforts to “revitalize fundamental research,” “expand the innovation talent pool in the United States,” and “lead the world in the development and deployment of advanced technologies”); ANN LEE, WHAT THE U.S. CAN LEARN FROM CHINA: AN OPEN-MINDED GUIDE TO TREATING OUR GREATEST COMPETITOR AS OUR GREATEST TEACHER 5 (2012) (calling America to “revive education,” “reinvest in infrastructure” and “remain focused on competitiveness”).

130. As Reed Hundt lamented:

Even while all commentators identified educational reform as the source of new competitive energy to meet rising Asia, the [Bush] administration selected religion and standardized testing as the two most important topics in education. Prayer in school had nothing to do with responding to global competition. Testing could diagnose performance problems but in no way could remedy them. Meanwhile the administration failed to fund fully its own education law. It cut back public funds for college education. It discouraged American academies from recruiting the best students in other countries.

HUNDT, *supra* note 104, at 81.

131. See *id.* at 91 (“Total spending on research and development adjusted for inflation fell slightly every year. Federal spending on basic research in math and physical sciences has declined as a percentage of GDP since the 1980s, while federal spending on research and development for life sciences has gone up.” (footnote omitted)).

132. See THOMAS L. FRIEDMAN & MICHAEL MANDELBAUM, THAT USED TO BE US: HOW AMERICA FELL BEHIND IN THE WORLD IT INVENTED AND HOW WE CAN COME BACK 103 (2011) (“[W]e have an equally dangerous gap between the average American student and the average students in many industrial countries that we consider collaborators and competitors, including Singapore, Korea, Taiwan, Finland, and those in the most developed parts of China.”); HUNDT, *supra* note 104, at 48 (“The percentages of American students in mathematics and science decline steadily from the freshman year of college through the level of post-doctoral programs. Foreigners fill the spots in such programs.”); JEFFREY SACHS, THE PRICE OF CIVILIZATION: REAWAKENING AMERICAN VIRTUE AND PROSPERITY 19 (2011) (“The quality of the labor force will be the most important single determinant of American prosperity in the decades to come. The evidence, therefore, that America’s public schools are falling behind those of the rest of the world in core attainments in reading, science, and math is a harbinger of a deepening crisis.”).

of our educational system. That is why I don't want to be secretary of state, Mr. President. Instead, I want to be at the heart of the national security policy. I want to be secretary of education."¹³³ As these authors reasoned, drawing on their deep background knowledge of American politics:

We don't think of education as an investment in national growth and national security because throughout our history it has been a localized, decentralized issue, not a national one. Today, however, what matters is not how your local school ranks in its country or state but how America's schools rank in the world.¹³⁴

Like education, commentators are also very concerned about the country's reduced output in R & D.¹³⁵ As Friedman and Mandelbaum continued: "At a time when the pace of change in the global economy and the rising economic importance of knowledge make increasing investment in research and development an urgent priority, our spending in this vital area

133. FRIEDMAN & MANDELBAUM, *supra* note 132, at 100.

134. *Id.* at 100–01. In the book, the authors quoted a frank assessment of the U.S. education system by Michelle Rhee, the former chancellor of District of Columbia public schools:

This country is in a significant crisis in education, and we don't know it. If you look at other countries, like Singapore—Singapore's knocking it out of the box. Why? Because the number-one strategy in their economic plan is education.

We treat education as a social issue. And I'll tell you what happens with social issues: When the budget crunch comes, they get swept under the rug, they get pushed aside.

We have to start treating education as an economic issue. We need America to become number one again, and the one thing that can drive us toward that is competition.

Harry Jaffe, *The Education of Michelle Rhee*, WASHINGTONIAN (Nov. 29, 2010), <http://www.washingtonian.com/articles/people/the-education-of-michelle-rhee/>.

135. As Reed Hundt observed:

According to a task force composed of technology companies, by 2005 the American lead in research and discovery was "eroding rapidly as other countries commit significant resources to enhance" the capacity of their citizens and firms to compete with the United States. The American share of scientific papers and patents is declining. American citizens authored only about half the industrial patents sought in the United States in 2004, and less than a third of the articles in *Physical Review*, a physics journal. Fewer Americans choose to study basic mathematics and science than in the past. In graduate science and mathematics American enrollment is dropping. The number of science and engineering doctorates granted to American citizens at American universities fell about 12 percent from 1998 to 2002.

HUNDT, *supra* note 104, at 91 (footnotes omitted); *see also* SACHS, *supra* note 132, at 19 ("Intellectual capital . . . is also diminishing, as America ceded technological leadership to China and other countries in areas such as renewable energy and stem cell research.").

is actually declining.”¹³⁶ In a colorful list, they laid down an interesting set of metrics to show the country’s upcoming challenges:

In 2009 United States consumers spent significantly more on potato chips than the government devoted to energy research and development—\$7.1 billion versus \$5.1 billion.

China is now second in the world in its publication of biomedical research articles, having recently surpassed Japan, the United Kingdom, Germany, Italy, France, Canada, and Spain.

....

Federal funding of research in the physical sciences as a fraction of GDP fell by 54 percent in the twenty-five years after 1970. The decline in engineering funding was 51 percent.

....

The total *annual* federal investment in research in mathematics, the physical sciences, and engineering is now equal to the *increase* in U.S. health-care costs every nine weeks.

China’s Tsinghua and Peking Universities are the two largest suppliers of students who receive Ph.D.s—in the United States.¹³⁷

Interestingly—and disturbingly for U.S. policymakers—while the U.S. administration has been pushing for severe funding cuts in education and research, China has been doing just the exact opposite. For instance, China is now actively increasing opportunities for university education, including in the areas of science, engineering, mathematics, technology, and medicine.¹³⁸ The country has also dedicated considerable effort to expanding R & D capabilities.¹³⁹ To some extent, such dedicated efforts provide a

136. FRIEDMAN & MANDELBAUM, *supra* note 132, at 230.

137. *Id.* at 232.

138. See JOHN NAISBITT & DORIS NAISBITT, CHINA’S MEGATRENDS: THE 8 PILLARS OF A NEW SOCIETY 165 (2010). As John and Doris Naisbitt noted:

Since 1979, more than 1 million Chinese have studied in more than 100 countries, and nearly 300,000 have returned home after finishing their studies. The number of foreign students in China has also increased rapidly. Since 1979, more than 1 million students from 188 countries have studied at 544 Chinese universities.

Id.; see also ORCUTT & SHEN, *supra* note 6, at 46 (“[E]ven if China is graduating *only* 750 000+ science and engineering undergraduates each year, that number is still 50% greater than the United States’ annual output of roughly 500 000 science and engineering undergraduates.”).

139. For example, Martin Jacques wrote:

China is already the fifth leading nation in terms of its share of the world’s leading scientific publications and it is particularly strong in certain key areas like nanotechnology. In 2006, according to the OECD, China overtook Japan to become the world’s second largest R&D investor after the US. With 6.5 million undergraduates and 0.5 million postgraduates studying science, engineering and medi-

late, but timely renewal of the millennia-long Chinese tradition of education and scientific development.¹⁴⁰

At the commercial level, China has also actively assumed new roles that go beyond what it took up in the past two decades. Although China has served as an original equipment manufacturer and the world's factory for shoes, clothes, toys, household products, and low-cost electronic goods, it is now "moving rapidly to dominate global markets, not just for labor-

cine, China already has the world's largest scientific workforce. In 2003 and 2005 it successfully carried out two manned space missions, while in 2007 it managed to destroy one of its own satellites with a ballistic missile, thereby announcing the intention of competing with the United States of military supremacy in space. In due course, it seems highly likely that China will emerge as a major global force in science and technology.

MARTIN JACQUES, *WHEN CHINA RULES THE WORLD: THE END OF THE WESTERN WORLD AND THE BIRTH OF A NEW GLOBAL ORDER* 385–86 (2009). Niall Ferguson concurred:

China has increased expenditure on research and development by a factor of six in the past decade, has more than doubled the number of its scientists and is now second only to the United States in its annual output of scientific papers and its supercomputing capability. There remains a significant gap in terms of international citations of Chinese research, but there is good reason to expect this to close.

NIALL FERGUSON, *CIVILIZATION: THE WEST AND THE REST* 318 (2011). Aaron Friedberg also noted:

Since the mid-1990s, the government has put its money where its mouth is. Total national spending on research and development has grown even faster than the economy as a whole, increasing its share of GDP from around .3 percent in 1998 to 1.34 percent in 2005, with a goal of reaching 2.5 percent by 2020. Other "inputs" to the innovation process have increased as well, including the numbers of scientists and engineers engaged in R&D in China, students enrolled in college and graduate school, and those receiving doctoral degrees in science and engineering fields.

AARON L. FRIEDBERG, *A CONTEST FOR SUPREMACY: CHINA, AMERICA, AND THE STRUGGLE FOR MASTERY IN ASIA* 234 (2011). John Orcutt and Shen Hong further observed:

From 2000 to 2006, China almost tripled its output of science and engineering PhDs and more than quadrupled its output of science and engineering masters' degrees. Some have predicted that China will have more science and engineering PhDs in the United States by 2010. In 2006, China graduated more science and engineering PhDs, which compares favorably to the United States' issuance of just under 16 000 PhDs in physical sciences and engineering in 2007.

ORCUTT & SHEN, *supra* note 6, at 46–47 (citation omitted).

140. Joseph Needham's lifelong work on his series of books entitled *Science and Civilization in China* provides a good starting point for studying Chinese scientific developments. See, e.g., JOSEPH NEEDHAM, *SCIENCE AND CIVILISATION IN CHINA. VOLUME 1: INTRODUCTORY ORIENTATIONS* (1956). See also BENJAMIN A. ELMAN, *ON THEIR OWN TERMS: SCIENCE IN CHINA, 1550–1900* (2005) (discussing the scientific developments in China in the Ming and Qing dynasties); ROBERT TEMPLE, *THE GENIUS OF CHINA: 3,000 YEARS OF SCIENCE, DISCOVERY, AND INVENTION* (2007) (discussing three millennia of science, discoveries, and inventions in China).

intensive manufactured goods, but also technologically more advanced products.”¹⁴¹ As the country becomes a more dominant player in the global marketplace, the economic challenge it presents to the United States and other developed economies is likely to become more severe.

In sum, the economic and technological competition between China and the United States can only become steeper in the near future. It is time U.S. policymakers reassess their priorities in the areas of education and R & D. Indeed, when this point was presented in conferences, including this Symposium, many audience members could not help but nod in agreement. Perhaps they were nodding because they were members of the academic and research communities. But perhaps they were also nodding because they foresaw the United States’ upcoming challenge to compete with China, yet was disappointed by the administration’s reluctance to invest in promoting the country’s competitiveness.

B. *Bilateral Policy*

In the intellectual property arena, both policymakers and the mainstream media in the United States have a tendency to focus on piracy and counterfeiting in China. While those activities continue to harm U.S. rights holders and deserve our policy attention, the picture of intellectual property developments in China has become increasingly complex. In fact, U.S. policymakers can no longer ignore China’s emergence as an intellectual property power. They need to consider China not as what they want it to be, but what it actually is or what it will become.

As Bruce Lehman, the former commissioner of the United States Patent and Trademark Office, rightly reminded the International Trade Commission during a public hearing on the impact of intellectual property in-

141. C. FRED BERGSTEN ET AL., CHINA: THE BALANCE SHEET: WHAT THE WORLD NEEDS TO KNOW NOW ABOUT THE EMERGING SUPERPOWER 99 (2006); *see also* Dominic Barton, *Foreword* to LIEBERTHAL, *supra* note 29, at ix (“No longer can it be said that China is only a source of low-cost manufactured goods, exporting a ‘China price’ to the world; many leading Chinese businesses are rapidly moving up the value chain on the back of home-market demand to challenge the historic global leaders.”); Daniel C.K. Chow, *Why China Does Not Take Commercial Piracy Seriously*, 32 OHIO N.U. L. REV. 203, 208 (2006) (“China’s ambitions are vast: China seeks to maintain its dominance in labor-intensive sectors, to gain and maintain dominance in low-technology sectors, and to eventually dominate trade in high-technology sectors.”); Yu, *From Pirates to Partners II*, *supra* note 1, at 392 (“Although China today is considered the world’s manufacturing capital, producing shoes, clothes, toys, household products, and low-cost electronic goods, the country eventually will move into the world’s high-end market while continuing to dominate its low-end market.”); Pete Engardio, *Introduction* to CHINDIA: HOW CHINA AND INDIA ARE REVOLUTIONIZING GLOBAL BUSINESS 4 (Pete Engardio ed., 2006) (“The idea that China will continue to assemble low-end products while high-end manufacturing will always remain in advanced countries . . . is becoming outdated.”).

fringement and indigenous innovation policies in China on the U.S. economy:

China is emerging as a technological power, graduating significantly more scientists and engineers than the United States. Its population of Internet users has become the largest in the world. *I expect that in coming decades China will have a robust system of intellectual property rights protection and enforcement appropriate to a tech-based economy. Unfortunately, that may come too late for U.S. industry.* Having sheltered its own market while developing competitive [intellectual property] based products and services, China will then be in a position to assert a comparative advantage, based not only on cheap labor and currency manipulation, but in the very areas of comparative market advantage that we in the U.S. had envisioned in the 1990s when we negotiated what we thought will be a fair and balanced trading relationship.¹⁴²

In Lehman's view, the United States should take advantage of the present window when it still has a comparative edge over China in both the technological sector and intellectual property-based goods and services. It will be too late if China is able to close that window and catch up with the United States.

Thus far, the U.S. foreign intellectual property strategy has focused mostly on pushing China to strengthen intellectual property protection and enforcement. However, it is time policymakers think more about the unintended consequences of such a focus—for example, how strengthening intellectual property protection and enforcement could provide China with a new competitive edge. It is also important for them to consider the risks involved in betting on a world intellectual property order that assumes that the United States will always benefit from broader and stronger intellectual property rights, as opposed to having a more moderate level of protection that benefits innovation.

In fact, commentators have begun to point out the danger of having an obsession with intellectual property enforcement. As Dan Chow pointed out, such obsession has now backfired on rights holders by making piracy and counterfeiting problems in China more difficult to tackle:

Multi-national companies (MNCs) have adopted a flawed approach to combating trademark counterfeiting in China that is actually making the problem worse, inciting a frenzy of counterfeiting at all-time new world highs in China. This approach places primary emphasis on enforcement,

142. Written Statement of Bruce A. Lehman, President, International Intellectual Property Institute, Before the U.S. International Trade Commission (June 15, 2012), *available at* http://www.usitc.gov/press_room/documents/testimony/332_514_003.pdf (emphasis added). The Author of this Article also testified in this public hearing. See Yu, *ACTA and Its Complex Politics*, *supra* note 3, at 6–13 (expanding the ideas articulated in the Author's oral testimony).

that is, raids on factories and warehouses used by counterfeiters, destruction of equipment, and confiscation and seizures of counterfeit products. . . . As any brand owner in China knows, it is possible to obtain an enforcement action in the form of a surprise raid within minutes of an in-person application before the enforcement authorities. However, as brand owners in China also know, enforcement does not result in any serious consequences for the counterfeiter; to the contrary, the consequences of being caught as a counterfeiter are usually so insignificant that such consequences can be considered just a cost of doing business. As a result, a strategy that focuses primarily on enforcement in a legal system and that does not create effective deterrence actually has the unintended, even opposite effect, of angering counterfeiters and provoking them to engage in even more illegal activity. Indeed, what some MNCs have discovered is that the more enforcement they conduct, the more their products are being counterfeited.¹⁴³

C. *Multilateral Policy*

There is no doubt China will become more assertive in the international intellectual property regime as it becomes more powerful and technologically proficient. After more than a decade of experience with the WTO and more than two decades of rapid and sustained economic growth, it is understandable why China wants to join Brazil and India as the leaders of the developing world.¹⁴⁴ Although China has intentionally kept a low profile on international intellectual property matters, it now has strategically positioned itself as a norm maker, in addition to being a norm taker.¹⁴⁵

Part I shows that China will experience dramatic improvements in intellectual property protection as it crosses over from the less promising side of the intellectual property divide to the more promising one. It remains unclear, however, whether China will be interested in retaining the existing international intellectual property system. In fact, there is a good chance that new intellectual property powers may want to develop something different—something that builds on their historical traditions and cultural backgrounds and something that takes account of their drastically different socio-economic conditions.¹⁴⁶

143. Daniel Chow, *Anti-Counterfeiting Strategies of Multi-National Companies in China: How a Flawed Approach Is Making Counterfeiting Worse*, 41 GEO. J. INT'L L. 749, 750 (2010).

144. See Yu, *Middle Kingdom*, *supra* note 1.

145. See *id.*

146. See Yu, *Global Intellectual Property Order*, *supra* note 29, at 15 (“Although there has been wide disagreement over where the balance should be struck, the future standards are likely to fall somewhere in the middle—between what developed countries desire and what less-developed countries can afford.”).

If the intellectual property positions of China and the United States represent two ends of a spectrum, the intellectual property system they shape is likely to be somewhere in the middle between the two.¹⁴⁷ Depending on the strength of each power, and its ability to form alliances with other members of the international community, the system will likely swing back and forth between the two ends. Indeed, as Martin Jacques observed, “In the long term . . . China is likely to operate both *within* and *outside* the existing international system, seeking to transform that system while at the same time, in effect, sponsoring a new China-centric international system which will exist alongside the present system and probably slowly begin to usurp it.”¹⁴⁸

As excited as policymakers are about the developments in China, they should also pay greater attention to the growing emergence of India as both an economic and intellectual property power.¹⁴⁹ Like China, India is one of the widely-discussed BRICs countries, providing a large and fast-growing market.¹⁵⁰ As Goldman Sachs analysts have stated, “India has the potential to show the fastest growth over the next 30 and 50 years,” and its “economy could be larger than all but the US and China in 30 years.”¹⁵¹ In fact,

147. As I explained earlier:

Although some commentators have argued that less-developed countries will eventually make a transition to become developed countries, it is premature to assume that less-developed countries, once developed, will always want the existing international intellectual property system. There is a good chance that they may want or *need* something rather different!

Id. at 15; *see also* JACQUES, *supra* note 139, at 178 (“However difficult and different the circumstances China faces, it is already busy inventing its own path of development, as Britain did as the pioneer country, the United States as the inventor of mass production, and Japan as the innovator of a new kind of just-in-time production.”).

148. JACQUES, *supra* note 139, at 362.

149. Indeed, China and India are so important that many commentators have discussed these two countries together. *See* CHINDIA, *supra* note 141; ROBYN MEREDITH, *THE ELEPHANT AND THE DRAGON: THE RISE OF INDIA AND CHINA AND WHAT IT MEANS FOR ALL OF US* (2007). As Martin Jacques observed:

China and India have much in common. They are both hugely populous countries, demographic superpowers, which are in the process of dramatic economic information. Between them they account for almost 40 percent of the world’s population. They are both continental giants, China a dominating presence in East Asia and India similarly in South Asia. By the mid twenty-first century they could both be major global powers.

JACQUES, *supra* note 139, at 338.

150. *See generally* JIM O’NEILL, *THE GROWTH MAP: ECONOMIC OPPORTUNITY IN THE BRICs AND BEYOND* 69–79 (2011) (discussing the growth potential of India).

151. Dominic Wilson & Roopa Purushothaman, *Dreaming with BRICs: The Path to 2050*, at 4 (Goldman Sachs, Global Economics Paper No. 99), *available at* <http://www.goldmansachs.com/our-thinking/brics/brics-reports-pdfs/brics-dream.pdf>.

some analysts have already predicted that India will eventually overtake China in the latter half of the twenty-first century.¹⁵² India is also a longstanding leader of the developing world, along with Brazil.¹⁵³ Although commentators have questioned whether Brazil and India could still assert their leadership in the intellectual property arena as they did in the past,¹⁵⁴ it is fair to say that the United States' relationship with India will figure largely in future macro-level intellectual property policies.

Also of great importance is the recent emergence of the African Group.¹⁵⁵ For example, Zimbabwe, with one of its nationals serving as the chair of the TRIPS Council at the time of the Doha Declaration,¹⁵⁶ was instrumental in pushing for the adoption of that declaration.¹⁵⁷ Tanzania has also been active in pushing for the development of a new article 29*bis* of

152. See MEREDITH, *supra* note 149, at 57 (“China is winning the sprint, and [India is] going to win the marathon.” (quoting Kamal Nath, India’s minister of commerce and industry)); Pete Engardio, *Why India May Be Destined to Overtake China*, in CHINDIA, *supra* note 141, at 27 (noting that India may eventually become a stronger economic power than China, due to its growth in workforce, fixed investment, and productivity); Huang Yasheng & Tarun Khanna, *Can India Overtake China?*, FOREIGN POL’Y, July/Aug. 2003, at 74, 81 (“China and India have pursued radically different development strategies. India is not outperforming China overall but it is doing better in certain key areas. That success may enable it to catch up with and perhaps even overtake China.”). *But see* MEREDITH, *supra* note 149, at 154 (“China has proved so much more efficient than India at development and managing its economy that th[e] scenario [that India’s economy will overtake China’s] is unlikely unless China falls into political turmoil.”).

153. See Peter K. Yu, *Access to Medicines, BRICS Alliances, and Collective Action*, 34 AM. J.L. & MED. 345, 349–50 (2008).

154. See Peter Drahos, *Developing Countries and International Intellectual Property Standard-Setting*, 5 J. WORLD INTELL. PROP. 765, 765 (2002) (questioning whether “India and Brazil are prepared to provide the general leadership on intellectual property issues that they once did”).

155. See CAROLYN DEERE, *THE IMPLEMENTATION GAME: THE TRIPS AGREEMENT AND THE GLOBAL POLITICS OF INTELLECTUAL PROPERTY REFORM IN DEVELOPING COUNTRIES* 123 (2009) (noting the increased assertiveness of the African Group).

156. Zimbabwean Ambassador Boniface Chidyausiku chaired the Council for Trade-Related Aspects of Intellectual Property Rights in its formal meeting on June 18–22, 2001. WORLD TRADE ORG., ANNUAL REPORT (2001) OF THE COUNCIL FOR TRIPS (2001). He also “requested a special TRIPS Council session on access to medicines.” Susan K. Sell, *TRIPS and the Access to Medicines Campaign*, 20 WIS. INT’L L.J. 481, 512 (2002).

157. See Sangeeta Shashikant, *The Doha Declaration on TRIPS and Public Health: An Impetus for Access to Medicines*, in ACCESS TO KNOWLEDGE IN THE AGE OF INTELLECTUAL PROPERTY 141, 146 (Gaëlle Krikorian & Amy Kapczynski eds., 2010) (“Zimbabwe, on behalf of the Africa Group, proposed that the Doha Ministerial Conference to be convened later in the same year issue a special declaration to affirm a common understanding that the TRIPS Agreement does not prevent members from taking measures to protect public health . . .”).

the TRIPS Agreement.¹⁵⁸ That new provision would create an obligation to disclose in patent applications the source of origin of the biological resources and traditional knowledge used in patent-seeking inventions.¹⁵⁹ If the importance of the African Group grows, U.S. policymakers will need to think more about China's ongoing engagement with African countries.¹⁶⁰

In many of these countries, the Beijing Consensus¹⁶¹ has now been touted as a desirable alternative to the Washington Consensus,¹⁶² which the

158. See *Communication from Brazil, China, Colombia, Cuba, India, Pakistan, Peru, Thailand and Tanzania*, Doha Work Programme—The Outstanding Implementation Issue on the Relationship Between the TRIPS Agreement and the Convention on Biological Diversity, WT/GC/W/564/Rev.2 (July 5, 2006).

159. See *id.* ¶ 2 (requiring patent applicants to “disclose the country providing the resources and/or associated traditional knowledge, from whom in the providing country they were obtained, and, as known after reasonable inquiry, the country of origin”).

160. See, e.g., AFRICAN PERSPECTIVES ON CHINA IN AFRICA (Firoze Manji & Stephen Marks eds., 2007) [hereinafter AFRICAN PERSPECTIVES]; CHRIS ALDEN, CHINA IN AFRICA: PARTNER, COMPETITOR OR HEGEMON? (2007); DEBORAH BRAUTIGAM, THE DRAGON'S GIFT: THE REAL STORY OF CHINA IN AFRICA (2011); HARRY G. BROADMAN, AFRICA'S SILK ROAD: CHINA AND INDIA'S NEW ECONOMIC FRONTIER (2007); PÁDRAIG CARMODY, THE NEW SCRAMBLE FOR AFRICA (2011); CHINA AND THE DEVELOPING WORLD: BEIJING'S STRATEGY FOR THE TWENTY-FIRST CENTURY (Joshua Eisenman et al. eds., 2007); CHINA INTO AFRICA: TRADE, AID, AND INFLUENCE (Robert I. Rotberg ed., 2008); CHINA RETURNS TO AFRICA: A RISING POWER AND A CONTINENT EMBRACE (Chris Alden et al. eds., 2008); CHINA'S NEW ROLE IN AFRICA AND THE SOUTH: A SEARCH FOR A NEW PERSPECTIVE (Dorothy-Grace Guerrero & Firoze Manji eds., 2008); IAN TAYLOR, CHINA AND AFRICA: ENGAGEMENT AND COMPROMISE (2006); IAN TAYLOR, CHINA'S NEW ROLE IN AFRICA (2008); THE RISE OF CHINA AND INDIA IN AFRICA: CHALLENGES, OPPORTUNITIES AND CRITICAL INTERVENTIONS (Fantu Cheru & Cyril Obi eds., 2010).

161. Joshua Ramo, the former *Time* foreign editor, coined the term “Beijing Consensus.” JOSHUA COOPER RAMO, THE BEIJING CONSENSUS 4 (2004), available at <http://fpc.org.uk/fsblob/244.pdf>. As he explained:

[The Beijing Consensus] is simply three theorems about how to organise the place of a developing country in the world, along with a couple of axioms about why the physics is attracting students in places like New Delhi and Brasilia. The first theorem repositions the value of innovation. Rather than the “old-physics” argument that developing countries must start development with trailing-edge technology (copper wires), it insists that on the necessity of bleeding-edge innovation (fiber optic) to create change that moves faster than the problems change creates. In physics terms, it is about using innovation to reduce the friction-losses of reform.

The second Beijing Consensus theorem is that since chaos is impossible to control from the top you need a whole set of new tools. It looks beyond measures like per-capita GDP and focuses instead of quality-of-life, the only way to manage the massive contradictions of Chinese development. This second theorem demands a development model where sustainability and equality become first considerations, not luxuries. Because Chinese society is an unstable stew of hope, ambition, fear, misinformation and politics only this kind of chaos-theory can provide meaningful organization.

recent financial crisis has largely discredited.¹⁶³ The Chinese development model has also earned great admiration among countries throughout the developing world. In recent years, for example, “[g]overnment research teams from Iran to Egypt, Angola to Zambia, Kazakhstan to Russia, India to Vietnam and Brazil to Venezuela have been crawling around the Chinese cities and countryside in search of lessons from Beijing’s experience.”¹⁶⁴

Indeed, African analysts appreciate that “China understands the challenges of governing in areas where the bulk of the population lives in abject poverty.”¹⁶⁵ While the Chinese model may not promote democratic society and civil liberties—the conditions U.S. policymakers often demand—that model shows the Chinese leaders’ pragmatic approach and willingness to consider a wide variety of options.¹⁶⁶ As Deborah Brautigam reminded us:

At the end of the day, we should remember this: China’s own experiments have raised hundreds of millions of Chinese out of poverty, largely without

Finally, the Beijing Consensus contains a theory of self-determination, one that stresses using leverage to move big, hegemonic powers that may be tempted to tread on your toes.

Id. at 11–12. For discussions of the Beijing Consensus, see generally *id.*; STEFAN A. HALPER, *THE BEIJING CONSENSUS: HOW CHINA’S AUTHORITARIAN MODEL WILL DOMINATE THE TWENTY-FIRST CENTURY* (2010).

162. John Williamson, an economist and a senior fellow of the Institute for International Economics, coined the term “Washington Consensus.” John Williamson, *What Washington Means by Policy Reform*, in *LATIN AMERICAN ADJUSTMENT: HOW MUCH HAS HAPPENED?* 7, 7–20 (John Williamson ed., 1990). The Washington Consensus was derived from recommendations in ten different areas: (1) fiscal deficits; (2) public expenditure priorities; (3) tax reform; (4) interest rates; (5) the exchange rate; (6) trade policy; (7) foreign direct investment; (8) privatization; (9) deregulation; and (10) property rights. *Id.*

163. See Peter K. Yu, *Sinic Trade Agreements*, 44 U.C. DAVIS L. REV. 953, 1018–22 (2011) (discussing the battle between the Beijing Consensus and the Washington Consensus).

164. MARK LEONARD, *WHAT DOES CHINA THINK?* 122 (2008); see also HALPER, *supra* note 161, at 31 (noting “a growing number of developing nations that are loosely connected by an admiration for China”); Stephen Marks, *Introduction to AFRICAN PERSPECTIVES*, *supra* note 160, at 1, 11 (citing Nigerians’ appreciation of the Chinese model for providing stability and visionary leadership).

165. Hany Besada, *The Implications of China’s Ascendancy for Africa* 24 (Ctr. for Int’l Governance Innovation, Working Paper No. 40, 2008), available at http://www.cigionline.org/sites/default/files/Paper_40-web.pdf.

166. See WILLIAM H. OVERHOLT, *ASIA, AMERICA, AND THE TRANSFORMATION OF GEOPOLITICS* 118 (2007). As William Overholt explained:

Chinese leaders . . . do not accept Western democratic ideology, but they accept individual practices, such as village elections, because those practices have specific pragmatic value in reducing corruption. They want to discover and test these things themselves, step by step, rather than succumb to foreign ideological brow-beating, but they are willing to consider nearly everything.

Id.

foreign aid. They believe in investment, trade, and technology as levers for development, and they are applying these same tools in their African engagement, not out of altruism but because of what they learned at home. . . . These lessons emphasize not aid, but experiments; not paternalism, but the “creative destruction” of competition and the green shoots of new opportunities.¹⁶⁷

A better understanding of the operation of the Beijing Consensus is important because if members of the African Group consider the Beijing Consensus an attractive alternative model, it is plausible that they will also embrace China’s position in the international intellectual property regime. This is particularly true when developed countries, especially the United States, continue to neglect the needs and interests of developing countries in Africa, Asia, and Latin America.¹⁶⁸

U.S. policymakers therefore should think more about the positions they have taken in the international arena—at both the multilateral and nonmultilateral levels.¹⁶⁹ Efforts such as the highly controversial ACTA and the equally problematic TPP have not earned the United States much goodwill.¹⁷⁰ Even if the provisions in those agreements can normally be considered acceptable, the use of a highly nontransparent “country club” approach to set up these agreements has made the agreements appear much more problematic than they may actually be.¹⁷¹

Policymakers should also consider whether the United States should rethink its competitive strategies at the international level. Although many of them have a tendency to view the rise of China as a zero-sum game, a growing number of policymakers and commentators have now embraced a nonzero-sum approach to examining the United States’ interactions with China and the ramifications for the latter’s rise.¹⁷² Consider, for example,

167. BRAUTIGAM, *supra* note 160, at 311–12.

168. See LEE, *supra* note 129, at 176 (“Westerners ignored the Africans until the Chinese started making deals with them.”); Yu, *Sinic Trade Agreements*, *supra* note 163, at 996 (“During the Asian financial crisis, China also helped Thailand, Indonesia, and other Asian neighbors—countries that have been largely ignored by the United States.”).

169. See generally Yu, *ACTA and Its Complex Politics*, *supra* note 3, at 9–12 (discussing the rise of the nonmultilateral era).

170. See Yu, *Alphabet Soup*, *supra* note 4 (explaining why TPP is likely to be more dangerous than ACTA from a public interest standpoint).

171. See Yu, *ACTA and Its Complex Politics*, *supra* note 3, at 2 (stating that ACTA “is flawed not only because it is a country club agreement but also because it is a bad country club agreement”); see also Yu, *Six Secret Fears*, *supra* note 3, at 1074–83 (criticizing the “country club” approach deployed by the ACTA negotiators).

172. See generally Peter K. Yu, *Toward a Nonzero-Sum Approach to Resolving Global Intellectual Property Disputes: What We Can Learn from Mediators, Business Strategists, and International Relations Theorists*, 70 U. CIN. L. REV. 569 (2002) (advancing a nonzero-

the rise of China in the context of this Article. In a nonzero-sum view, the rise of China as an intellectual property power does not necessarily mean the United States' decline as an intellectual property power. Both intellectual property powers could easily coexist and be mutually supportive.

In their new book, *Run of the Red Queen*, Dan Breznitz and Michael Murphree locate in China “a remarkably profitable and sustainable model of innovation . . . [that] makes China into a critical part of the world innovation system, but . . . does not rely on China excelling in cutting-edge novel-product R&D.”¹⁷³ While the emergence of alternative forms of innovation in China has raised many intriguing questions concerning industrial development and global competitiveness, the book explains why the Chinese model can complement the breakthrough innovation embraced by

sum approach to resolving global intellectual property disputes). As Nobel Laureate Michael Spence recently observed:

Rebuilding an inclusive, centrist, pragmatic agenda, with a cooperative problem-solving approach to addressing it, will take time and effort, and it is important. The challenges ahead to sustaining growth and expanding opportunity in the final fifty years of a century of convergence are large. So also is our capacity for creativity and adaption. But to unleash it, we need to be firmly committed to inclusiveness globally and to be willing to set aside overly simple and somewhat ideological prescriptions of the one-size-fits-all sort, regardless of where on the political spectrum they emanate from.

MICHAEL SPENCE, *THE NEXT CONVERGENCE: THE FUTURE OF ECONOMIC GROWTH IN A MULTISPEED WORLD* 272 (2011).

173. BREZNITZ & MURPHREE, *supra* note 6, at 19. As Breznitz and Murphree elaborated:

As China has become the global center for many different stages of production, it has also developed a formidable competitive capacity to innovate in different segments of the research, development, and production chain that are as critical for economic growth as many novel-product innovations, and perhaps even more so. In addition, taken together, China's regional and national systems have developed varied capabilities that amount to a specific and highly successful, though inadvertently, created national model. China's accomplishment has been to master the art of thriving in second-generation innovation—including the mixing of established technologies and products in order to come up with new solutions—and the science of organizational, incremental, and process innovation. Thus, China's innovation capabilities are not solely in process (or incremental) innovation but also in the organization of production, manufacturing techniques and technologies, delivery, design, and second-generation innovation. Those capabilities enable China to move quickly into new niches once they have been proved profitable by the original innovator.

Id. at 4; *see also id.* at 195 (noting the need to dispel the myth concerning “the Western techno-fetishism of novelty, which equate innovation only with the creation of new technologies and products”).

the United States and other developed countries.¹⁷⁴ As Breznitz and Murphree observed:

China needed Apple to develop the concept and definition of the iPod and the iPhone, but Apple cannot produce and sell these products without China. In the world of flexible mass production, the Red Queen country [referring to China or other countries with a similar innovation model] needs the novel-product innovators to keep churning out new ideas, and the novel-product-innovating countries need the Red Queen country to keep innovating on almost every aspect of production and delivery.¹⁷⁵

In recent literature, other scholars have also articulated new theories concerning China's engagement in "cost innovation"¹⁷⁶ and "process innovation."¹⁷⁷ Like the form of innovation Breznitz and Murphree discussed, these new and varied forms of Chinese innovation—or "Chinnovation"¹⁷⁸—are easily complementary to the model of breakthrough innovation embraced by the United States and other developed countries. As Zeng Ming and Peter Williamson reminded us: "Far from being a zero-sum game . . . , the emergence of Chinese companies as significant players in the global market promises new benefits to the world's consumers and new opportunities to those established companies that choose the right responses and execute them well."¹⁷⁹

In sum, it is important for the United States to consider further cooperation with China in an effort to push for new and constructive developments in the international intellectual property regime. Indeed, commenta-

174. *See id.* at 206 ("[T]hanks to the fragmentation of production, the rise of China need not be seen as a zero-sum game by policy makers inside and outside the country.").

175. *Id.* at 18.

176. *See generally* ZENG & WILLIAMSON, *supra* note 6 (advancing the concept of cost innovation and discussing its global implications). As Zeng Ming and Peter Williamson pointed out, "The new competition from China is also disruptive because it threatens to obsolete much of the established firms' assets, capabilities, and experience base by changing the accepted rules of the game, undermining traditional profit models, and growing parts of the market that incumbents are poorly equipped to serve." *Id.* at 55–56.

177. TAN, *supra* note 6, at xii. As Tan Yinglan explained:

Most of China's companies are in the stage of process innovation. Start-ups typically learn and adopt business models from other geographies and adapt them locally. Companies are trying to move into technological innovation via research and development by building on their existing knowledge, the way semiconductor firms are moving into thin film in 2010. Most Chinese firms are still using existing technology to create products, rather than creating the technology itself (as is done in the United States). This makes China tech markets symbiotic and complementary with the U.S. market and those in some other countries.

Id. at 268.

178. *Id.* at 268.

179. ZENG & WILLIAMSON, *supra* note 6, at vii.

tors have increasingly discussed the need to use the G-2 model to facilitate cooperation between the two countries in response to a large variety of global problems,¹⁸⁰ which range from climate change to global economic recovery. As Fred Bergsten and his colleagues reminded us:

It is now clear that an effective response to every major international economic issue requires close cooperation between [China and the United States]. There will be no sustained recovery from the global economic crisis unless China and the United States lead it and they have appropriately launched by far the largest stimulus programs in the world. There will be no renewed momentum toward trade liberalization through the Doha Round or otherwise, a credible defense against the protectionist pressures that have been intensified by the crisis, unless they endorse it. There will be no international cooperation on global warming unless they embrace it. The United States is the world's largest deficit and debtor country, and China is the world's largest surplus and creditor country, and without their concurrence there will be neither resolution of the global imbalances that helped bring on the current crisis nor lasting reform of the international financial architecture.¹⁸¹

If carefully designed, this G-2 model could be easily extended to cover intellectual property matters, such as enforcement of intellectual property rights, protection of traditional knowledge and cultural expressions, and development of measures to address global climate change.¹⁸²

IV. A SLOWER TECHNOLOGICAL RISE?

Notwithstanding the many concerns raised in the previous Part, and the rather alarming picture the Article has painted regarding China's growing competitiveness, one may wonder whether China's rise as an intellectual property power would be much slower than many have anticipated. In fact, most forecasts about the interactions between China and the United States have been forecasts at best. Quite a number of factors affect China's ability to compete with the United States in the intellectual property arena.

180. See Peter K. Yu, *What Copenhagen Could Signal About U.S., China*, DES MOINES REG., Dec. 17, 2009.

181. C. FRED BERGSTEN ET AL., CHINA'S RISE: CHALLENGES AND OPPORTUNITIES x-xi (2008) [hereinafter BERGSTEN ET AL., CHINA'S RISE].

182. See Peter K. Yu, *Intellectual Property and Asian Values*, 16 MARQ. INTELL. PROP. L. REV. 329, 378-97 (2012) (identifying ten key intellectual property agenda items that are important to China and other countries in Asia).

Table 1: Indicators on Technological Developments and Innovation Capabilities¹⁸³

	United States	China
COMPARISONS BASED ON 2010 FIGURES		
GDP (US\$M)	14,586,736,313,339	5,926,612,009,750
GDP Growth (Annual %)	3.0	10.4
GDP Per Capita (US\$)	47,153	4,428
School Enrollment, Tertiary (%)	95	26
High-technology Exports (US\$M)	145,497,804,512	406,089,687,684
Domestic Patent Applications	241,977	293,066
Domestic Trademark Applications	236,826	973,460
Royalty & License Fees, Receipts	105,583,000,000	830,483,814
Royalty & License Fees, Payments	33,450,000,000	13,039,546,459
Royalty & License Fees, Balance	72,133,000,000	-12,209,062,645
COMPARISONS BASED ON 2007 FIGURES		
R&D Expenditure (% of GDP)	2.67	1.40
Researchers in R&D (per million)	4,673	1,077
Science/Technical Journal Articles	209,898	56,811

First, as far as technological and innovation capabilities are concerned, China is still far behind the United States (see table 1). While China may be able to compete against the United States in selected sectors, it will not be able to effectively compete against the United States in a large variety of sectors.

To some extent, the debate about China's improvement as a technological power is similar to the ongoing debate about China's elevation as a military power. Even with the active and continuous growth of its military budget, it is unlikely that China will be able to quickly catch up with the United States. For many commentators, China is at best a regional military power.¹⁸⁴ Instead of challenging the United States directly, how it will be-

183. This table builds on data provided by the World Bank. *See Data*, WORLD BANK, <http://data.worldbank.org/indicator> (last visited May 11, 2012). Figures from 2010 and 2007 were selected to maximize the amount of data available for comparison purposes. As far as the latter figures are concerned, it is important to remember that technological and innovation capabilities have dramatically increased in China since 2007.

184. Compare Gerald Segal, *Does China Matter?*, FOREIGN AFF., Sept./Oct. 1999, at 24, 30 ("China is less like the Soviet Union in the 1950s than like Iraq in the 1990s: a regional threat to Western interests, not a global ideological rival."), with Bates Gill, *China as a Regional Military Power*, in DOES CHINA MATTER? A REASSESSMENT: ESSAYS IN MEMORY OF GERALD SEGAL 124, 142 (Barry Buzan & Rosemary Foot eds., 2004). As Dr. Gill observed:

Within a narrow regional security context, we can see that China is worthy of greater concern and attention. China is transforming itself from a land-based, heavily mechanized force to one with air and sea capabilities for operations within

have in the military arena is likely to affect the United States' strategic interests in other parts of the world.¹⁸⁵ The same is likely to be true in regard to China's technological rise.

Second, the Chinese economy is rather complex, and developments have been highly uneven—both geographically and across economic and technological sectors.¹⁸⁶ As I have noted, such developments have resulted in the country's taking a somewhat “schizophrenic” position in the international intellectual property arena.¹⁸⁷ While China prefers to have stronger protection of intellectual property rights in entertainment, software, semiconductors, and selected areas of biotechnology, it remains reluctant to increase protection for pharmaceuticals, chemicals, fertilizers, seeds, and foodstuffs. Such preferences are the combined result of a huge population, the country's continued economic dependence on agriculture, the leaders' worries about public health issues, and the general concerns about the people's overall well-being.¹⁸⁸ As a result of its “schizophrenic” preferences, China is likely to be on the side of the developing world with respect to some issues, but on the side of the developed world with respect to others.

several hundred miles of its shores. This is a change of historical proportions for the [People's Liberation Army], and one that China's regional neighbours are watching warily.

Id.

185. As Lee Kuan Yew, Singapore's senior minister, insightfully observed: “If you compete with America in armaments, you will lose. You will bankrupt yourself. So, avoid it, keep your head down, and smile, for 40 or 50 years.” *It's Stupid to Be Afraid*, SPIEGEL ONLINE INT'L (Aug. 8, 2005), <http://www.spiegel.de/international/spiegel/0,1518,369128,00.html> (providing an interview with Lee).

186. As I observed earlier:

Although the subsequent founding of the People's Republic of China in 1949 helped centralize the country to a certain extent, strategic planning in the country's formative years and the rapid economic development in China within the past two decades have led to greater economic development in certain parts of China at the expense of others. In Deng Xiaoping's words, “some people have to get rich first.” As a result, there are now enormous disparities across the country in the levels of wealth and income, the purchasing power of local consumers, and the stages of economic and technological development.

Peter K. Yu, *Three Questions that Will Make You Rethink the U.S.-China Intellectual Property Debate*, 7 J. MARSHALL REV. INTEL. PROP. L. 412, 421–22 (2008) [hereinafter Yu, *Three Questions*] (footnotes omitted). See generally Yu, *China Puzzle*, *supra* note 1, at 203–13 (discussing the wide regional and sectoral disparities in China).

187. See Peter K. Yu, *International Enclosure, the Regime Complex, and Intellectual Property Schizophrenia*, 2007 MICH. ST. L. REV. 1, 25–26 (explaining why intellectual property developments in China should not be analyzed as if the country were homogeneous).

188. See *id.* at 26.

In fact, the complex internal economic conditions have made it difficult for China to develop an effective and coherent national strategy. After all, strategies that work well for major cities, like Beijing, Shanghai, and Guangzhou, may not work well for the countryside.¹⁸⁹ Likewise, strategies that excel in prosperous coastal areas may not work for the poor rural west. Indeed, one of the biggest challenges for China is to come up with nationwide solutions that respond well to the country's complex and divergent conditions and varying R & D capabilities.

Third, most of the important intellectual property developments discussed in this Article concern patents. Although China has the world's fastest growing and largest Internet population,¹⁹⁰ its censorship policy and heavily controlled information environment¹⁹¹ greatly stifle creativity and may therefore prevent dramatic improvements from taking place in the copyright area. Due to variations in policy goals, administrative structures, and ideological obstacles, improvements may also vary greatly from one branch of intellectual property law to another.¹⁹²

189. See Yu, *From Pirates to Partners II*, *supra* note 1, at 963 (“[O]ne needs to recognize China as a ‘country of countries,’ rather than a homogenous one.”).

190. See CHINA INTERNET NETWORK INFORMATION CENTER, 29TH STATISTICAL SURVEY REPORT ON THE INTERNET DEVELOPMENT IN CHINA 4 (2012), *available at* <http://www1.cnnic.cn/uploadfiles/pdf/2012/2/27/112543.pdf> (providing official statistics stating that China has the world's largest internet population, which amounted to over 513 million users in December 2011).

191. See generally Peter K. Yu, *Piracy, Prejudice, and Perspectives: An Attempt to Use Shakespeare to Reconfigure the U.S.-China Intellectual Property Debate*, 19 B.U. INT'L L.J. 1, 28–32 (2001) (discussing the Chinese censorship and information control policies).

192. As I noted in an article published before the State Council's adoption of the National Intellectual Property Strategy, which provided a major push in the patent area:

Compared to copyrights and patents, trademark protection will create fewer obstacles to China's modernization efforts. Trademarks “were a state planning tool before they became a marketing device and private property,” and trademark registrations continued even during the Cultural Revolution, although they have been decentralized and politicized, and manufacturers had used such “politically correct” pseudonyms and non-identifying labels as “Red Flag,” “East Wind,” and “Worker-Peasant-Soldier.” By contrast, copyright protection affects the country's ability to maintain cultural and media control and may have a negative impact on its extensive propaganda efforts, while patent protection slows down the country's efforts by draining foreign exchange reserves in the form of royalty and license fee payments. It is, therefore, no surprise that the 1982 Trademark Law was the first to be enacted after China's reopening in the late 1970s, while the 1990 Copyright Law was the last to be enacted, only after significant pressure by the United States.

Yu, *From Pirates to Partners II*, *supra* note 1, at 995 (footnotes omitted); see also ANDREW MERTHA, *THE POLITICS OF PIRACY: INTELLECTUAL PROPERTY IN CONTEMPORARY CHINA* 133–34 (2005) (noting that “the copyright bureaucracy . . . is embedded within a *xitong* [functional bureaucratic system] that concerns itself with cultural, ideological, and value-

Moreover, a widening gap is slowly emerging in the U.S.-China intellectual property debate between those U.S. industries driven by copyright protection, such as the movie and music industries, and those driven by patent protection.¹⁹³ It remains to be seen whether the bifurcation of this debate would result in greater variations in the external pressure exerted on China in different areas of intellectual property law.¹⁹⁴ If such variations exist, improvements in these areas may vary even further.

Fourth, as with the recent analysis of the BRICs countries, the forecasts of China as an intellectual property power depend on a continued trend of development. Two decades ago, many predicted that Japan would catch up with the United States, only to be disillusioned by the Asian economic crisis.¹⁹⁵ The authors of the now-famous study of the BRICs countries also included the following qualification: “Our projections are optimistic, in the sense that they assume reasonably successful development. . . . There is a good chance that the right conditions in one or another economy will not fall into place and the projections will not be realized.”¹⁹⁶ Indeed, as the histories of both China and elsewhere have shown, many factors could disrupt the trend of successful development. These factors range from bad governance to natural calamities to wars to civil unrest.¹⁹⁷ Rampant corruption and local protectionism could also slow down China’s rise as an intellectual property power, thereby preventing the country from realizing its full potential.¹⁹⁸

laden media and is therefore involved in a more politically sensitive environment, even if technical copyright issues themselves are no more or less ‘political’ than those pertaining to patents or trademarks”).

193. Such a gap exists in other intellectual property debates. See Peter K. Yu, *ACTA and Its Complex Politics*, 3 WIPO J. 1, 13–15 (2011) (discussing the complex domestic politics implicated by the ACTA negotiations).

194. See generally Yu, *From Pirates to Partners*, *supra* note 1, at 138–40 (discussing the USTR’s section 301 process).

195. See HUNDT, *supra* note 104, at 14–15 (discussing the eventual triumph of the U.S. economy over Japan’s). See generally EZRA F. VOGEL, *JAPAN AS NUMBER ONE: LESSONS FOR AMERICA* (1979) (examining Japan’s development into one of the world’s most effective industrial powers).

196. Wilson & Purushothaman, *supra* note 151, at 3–4.

197. Cf. Yu, *The Copyright Divide*, *supra* note 31, at 354 (noting the “decades of warlordism, wars, famines, revolutions, and political turmoil” before China finally regained stability in the late 1970s).

198. See Tao Jingzhou, *Problems and New Developments in the Enforcement of Intellectual Property Rights in China*, in *INTELLECTUAL PROPERTY AND TRIPS COMPLIANCE IN CHINA: CHINESE AND EUROPEAN PERSPECTIVES* 107, 109 (Paul Torremans et al. eds., 2007) (listing local protectionism as “the greatest barrier to intellectual property rights protection in the PRC”); Daniel C.K. Chow, *Counterfeiting in the People’s Republic of China*, 78 WASH. U. L.Q. 1, 26 (2000) (“Local protectionism in China is widespread and poses probably the single most significant problem in enforcement against counterfeiting. The trade in

Finally, it is always difficult to prognosticate in a highly dynamic situation, such as one concerning the intellectual property and innovation systems.¹⁹⁹ While China may be able to greatly improve its competitiveness on an *absolute* scale, how well it performs on a *relative* scale will depend on the policies of other countries, such as members of the European Union, India, Japan, South Korea, Switzerland, and the United States. The more U.S. policymakers consider the challenges Part II identifies, the more likely they will push for policies that help the United States maintain its competitive edge.²⁰⁰

CONCLUSION

This Article presents a tale of the rise and decline of the intellectual property powers. While some would reject this tale outright, finding it implausible, others would consider it highly alarming. Although the Article seeks to paint a picture of the rise of China as an intellectual property power, it remains much more tentative in prognosticating the United States' decline as an intellectual property power. In fact, it is very plausible that the two powers could coexist; most likely, they would do so. They could complement each other. They could also work together to shape the international intellectual property and trading regimes.²⁰¹

counterfeit goods has now become a major and vital portion of some local economies, providing employment for otherwise unemployable workers and generating significant revenue for the local economy.”); Li Yiqiang, *Evaluation of the Sino-American Intellectual Property Agreements: A Judicial Approach to Solving the Local Protectionism Problem*, 10 COLUM. J. ASIAN L. 391, 395–401 (1996) (discussing the problems of local protectionism in the context of intellectual property enforcement); Yu, *Three Questions*, *supra* note 186, at 421–22 (discussing the problems of local protectionism in China). Thanks to Bill Hennessey for pushing the Author on this particular point.

199. See FRIEDMAN, *supra* note 109, at 15 (noting the difficulty of predicting the future for “a society that is at the cutting edge of [technological] change”); ORCUTT & SHEN, *supra* note 6, at 69 (“One reason that innovation systems are so difficult to analyze, and therefore thoughtfully improve, is their incredibly dynamic nature.”).

200. *But see* SACHS, *supra* note 132, at 259 (“No matter what success the United States has in recovering its dynamism and vitality in the years ahead, it is almost inevitable (barring global catastrophe) that America’s relative economic position will decline.”).

201. As Fred Bergsten and his colleagues pointed out in other contexts:

The United States should . . . implement a subtle but sharp change in its basic economic strategy toward China. Instead of focusing on bilateral problems and complaints, and seeking to coopt China into a global economic system that it would try to continue leading by itself, the United States should seek to develop a true partnership with China to provide joint leadership of that system, even if the system requires substantial modifications to persuade China to play that role. The two economic superpowers should begin to pursue together the development of coordinated, or at least cooperative, approaches to global issues that can be re-

It is important that policymakers in both China and the United States develop a better and deeper understanding of the implications of China's rise as an intellectual property power and what such a rise would mean for the United States. By thinking more about the rise and decline of the intellectual property powers, and the conditions under which a country will cross over the intellectual property divide, we may be able to develop a more sophisticated understanding of the intellectual property system. We may also be able to better tackle the global piracy and counterfeiting problems while exploring whether a careful and strategic recalibration of the existing intellectual property system could help accelerate the crossover process for countries in the developing world.

The oft-repeated story about China as a major pirating nation is too simple and too outdated. Although that story fits well within the fifteen-second sound bites usually found in media reports, it does not fully capture the reality. There is no denying that China still has significant piracy and counterfeiting problems. However, we should also not ignore the highly important, and increasingly more important, story about China's technological rise. Hopefully, this Article will inspire us to think more about this largely omitted story and what it means for the intellectual property policy debate.

solved effectively only through their active co-management. Such a "G2" approach would accurately recognize, and be perceived by the Chinese as accurately recognizing, the new role of China as a legitimate architect and steward of the international economic order.

BERGSTEN ET AL., CHINA'S RISE, *supra* note 181, at 22–23.