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**The Emerging BRIC Economies: Lessons from Intellectual
Property Negotiation and Enforcement**

Robert C. Bird and Daniel R. Cahoy



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By Robert C. Bird* and Daniel R. Cahoy**

¶1 In 2003, two economists at Goldman Sachs produced a white paper predicting the economic growth of Brazil, Russia, India, and China, collectively termed the BRIC economies.¹ This paper offered projections from the present date to 2050 relative to similar growth projections of the G6 countries.² Applying capital accumulation and productivity growth to demographic trends, the authors discovered a surprising result. Each of the BRIC economies may exceed the gross domestic product (GDP) of the current members of the G6 within 40 years.³ China's economy in size may overtake those of Germany, Japan, and the United Kingdom within ten years.⁴ India's may do the same within 30 years.⁵ If the study proves correct, Germany, France, Italy, and the United Kingdom may all be forced out of the elite G6 club by 2050, leaving only the United States and Japan remaining within the largest six economies in the world.⁶

¶2 The Goldman Sachs study should capture the attention of anyone interested in emerging economies. Although it may not be surprising to everyone that the BRICs will emerge as economic contenders, what may be unexpected is the rapidity and the totality with which economic dominance may be achieved. The world that our students live in now is not the one in which they will grow old, and the United States may stand alone, if it stands at all, as the sole Western economic leader.

¶3 There are of course lies, damn lies, and statistics,⁷ and economics has been frequently and perhaps unjustly painted as the "dismal science."⁸ Any accounting of the

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¹ Dominic Wilson & Roopa Purushothaman, *Dreaming with BRICs: The Path to 2050* (Goldman Sachs, Global Economics Paper No. 99, 2003), available at <http://www.gs.com/insight/research/reports/99.pdf>.

² *Id.* at 3. The G6 preceded the G8 as a 'club of wealthy nations.' The United States, Japan, Germany, France, Italy, and the United Kingdom are generally considered to be the G6 members. For more information on the G8, which includes the G6 plus Canada and Russia, see *Profile: G8*, http://news.bbc.co.uk/1/hi/world/americas/country_profiles/3777557.stm; *G8 Information Centre*, <http://www.g7.utoronto.ca/>.

³ Wilson & Purushothaman, *supra* note 1, at 4.

⁴ *Id.*

⁵ *Id.*

⁶ *Id.* at 4.

⁷ Quote... Unquote, The Most Quoted Remarks, <http://www.1c.btwebworld.com/quote-unquote/p0000149.htm> (last visited Nov. 11, 2006) (quoting, MARK TWAIN, *AUTOBIOGRAPHY* (1924)). Twain gives credit for the quote to Disraeli. *Id.*

⁸ *E.g.*, Mark D. Whitener, *Editor's Note: The Dismal Science*, 20 ANTITRUST 6, 6 (2006); David A. Westbrook, *Commentary, Triptych: Three Meditations on How Law Rules After Globalization*, 12 MINN. J. GLOBAL TRADE 337, 374 (2003) ("Economics has long been called the 'dismal science' for a reason."); CHARLES WHELAN, *NAKED ECONOMICS: UNDRRESSING THE DISMAL SCIENCE* (2002). *But see* Alan

Goldman Sachs paper must be done with caution. The authors rightly note that demographic shifts, changing investment rates, and different convergence rates can change the results of the study.⁹ Regional economic shocks, political unrest, and a stalling of needed reforms can derail one or all four of the BRICs from the lofty attainments of 2050.

¶4 Yet far from dismal, Wilson & Purushothaman's paper is fundamentally optimistic, at least from the perspective of the BRIC nations. Rigorous quantitative work such as theirs is badly needed in a profession traditionally focused on qualitative reasoning and argumentation.¹⁰ Furthermore, few legal articles focus on the BRICs as a collectively emerging economic force.¹¹ A 2005 conference held at the University of Connecticut studying the BRIC economies produced a compendium of BRIC-focused articles written largely by economists and business faculty.¹² Just as this program thoughtfully explored the BRICs from a firm perspective, so too should the forward thinking symposium sponsored by the Northwestern Journal of Technology and Intellectual Property, of which the articles in this issue are a consequence, similarly illuminate legal issues.

¶5 Scholarly machinations aside, the question remains of how scholars should view the BRIC juggernaut. The BRIC economies are potentially a political and economic force emerging to unseat Western economic hegemony. On the other hand, the BRICs may be little more than a collection of disparate nations that share common characteristics of growth and emergence by chance rather than by design. The answer likely lies somewhere between these two extremes and legal scholars can help find the way.

¶6 This article briefly examines the converging and diverging economic and legal trends of the BRICs from an intellectual property perspective. Part I of this article explores the macroeconomic converging and diverging forces of BRICs, such as growth opportunities and constraints, transformations and challenges, as well as outward and inward foreign direct investment. This section will take a particular focus on intellectual property laws and enforcement as emblematic of the challenges experienced by emerging BRICs. Part II amplifies the focus on intellectual property with an examination of one of the most controversial current intellectual property topics—that of pharmaceutical patent

Krupnick, Colloquium, *Economic Analysis*, 16 PACE ENV'T'L L. REV. 69, 69 (1998) (contrasting the notion of economics as a dismal science, the author writes, "I think of economics as a happy science.").

⁹ Wilson & Purushothaman, *supra* note 1, at 4.

¹⁰ See, e.g., Tracy E. George, *An Empirical Study of Empirical Legal Scholarship: The Top Law Schools*, 81 IND. L.J. 141, 141 (2006) ("[Empirical research] was uncommon in law schools through most of the last century."). See also Craig Allen Nard, *Empirical Legal Scholarship: Reestablishing a Dialogue Between the Academy and the Profession*, 30 WAKE FOREST L. REV. 347, 362 (1995) (reporting results of a telephone survey of 40 law professors selected at random from 20 schools that nearly 90% thought a "lack or shortage of empirical research in legal scholarship" existed).

¹¹ Exceptions to this rule predating this symposium are, for example, Robert C. Bird, *Defending Intellectual Property Rights in the BRIC Economies*, 43 AM. BUS. L.J. 317 (2006); Michael Littlewood, *Tax Competition: Harmful to Whom?*, 26 MICH. J. INT'L L. 411, 478 n.278 (2004) and Srividhya Ragavan, *The Jekyll and Hyde Story of International Trade: The Supreme Court in Phrma v. Walsh and the TRIPS Agreement*, 38 U. RICH. L. REV. 777, 824 n.279 (2004).

¹² EMERGING ECONOMIES AND THE TRANSFORMATION OF INTERNATIONAL BUSINESS: BRAZIL, RUSSIA, INDIA AND CHINA (BRICs) (Subhash C. Jain ed. 2003). The conference and the publication by Elgar Press was hosted and sponsored by the University of Connecticut's Center for International Business Education and Research (CIBER), a program funded by the U.S. Department of Education. *Id.* at v, xv. Other CIBERs at Columbia University, University of Memphis, Thunderbird, the Galvin School of Management, and the University of Wisconsin co-sponsored the event. *Id.* at xiii.

rights. This section will examine the compulsory licensing statutes and practices of each BRIC member and draw conclusions from these activities about the differing approaches of emerging nations to heretofore unfamiliar legal structures and obligations.

I. THE ASCENDANCY OF THE BRICS: PHYSICAL AND INTELLECTUAL CAPITAL GROWTH AND CHALLENGES

¶7 The BRIC nations emerge from radically different economic and political histories. Brazil obtained independence from Portugal in 1822 and experienced a surge of industrialization through much of the twentieth century. In spite of the oil shocks of the 1970s, Brazil's GDP expanded 8% on average from 1970 to 1980. In the 1980s, Brazil suffered from low commodity prices, inflationary pressures, and high interest rates while at the same time making the transition from long-standing military intervention in governance to mainly civilian leadership. The 1990s and 2000s were marked with widely fluctuating growth rates, a depreciated currency, and poor administrative reforms.¹³

¶8 Russia, by contrast, emerged from the disintegration of the Soviet Union in 1991 with little history of democratic governance and legal free markets. Russian leaders dismantled the centrally planned economy and distributed ownership of state enterprises to managers and other citizens. Private property ownership in Russia brought abuses through dubious loans-for-shares schemes in which powerful citizens "purchased" state assets from government officials in rigged auctions. The result was the emergence of a cadre of oligarchs who controlled most of Russia's most valuable natural resources and industrial assets.¹⁴

¶9 Achieving independence in 1947, India has existed under democratic government for centuries. In spite of a diverse economy, India has suffered from a command and control planning system that has generated large bureaucratic governments, inefficient production and distribution methods, and a stifling restriction on imports. This policy, known as the "license raj,"¹⁵ resulted in India's share of international trade declining from 2.5% in 1947 to 0.5% in 1980. Weak returns on investments in large, capital-intensive projects arising from delay and cost overruns also contributed to India's economic malaise.¹⁶ Increased borrowing and rapid overpopulation has resulted in an economy poised for growth, but as of yet unable to completely unshackle itself from the remnants of government planning.¹⁷

¶10 Finally, China has attempted to weave together the economic benefits of a market economy with the government social and political control of socialism. Forged in 1949,

¹³ Ben L. Kedia, Somnath Lahiri & Debmalya Mukherjee, *BRIC Economies: Earlier Growth Constraints, Contemporary Transformations and Future Potential, and Key Challenges*, 47-48, in *EMERGING ECONOMIES AND THE TRANSFORMATION OF INTERNATIONAL BUSINESS: BRAZIL, RUSSIA, INDIA AND CHINA (BRICS)* (Subhash C. Jain ed. 2003). See also Diane M. Sweetwood, *Is Brazil's Economy Coming Back to Life?*, 10 *MULTINAT'L BUS. REV.* 54 (2002).

¹⁴ Daniel J. McCarthy & Sheila M. Puffer, *The Tortuous Trail Toward Corporate Governance in Russia* 218-220, in *EMERGING ECONOMIES AND THE TRANSFORMATION OF INTERNATIONAL BUSINESS: BRAZIL, RUSSIA, INDIA AND CHINA (BRICS)* (Subhash C. Jain ed. 2003).

¹⁵ E.g., Sumit K. Majumdar, *The Hidden Hand and the License Raj to an Evaluation of the Relationship between the Age and the Growth of Firms in India*, 19 *J. BUS. VENTURING* 107 (2004).

¹⁶ Jagdish N. Sheth, *Making India Globally Competitive*, 29 *VIKALPA: THE JOURNAL FOR DECISION MAKERS* 1 (2004).

¹⁷ Kedia et al., *supra* note 13, at 51-52.

the People's Republic of China has suffered from repeated attempts to jumpstart its economy. One of the most disastrous was Mao Zedong's "Great Leap Forward," a program of collectivization of agriculture and promotion of small-scale rural industry that, after initial success, wilted into an economic disaster. Forced production quotas resulted in goods produced, such as steel, that were useless for market consumption.¹⁸ Mao's successor, Deng Xiaoping, brought economic reforms by opening China's large market to foreign investment.¹⁹ Today, China uneasily blends socialist governance and market planning while continuing its efforts at economic reform.

¶11 In spite of vastly different political histories, the BRIC treatment of intellectual property law and enforcement are all unsatisfactory, at least by American and perhaps European standards. All four BRICs have been subjected to coercive pressure from the United States. The way each nation has responded, however, is as different as the histories of the nations themselves.

¶12 During the 1980s and at least as far back as 1971, Brazil's intellectual property law lacked patent protection for pharmaceutical products and processes.²⁰ The Pharmaceutical Manufacturers' Association (PMA) claimed that Brazil's weak laws devalued their investments, impaired exports, and denied opportunities for further investment in Brazil.²¹ Claiming hundreds of millions of dollars in losses, the PMA chose the coercive route, seeking relief under Section 301²² of the Trade Act of 1974.²³ Section 301 and its subsequent enhancements give the President authority to impose retaliatory sanctions against a nation that engages in unfair trade practices.²⁴ Pursuant to the Act, the PMA filed a petition in 1987 with the United States Trade Representative

¹⁸ *Id.* at 52-53.

¹⁹ Anne M. Wall, *Intellectual Property Protection in China: Enforcing Trademark Rights*, 17 MARQ. SPORTS L. REV. 341, 349-51 (2006). Deng's pragmatism toward economics is captured in his widely-cited quote from the 1960s, "Whether a cat is black or white makes no difference. As long as it catches mice, it is a good cat." H. Stephen Harris, Jr., *The Making of an Antitrust Law: The Pending Anti-Monopoly Law of the People's Republic of China*, 7 CHI. J. INT'L L. 169, 172 (2006).

²⁰ Naomi A. Bass, *Implications of the TRIPS Agreement for Developing Countries: Pharmaceutical Patent Laws in Brazil and South Africa in the 21st Century*, 34 GEO. WASH. INT'L L. REV. 191, 206-07 (2002).

²¹ Mohamed Omar Gad, *Impact of Multinational Enterprises on Multilateral Rulemaking: The Pharmaceutical Industry and the TRIPS Uruguay Round Negotiations*, 9 NAFTA L. & BUS. REV. AM. 667, 674 (2003).

²² 19 U.S.C. § 2411 (2007).

²³ The stated purposes of the 1974 Trade Act are:

- (1) to foster the economic growth of and full employment in the United States and to strengthen economic relations between the United States and foreign countries through open and nondiscriminatory world trade;
- (2) to harmonize, reduce, and eliminate barriers to trade on a basis which assures substantially equivalent competitive opportunities for the commerce of the United States;
- (3) to establish fairness and equity in international trading relations, including reform of the General Agreement on Tariffs and Trade;
- (4) to provide adequate procedures to safeguard American industry and labor against unfair or injurious import competition, and to assist industries, firm, workers, and communities to adjust to changes in international trade flows;
- (5) to open up market opportunities for United States commerce in nonmarket economies; and
- (6) to provide fair and reasonable access to products of less developed countries in the United States market.

¹⁹ U.S.C. § 2102 (2007).

²⁴ See Peter K. Yu, *From Pirates to Partners: Protecting Intellectual Property in China in the Twenty-First Century*, 50 AM. U. L. REV. 131, 139 n.37 (2000).

(USTR), which is required to review whether a foreign country practice constitutes a barrier to U.S. exports.²⁵ In 1988, President Reagan placed a 100% tariff on \$39 million dollars worth of Brazilian imports to the United States.²⁶ Only when the Brazilian government announced that it would draft legislation protecting pharmaceutical products and processes and that it would ensure a bill would be presented to the Brazilian National Congress by March 20, 1991, did the U.S. government lift the sanctions.²⁷

¶13

Russia has also experienced U.S. pressure. In 1995, the USTR placed Russia on its Watch List in 1995 and then elevated Russia to its Priority Watch List in 1997.²⁸ While the U.S. government encouraged Russia to join the Berne Convention in exchange for preferential trade status, the motion picture industry lobbied the U.S. Congress to withhold ratification until Russia improved its copyright laws.²⁹ In November 2006, Russian and American trade representatives signed a “Side Letter” formally known as the U.S.-Russia Bilateral Market Access Agreement on Intellectual Property Rights.³⁰ This letter was negotiated in the context of Russia’s continuing efforts to accede to the World Trade Organization (WTO).³¹ The letter establishes a binding blueprint for Russia to improve intellectual property enforcement, strengthen various laws, and fully implement the Agreement on Trade-related Aspects of Intellectual Property Rights (TRIPS).³² Cited by the International Intellectual Property Association (IIPA) as having the worst copyright piracy problem in the world,³³ Russia remains on the USTR’s Priority Watch List.³⁴ The IIPA watchdog group recommended earlier this year that Russia remain there until meaningful progress on intellectual property develops.³⁵ Furthermore, Russia is a major beneficiary of the U.S. Generalized System of Preferences (GSP) program, designed to promote the economies of developing countries through the allowance of

²⁵ *Id.* at 139.

²⁶ Bass, *supra* note 20, at 207. Mohamed Omar Gad reports the amount at \$40 million. Gad, *supra* note 21, at 684.

²⁷ Determination to Terminate Increased Duties on Certain Articles from Brazil, 55 Fed. Reg. 27,324 (July 2, 1990).

²⁸ Connie Neigel, *Piracy in Russia and China: A Different U.S. Reaction*, 63 LAW & CONTEMP. PROBS. 179, 188 (2000). See also Tim Kuik, *Piracy in Russia: An Epidemic*, 20 WHITTIER L. REV. 831 (1999). See Lianlian Lin, *Intellectual Property Protection in China*, 27 ACAD. LEGAL STUD. BUS. NAT’L PROC. 203, 205 (1998) (“[The] USTR prepares a list of countries, ranked from ‘priority foreign country,’ a country with the most egregious IPR problems, to ‘priority watch list,’ and to ‘watch list,’ a country that still warrant [sic] monitoring.”).

²⁹ Bird, *supra* note 11, at 328. See also Lana C. Fleishman, *The Empire Strikes Back: The Influence of the United States Motion Picture Industry on Russian Copyright Law*, 26 CORNELL INT’L L.J. 189, 215-22 (1993).

³⁰ International Intellectual Property Alliance, 2007 Special 301 Report (Russian Federation), at <http://www.iipa.com/rbc/2007/2007SPEC301RUSSIA.pdf>. at 115 n.2. [hereinafter *IIPA 2007 Russia*]

³¹ Russia is not currently a member of the WTO, having merely observer status. Brigitte Binkert, *Why the Current Global Intellectual Property Framework under TRIPS is not Working*, 10 INTELL. PROP. L. BULL. 143, 162 (2006). For more information in Russia’s efforts to join the WTO, see *Accessions: Russian Federation*, http://www.wto.org/english/thewto_e/acc_e/a1_russie_e.htm.

³² U.S.-Russia Bilateral Market Access Agreement on Intellectual Property Rights, http://www.ustr.gov/assets/World_Regions/Europe_Middle_East/Russia_the_NIS/asset_upload_file148_10011.pdf.

³³ *IIPA 2007 Russia*, *supra* note 30, at 115.

³⁴ United States Trade Representative, 2007 Priority Watch List, available at http://www.ustr.gov/assets/Document_Library/Reports_Publications/2007/2007_Special_301_Review/asset_upload_file884_11123.pdf. [hereinafter *USTR 2007 Priority Watch List*]

³⁵ *IIPA 2007 Russia*, *supra* note 30, at 115.

duty-free products.³⁶ Russia received GSP-linked trade benefits worth \$429.8 billion in 2003.³⁷ The IIPA has recommended that the USTR suspend GSP benefits for Russia, and the USTR remarked in its 2007 Priority Watch List³⁸ document that the U.S. is “reviewing Russia’s status as a beneficiary country under the U.S. Generalized System of Preferences (GSP) Program.”³⁹

¶14 India led the charge against intermixing intellectual property and trade rights in the 1980s, refusing to even discuss the possibility of including patent protection in a General Agreement on Tariffs and Trade agreement (GATT).⁴⁰ India’s resistance ended in 1989, during the same period when India depleted its foreign currency reserves due to an economic crisis.⁴¹ India sought badly needed assistance from the International Monetary Fund (IMF), an entity heavily influenced by the United States.⁴² As a result of its IMF needs and other potential trade losses with the United States, India ultimately relaxed its opposition to the TRIPS agreement, a major result of GATT, and acceded to its provisions.⁴³ U.S.-based pressure towards India did not end even after it agreed to follow the obligations of TRIPS. When the Indian government delayed in enacting enabling legislation, the United States sought redress through the WTO, which can ultimately authorize trade sanctions by one country against another, to compel India to amend its insufficiently strong patent legislation.⁴⁴ In 2000, pharmaceutical representatives demanded that the USTR place India on its Priority Watch List. As of 2007, India remains on the USTR’s Priority Watch List, cited for weak copyright laws, inadequate enforcement, and slow judicial resolution of criminal actions.⁴⁵

¶15 The United States repeatedly has threatened China with economic sanctions for its failure to protect intellectual property rights. After a 1979 agreement to treat one another’s patents and trademarks equally failed to protect U.S. intellectual property rights,⁴⁶ the USTR placed China on its first Priority Watch List in 1989.⁴⁷ During the 1990s, China would respond to U.S. pressure by enacting ever stronger intellectual property laws. When U.S. firms found these laws or their enforcement unsatisfying, they

³⁶ Michael Mertens, *Thieves in Cyberspace: Examining Music Piracy and Copyright Law Deficiencies in Russia as it Enters the Digital Age*, 14 U. MIAMI INT’L & COMP. L. REV. 139, 179 n.308 (2006) (describing GSP program). See also United States Trade Representative: Generalized System of Preferences, at http://www.ustr.gov/Trade_Development/Preference_Programs/GSP/Section_Index.html.

³⁷ Mertens, *supra* note 36, at 180.

³⁸ *IIPA 2007 Russia*, *supra* note 30, at 115.

³⁹ USTR 2007 Priority Watch List, *supra* note 34, at 8. See also Mertens, *supra* note 36, at 180 (recommending that “[t]he United States should immediately suspend Russia’s GSP benefits until the country recognizes the online piracy problem and enforces copyright protection to the extent that a noticeable reduction in piracy results.”).

⁴⁰ C. O’Neal Taylor, *Linkage and Rule-Making: Observations on Trade and Investment and Trade and Labor*, 19 U. PA. J. INT’L ECON. L. 639, 668 n.114 (1998).

⁴¹ George K. Foster, *Opposing Forces in a Revolution in International Patent Protection: The U.S. and India in the Uruguay Round and its Aftermath*, 3 UCLA J. INT’L & FOREIGN AFF. 283, 316 (1998).

⁴² *Id.*

⁴³ *Id.* at 317.

⁴⁴ Bird, *supra* note 11, at 345.

⁴⁵ *USTR 2007 Priority Watch List*, *supra* note 34, at 10.

⁴⁶ Agreement on Trade Relations Between the United States of America and the People’s Republic of China of 1979, July 7, 1979, P.R.C.-U.S., 31 U.S.T. 4652.

⁴⁷ David Hindman, *The Effect of Intellectual Property Regimes on Foreign Investments in Developing Countries*, 23 ARIZ. J. INT’L & COMP. L. 467, 485 (2006).

would lobby the U.S. government to impose sanctions.⁴⁸ A last minute compromise between American and Chinese negotiators would avert a trade war and satisfy public opinion. But, as interest in piracy inevitably waned after the highly publicized agreement, American companies in China sensitive to intellectual property concerns would again demand assistance from the government to aid them in protecting their intellectual property rights abroad.⁴⁹ The result has been a frustrating “China Cycle” of negotiation, agreement, and renegotiation that has continued for over a decade.⁵⁰ As of 2007, China remains on the USTR’s Priority Watch List.⁵¹

¶16 In spite of current problems, the United States has succeeded at least in part in improving the protection of intellectual property rights in the BRICs over the past 20 years. All four BRICs relented somewhat under U.S. pressure to pass new laws and improve enforcement. The BRICs, however, are not simply compliant states. Each BRIC nation has developed its own successful strategy for resisting the unfettered will of the United States.

¶17 Of the four BRICs, Brazil has been by far the most masterful in counteracting the economic and political influence of the United States over global intellectual property law. In 1997, Brazil enacted new legislation that included a “local working” requirement which subjects a patent owner to potential compulsory licensing within three years after the patent is granted if, among other reasons, the patent owner fails to manufacture the product within Brazilian territory.⁵² The new law lowered production costs on critical drugs due to the increased local production.⁵³ The law also improved Brazil’s ability to develop local manufacturing capacity and expertise to certain manufacture drugs once their patents have expired.⁵⁴

¶18 The American pharmaceutical industry responded by predicting that Brazil’s actions would undermine efforts to develop new and improved treatments for important public health problems such as suppression of the HIV virus.⁵⁵ If the Brazilian government issued a compulsory license breaking these critical patents, the industry said it will “ensure that companies whose patents are broken will not be selling their next generation AIDS drugs, or any other medication for that matter, in Brazil.”⁵⁶ The United States also responded bringing a complaint against Brazil before the WTO, arguing that Article 68 contravened Article 27(1) of TRIPS, which prohibits national patent protection laws from discriminating with regard to the locale of invention.⁵⁷ According to the

⁴⁸ Bird, *supra* note 11, at 342.

⁴⁹ *Id.*

⁵⁰ *Id.* See also Yu, *supra* 24, at 134-35.

⁵¹ USTR 2007 Priority Watch List, *supra* note 34, at 1-6.

⁵² *Id.* The patent owner will be allowed to import the drug if the owner can show “economic unfeasibility” of manufacturing the medicine in Brazil. *Id.*

⁵³ Ubirajara Regis Quintanilha Marques et al., *Brazil’s AIDS Controversy: Antiretroviral Drugs, Breaking Patents, and Compulsory Licensing*, 60 FOOD & DRUG L.J. 471, 474 (2005).

⁵⁴ Claudia Schulz, *The TRIPS Agreement and Intellectual Property in Brazil*, 98 AM. SOC’Y INT’L L. PROC. 100, 101 (2004). The Article has been credited with reducing prices of key anti-retroviral AIDS drugs Efavirenz and Indinavir by 64% and 77%, respectively. Carlos Passarelli & Veriano Terto, Jr., *Good Medicine: Brazil’s Multifront war on AIDS*, 35 NACLA REP. ON AMERICAS 35, 37 (2002).

⁵⁵ Marques, *supra* note 53, at 476.

⁵⁶ *Id.* (quoting Institute for Policy Innovation, Necessity Breeds Invention (Protection), Techbytes 2.14 (Apr. 15, 2005), available at <http://www.iipi.org>).

⁵⁷ WTO Dispute Settlement Body, Brazil--Measure Affecting Patent Protection--Request for

USTR's Special 301 report in 2001, Brazil's claim that impairment of Article 68 would threaten its anti-AIDS program was inaccurate because Brazilian law already allowed for compulsory licenses for national emergencies, such as AIDS-prevention under Article 71.⁵⁸ The USTR called Article 68 a hidden trade barrier because it could require licensing "for any patented product, from bicycles to automobile components to golf clubs . . . [and is] discriminating against all imported products in favor of locally produced products."⁵⁹ The USTR further characterized Article 68 "a protectionist measure intended to create jobs for Brazilian nationals."⁶⁰

¶19 Instead of quietly defending Article 68 on the merits before the WTO, Brazil pled its case before the court of public opinion. Although Article 68 granted a compulsory license to any good regardless of social importance, Brazil tied Article 68 to the deeply controversial AIDS debate raging between developing countries and pharmaceutical enterprises. During this period, 39 pharmaceutical firms were suing the South African government to stop it from importing generic versions of anti-retroviral drugs that were patented in South Africa.⁶¹ The ill-targeted lawsuit, which triggered a proliferation of global activism and significant damage to public opinion, was filed against a nation where 20% of South Africa's adult population, or 4.2 million people, were believed to be infected with the HIV virus.⁶² Brazil used South Africa as a comparison point to parade its highly successful anti-AIDS program, implying that this program would be in jeopardy if the United States succeeded before the WTO.⁶³ AIDS activists and non-governmental organizations (NGOs) accused the U.S. government of profiting at the expense of infected Brazilians and commenced a signature campaign.⁶⁴ Brazil hosted a global meeting of NGO representatives and organized a march on the U.S. consulate to protest the complaint, with similar demonstrations occurring in other Brazilian cities.⁶⁵ Brazil successfully lobbied for a United Nations Commission on Human Rights resolution affirming the right of access to medication.⁶⁶ The United States was the sole abstention of the 53 member body, every member of which voted to pass the resolution.⁶⁷

¶20 Not satisfied with what one commentator called a "public relations disaster"⁶⁸ for the United States, Brazil went on the offensive by filing its own complaint before the WTO challenging portions of the U.S. patent code as non-compliant with TRIPS.⁶⁹

Consultations by the United States, WTO Doc. WT/DS199/1 (June 8, 2000).

⁵⁸ United States Trade Representative, 2000 Special 301 Report, *available at* <http://www.cptech.org/ip/health/ustr/special301.pdf>. [hereinafter 2001 Special 301 Report]

⁵⁹ *Id.* See also Haochen Sun, *The Road to Doha and Beyond: Some Reflections on the TRIPS Agreement and Public Health*, 15 EUR. J. INT'L L. 123, 132-33 (2004).

⁶⁰ 2001 Special 301 Report, *supra* note 34.

⁶¹ Passarelli & Terto, *supra* note 54 at 41.

⁶² Sabin Russell, *AIDS Experts to Meet in Eye of Epidemic/20% of South Africa's Adults are Infected*, S.F. CHRON., Jul. 7, 2000, *available at*, <http://www.aegis.com/news/sc/2000/SC000701.html>.

⁶³ Anselm Kamperman Sanders, *The Development Agenda for Intellectual Property: Rational Human Policy or "Modern-Day Communism"?*, lecture presented at Universiteit Maastricht (May 20, 2005), *available at* <http://www.unimaas.nl/bestand.asp?id=3827>, at 16. See also Marques, *supra* note __, at 471.

⁶⁴ Chakravarthi Raghavan, *US beats a (tactical) retreat over Brazil's patent law*, THIRD WORLD NETWORK, <http://www.twinside.org.sg/title/tactical.htm>.

⁶⁵ Passarelli & Terto, *supra* note 54, at 41-42.

⁶⁶ Sanders, *supra* note 63, at 16.

⁶⁷ *Id.*

⁶⁸ Raghavan, *supra* note 64.

⁶⁹ Sue Ann Mota, *TRIPS: Ten Years of Disputes at the WTO*, 9 COMPUTER L. REV. & TECH. 455, 477

Brazil challenged 30 U.S.C. § 202, which stated that products arising from small business or non-profit patent rights in inventions made with federal assistance shall be made substantially in the United States.⁷⁰ This provision also stated that licenses arising from federally-owned inventions shall be manufactured in the United States.⁷¹ India even joined the fray, claiming that it had a “systemic interest” in the proceeding.⁷² The combined pressure from Brazilian leadership, Brazil’s reprisal WTO action, and NGOs forced the United States to withdraw its original complaint from the WTO.⁷³

¶21 Russia, by contrast, does not press its advantage in the court of public opinion, but rather, resists United States pressure because of its unique political position as a nuclear nation, member of the U.N. Security Council, and a former superpower. In the past, Russia’s lack of intellectual property protection had been dealt with relatively leniently by the United States as compared to Brazil, India, and China. This may be due to the unique position that Russia held during the 1990s. In the post-Soviet era, the United States emerged as a strong supporter of the Yeltsin government.⁷⁴ Government officials speculated that pressing Russia for stronger intellectual property protection would unnecessarily push the Russian government back towards strong state controls if its economy faltered.⁷⁵ In addition, Russia has never been traditionally viewed as the enormous consumer market that has attracted businesspeople to China, India, and to a lesser extent, Brazil.⁷⁶ Most recently, Russia has played a key role in the global political arena on such controversial issues as the U.S. war in Iraq, dissemination of nuclear technologies, and terrorism. Current and future U.S. political administrations may not want to antagonize Russia unnecessarily, and Russia’s desired entry into the WTO may be one of only places where the United States may be able to exert meaningful leverage.⁷⁷

¶22 As a result, Russia’s political importance has allowed it to avoid making the necessary changes in its political, judicial, and law enforcement systems to halt piracy. Russia has no single agency responsible for IPR enforcement, nor a single policymaker in charge of creating or enforcing intellectual property policy.⁷⁸ Enforcement powers are scattered amongst many government agencies, with one entity having authority over plant

(2005).

⁷⁰ 30 U.S.C. § 202 (2007). *See also* Mota, *supra* note 69, at 477.

⁷¹ 30 U.S.C. § 202 (2007). *See also* Mota, *supra* note 69, at 477.

⁷² WTO Request to Join Consultations, U.S. – U.S. Patents Code, WT/DS2124/2 (Feb. 16, 2001), available at, <http://docsonline.wto.org/DDFDocuments/t/WT/DS/224-2.doc>.

⁷³ Terrence M. Brennan, *The United States and Brazil Agree to Disagree over Brazil’s Patent Law*, 13 INT. PROP. & TECH. L.J. 1, 5 (2001).

⁷⁴ *See, e.g.*, Philip Zelikow, *Beyond Boris Yeltsin*, 73 FOREIGN AFF. 44 (1994).

⁷⁵ Neigel, *supra* note 28, at 197.

⁷⁶ In 2006, combined imports and exports for Brazil, China, and India exceed those of Russia. *See* United States International Trade Commission: U.S. Trade Balance, by Partner Country 2006, at http://dataweb.usitc.gov/scripts/cy_m3_run.asp.

⁷⁷ *See, e.g.*, Fred Weir, *US-Russia Rift Widening, Despite Pact*, CHRISTIAN SCI. MON., Nov. 21, 2006, available at, <http://www.csmonitor.com/2006/1121/p06s02-woeu.html> (quoting Viktor Kremeniuk, deputy director of the Institute of USA-Canada Studies in Moscow as stating, “The only thing that has prevented a full slide into a new cold war was the personal relationship between Bush and Putin. . . . Now, as a result of an election that has greatly weakened Bush, he is reaching out to Putin for help on foreign policy issues such as Iran, using the only carrot he has: WTO membership.”).

⁷⁸ *IIPA 2007 Russia*, *supra* note 30, at 132.

licensing and another over copyright policy.⁷⁹ A working government commission to address intellectual property problems excludes rights holders from participation.⁸⁰

¶23 In a nation where copyright piracy ranks second to none in the world, Russian authorities have finally commenced raids against illegal optical disc plants.⁸¹ These raids, however, are rarely executed by surprise and often undertaken without the cooperation of the copyright holders of the pirated materials.⁸² The result has been that almost all of the optical disc plants raided over the last three years remain in operation.⁸³ Furthermore, Russian authorities are apparently not above outright chicanery to hide the extent of piracy. The IIPA reports that when a U.S. government official met Russian government officials in Moscow in late January 2007, all pirated products disappeared from the store and market shelves or stores were closed.⁸⁴ On February 5, after the U.S. delegation departed, pirated goods miraculously returned to these establishments.⁸⁵ The Russian government has the resources to suppress piracy, but the lack of strong incentives or impending sanctions gives it little reason to do so.

¶24 India lacks the economic power of China and the political importance of Russia in the eyes of the United States. That does not leave India, however, without an intellectual property resistance strategy. Although India has made significant strides in improving intellectual property rights, it has done so only at the slowest possible speed. Once India formally agreed to adopt TRIPS and its associated intellectual property requirements, it moved toward compliance at a glacial pace. Even then, a number of Indian lawmakers still resisted implementing TRIPS.⁸⁶ For example, TRIPS Article 70.8(a) required India to establish a patent office for receiving submissions for inventions.⁸⁷ Yet, a “procedural mishandling” enabling legislation caused the Indian Parliament to fail to adopt the necessary statutes to establish the patent office within the necessary time.⁸⁸

¶25 The United States responded by opening an investigation into India’s failure to effectively patent and by filing a formal claim with the WTO.⁸⁹ The WTO Dispute Settlement Body concluded that India failed to comply with TRIPS, and India unsuccessfully appealed.⁹⁰ A March 2, 1998 deadline for India to comply came and went.⁹¹ After three extensions granted by the United States, India and the U.S. finally agreed to a new April, 1999 deadline to implement the necessary legislation.⁹² By March, 1999, India’s legislature finally managed to pass an “emergency measure”

⁷⁹ *Id.* at 124.

⁸⁰ *Id.* at 132.

⁸¹ *IIPA 2007 Russia*, *supra* note 30, at 122.

⁸² *Id.* at 116.

⁸³ *Id.* at 123.

⁸⁴ *Id.* at 126.

⁸⁵ *Id.*

⁸⁶ See N. Vasuki Rao, *Anti-piracy Conference Turns, Instead, Anti-U.S.*, J. COMMERCE, Nov. 15, 1996, at 5A.

⁸⁷ David K. Tomar, Note, *A Look Into the WTO Pharmaceutical Patent Dispute between the United States and India*, 17 WIS. INT’L L.J. 579, 585 (1999).

⁸⁸ Bird, *supra* note 11, at 345.

⁸⁹ Tomar, *supra* note 87, at 585.

⁹⁰ See Report of the Appellate Body, *India-Patent Protection for Pharmaceutical and Agricultural Chemical Products*, WT/DS50/AB/R (Dec. 19, 1997).

⁹¹ Tomar, *supra* note 87, at 589.

⁹² Bird, *supra* note 11, at 346.

complying with TRIPS while the backlog of unprocessed patent applications exceeded 30,000.⁹³

¶26 Drug firm representatives pressed the USTR again to place India on the Priority Foreign Country list in February, 2000.⁹⁴ Apparently anticipating this pressure, India introduced a new patents bill in 1999, but it was eventually shuttled away to a legislative committee pending further review.⁹⁵ Another patent bill emerged again in 2002, but was drafted to allow India to grant a compulsory license for patented drugs in a national emergency.⁹⁶ In March 2005, over five years after U.S. applied direct pressure upon India to act, India finally enacted a patent law sufficiently protecting software, agricultural, and pharmaceutical products.⁹⁷

¶27 India's procedural slowness is not limited to patent infringement. India has also been slow to enact optical disc regulations that would license factories, grant authority to conduct surprise inspections, and gather sample discs for forensic testing to prevent piracy.⁹⁸ Legislation implementing these regulations has been under discussion for over three years with no immediate sign of passage.⁹⁹ Amendments necessary to harmonize existing copyright law with leading treaties have made no progress, even with many years of discussion by a "core group" in the Ministry of Human Resources Development and the release of a draft in early 2006 seeking public comment.¹⁰⁰ There appears to be little sign of Indian procedural efficiency increasing anytime in the future.

¶28 The Chinese government, while no doubt able to manipulate global public opinion like Brazil or drag its legislative heels like India, has been the most direct of all when faced with pressure to conform from the United States. In 1988, the USTR placed China on its Priority Watch List and China reacted with improvements to its intellectual property laws.¹⁰¹ In 1991, when dissatisfaction from American business generated even closer scrutiny of China's intellectual property practices, the U.S. government threatened to impose \$1.5 billion in tariffs on a variety of Chinese goods.¹⁰² China, by now a robustly growing economic power, simply threatened retaliation with its own tariffs on American aircraft, chemicals, corn, cotton, and steel.¹⁰³ After lengthy negotiations, China and the United States reached a Memorandum of Understanding in January 1992 (1992 MOU), narrowly averting a costly trade war.¹⁰⁴

⁹³ *Id.*

⁹⁴ Press Release, PhRMA, *PhRMA Calls for Vigilance [sic] on Intellectual Property Protection; Recommends Argentina, Egypt and India as "Priority Foreign Countries"*, <http://www.pharma.org/mediaroom/press/releases//21.02.2000.20.cfm> (Feb. 21, 2000).

⁹⁵ Srividhya Ragavan, *Can't we All Get Along? The Case for a Workable Patent Model*, 35 ARIZ. ST. L.J. 117, 148 (2003).

⁹⁶ *Id.* at 148 & n.312.

⁹⁷ *Patents Bill: Govt takes Left on board*, BUSINESS STANDARD, Mar. 19, 2005, at 1.(available at 2005 WLNR 4249411)

⁹⁸ International Intellectual Property Alliance, 2007 Special 301 Report (India), *at* <http://www.iipa.com/rbc/2007/2007SPEC301INDIA.pdf>, at 49. [hereinafter IIPA 2007 India]

⁹⁹ *Id.*

¹⁰⁰ *Id.*

¹⁰¹ Bird, *supra* note 11, at 340; Yu, *supra* note 24, at 140-41.

¹⁰² Yu, *supra* note 24, at 141-42.

¹⁰³ *Id.* at 142.

¹⁰⁴ Paul C.B. Liu, *U.S. Industry's Influence on Intellectual Property Negotiations and Special 301 Actions*, 13 UCLA PAC. BASIN L.J. 87, 112 (1994).

¶29 After the 1992 MOU, China significantly improved its intellectual property laws and joined the Berne and Geneva Conventions in 1993.¹⁰⁵ Yet, in 1994 the United States again cited China's lack of commitment to intellectual property protection and threatened to impose tariffs.¹⁰⁶ Not surprisingly, China threatened its own tariffs against the United States.¹⁰⁷ Again, a last minute compromise between the nations averted a trade war.

¶30 This repeating process of threat, counter-threat, negotiation, and last-minute resolution has been rightfully characterized by Peter Yu as a "cycle of futility."¹⁰⁸ The cycle continued throughout the 1990s as threatened tariffs by the United States for failure to protect intellectual property met with threats of equally damaging Chinese counter-tariffs against U.S. products. The cycle halted because of China's accession to the WTO on December 11, 2001.¹⁰⁹ China's membership in the WTO requires the United States to resolve any trade disputes with China, as with any WTO member country, through the mandatory WTO settlement process.¹¹⁰ This does not mean, however, that American businesses will not lobby to use the WTO as a forum to improve intellectual property protection. In 2005, trade groups urged the United States to file a complaint against China before the WTO because of inadequate intellectual property protection.¹¹¹ In September, 2007, the WTO opened a formal investigation into U.S. allegations that China is insufficiently protecting intellectual property rights.¹¹² Pressure from the United States on non-intellectual property trade-related issues continues to result in threatened counter-sanctions from the Chinese government.¹¹³

II. THE FUTURE OF THE BRICS: CONVERGENCE AND RESISTANCE

¶31 As the history described above indicates, the protection and enforcement of intellectual property rights in the BRIC countries has been the product of starts and stops, and the journey is clearly far from over. Much contention likely lies ahead as intellectual property continues to increase in economic significance.¹¹⁴ It is tempting to view the BRIC's options for the future from one of two opposing perspectives: (1) the Western property rights view, which argues for strong legal protections and the rejection of free-riding when a country has the economic strength to participate in global innovation, or (2) the Southern open access view, calling for a noble resistance to the coercion of

¹⁰⁵ Warren Newberry, Note, *Copyright Reform in China: A "TRIPS" Much Shorter and Less Strange than Imagined?*, 35 CONN. L. REV. 1425, 1439 (2003).

¹⁰⁶ Yu, *supra* note 24, at 144.

¹⁰⁷ *Id.*

¹⁰⁸ Peter K. Yu, *From Pirates to Partners (Episode II): Protecting Intellectual Property in Post-WTO China*, 55 AM. U. L. REV. 901, 904 (2006) (citing Yu, *supra* note 24, at 140-48).

¹⁰⁹ *Id.* at 904 n.16.

¹¹⁰ *Id.* at 904.

¹¹¹ *Id.*

¹¹² *WTO Inquiry to Examine Counterfeiting in China*, WALL ST. J. (Sep. 26, 2007), available at, http://online.wsj.com/article_email/SB119071094229538578-1MyQjAxMDE3OTIwNTcyMTUwWj.html.

¹¹³ Yu, *supra* note 108, at 902.

¹¹⁴ See Peter S. Menell, *Bankruptcy Treatment of Intellectual Property Assets: An Economic Analysis*, 22 BERKELEY TECH. L.J. 733, 735 (2007) (stating that "much of the value of the world's leading companies resides in their portfolios of intangible assets" and citing several sources in support). According to the Wall Street Journal, intangible assets, including patents, account for nearly one-third of the value of all U.S. stocks, or 45% of GDP. Nick Timiraos, *Businesses Battle Over Patent Laws*, WALL ST. J., Jun. 9, 2007, at A7.

industrialized oppressors intent on maximizing profits without a realistic understanding of development needs. As noted, each variant of the narrative has support. On one hand, the BRICs seem to respond to the economic incentive to limit intellectual property enforcement when home industries can effectively copy the creativity and technology of industrialized nations.¹¹⁵ Conversely, the property rights push can seem a bit disingenuous in view of the fact that many western nations owe aspects of their economic development to a lack of intellectual property protection.¹¹⁶ As a result, nations often end up talking past each other or resorting to grudging conciliation without truly understanding the others' needs.

¶32 Perhaps the dichotomous narrative is simply wrong on both counts. One can argue that it misses a middle ground that may better characterize the optimal future relationship of the BRICs with developed countries, as well as the larger developing world. It is possible that a hybrid model of intellectual property protection and occasional exception—a process of convergence and resistance—will provide the mix necessary for developing countries to gain an economic foothold, protect the health and safety of their citizens, and play a responsible and vital role in the world economy. This model may not mimic the regimes of industrialized nations now, or event in the distant future. But it may provide a predictable projection the value of investment incentives in these growing global markets.

¶33 In assessing the future of BRIC intellectual property regimes, most commentators choose to focus on copyright and trademark piracy. Indeed, as described above, it is the area that is subject to most scrutiny and is easily followed as a measure of progress. However, other areas of intellectual property protection have broader significance to most industries and may provide a more significant economic yardstick. In particular, patents are the cornerstone of industrial innovation investment,¹¹⁷ and a country's willingness to provide substantial protection can provide a reasonable basis for assessing its commitment to property rights and other investment incentives. For that reason, these

¹¹⁵ For example, India's strength in generic pharmaceutical manufacturing has arguably pushed it toward more relaxed intellectual property protection over the pharmaceutical innovations of foreign companies. See Rishi Gupta, *TRIPS Compliance: Dealing with the Consequences of Drug Patents in India*, 26 HOUS. J. INT'L L. 599, 602–03 (2003). Conversely, this ability to copy the inventions of foreign companies is one of the classical rationales for intellectual property protection. See Peter K. Yu, *Intellectual Property, Economic Development, and the China Puzzle*, Res. Paper No. 04-23, at pp. 4-5 (2007), <http://ssrn.com/abstract=978301>.

¹¹⁶ See FATUMTA JAWARA & AILEEN KWA, BEHIND THE SCENES AT THE WTO: THE REAL WORLD OF INTERNATIONAL TRADE NEGOTIATIONS 36 (2004) (“The USA, Germany, Japan and Korea, for example, all industrialized largely by copying existing product and/or process technologies . . .”).

¹¹⁷ SUZANNE SCOTCHMER, INNOVATION AND INCENTIVES 11-14 (2004) (describing the central role of patents in the great innovations of the late 19th and 20th centuries).. This is particular true in industries like pharmaceuticals and biotechnology. Stephen G. Kunin et al., *Reach-Through Claims in the Age of Biotechnology*, 51 AM. U. L. REV. 609, 615 (2002). One would be remiss in overlooking the important contribution of trade secret protection as an important investment mechanism as well. Trade secrets are the flip side of patents, providing protection when the costs of public disclosure exceed the gains of monopoly. WILLIAM M. LANDES & RICHARD A. POSNER, THE ECONOMIC STRUCTURE OF INTELLECTUAL PROPERTY LAW 326–29 (2003) (describing three economic justifications for the patent system based on inventor incentives and alternate behavior if only trade secret protections existed); Vincenzo Denicolò & Luigi Alberto Franzoni, *The Contract Theory of Patents*, 23 INT'L REV. L. & ECON. 365 (2004) (analyzing patent economics by considering trade secrets as the alternative). However, such protections are by definition, less transparent than patents, and therefore less useful as a means of assessment.

“hard” IP assets merit substantive investigation in any discussion of BRIC intellectual property regimes.¹¹⁸

A. *Pharmaceutical Patents as an IP Bellwether*

¶34

Pharmaceuticals are the basis of treatment for a wide variety of public health problems from recent global pandemics like AIDS,¹¹⁹ to diseases like malaria that have dogged mankind for millennia.¹²⁰ A great deal of investment is required to bring a pharmaceutical to market,¹²¹ much of it tied up in research endeavors that never come to fruition for a variety of reasons.¹²² The most common drugs today are known as “small molecule” compounds, meaning that they have a relatively simple structure that can be easily understood by a skilled chemist.¹²³ In contrast, in the emerging science of biotechnology, the structure of treatment compounds is often so complex that it eludes easy characterization.¹²⁴ The current dependence on small-molecule pharmaceuticals is significant because, without strong protection, they are relatively easy to copy by third parties, even without the use of a company’s inside know-how.¹²⁵ This means that, without a powerful legal mechanism to protect the investment from competition, it is likely to be erased by free riders.¹²⁶

¶35

Patent rights—which are a form of property protection¹²⁷—provide the primary exclusion mechanism for pharmaceuticals. They can cover several aspects of a drug, including the actual compound, the method of treatment, the method of manufacture, the formulation, or any combination.¹²⁸ It has been demonstrated that the pharmaceutical

¹¹⁸ Intellectual property attorneys often refer to patents as “hard IP,” and trade secrets, copyrights and trademarks as “soft IP.” See Marc E. Hankin, Comment, *Now that we Know “the Way Forward,” Let us Stay the Course*, 77 CHI.-KENT L. REV. 1295, 1299 (2002).

¹¹⁹ UNITED NATIONS DEVELOPMENT PROGRAMME (“UNDP”), HUMAN DEVELOPMENT REPORT 2005, at 3 (2005), available at http://hdr.undp.org/reports/global/2005/pdf/HDR05_HDI.pdf (“the HIV/AIDS pandemic has inflicted the single greatest reversal in human development.”).

¹²⁰ WORLD HEALTH ORGANIZATION COMM’N ON INTELLECTUAL PROPERTY RIGHTS, INNOVATION AND PUBLIC HEALTH, PUBLIC HEALTH: INNOVATION AND INTELLECTUAL PROPERTY RIGHTS 2-3 (2006).

¹²¹ See Joseph DiMasi et al., *The Price of Innovation: New Estimates of Drug Development Costs*, 22 J. HEALTH ECON. 151, 166–68, 180 (2003).

¹²² Henry Grabowski, *Politics, Policy and Availability: Patent and New Product Development in the Pharmaceutical and Biotechnology Industry*, 8 GEO. PUB. POL’Y REV. 7, 9 (2003) (“most new drug candidates fail to reach the market.”).

¹²³ Gregory N. Mandel, *The Generic Biologics Debate: Industry’s Unintended Admission the Biotech Patents Fail Enablement*, 11 VA. J.L. & TECH. 8, 60 (2006) (“Small molecule drugs are relatively easy to copy and test for equivalence.”).

¹²⁴ *Id.* at 61.

¹²⁵ Patricia M. Festin, *The Regulatory, Economic, and Privacy Implications of Pharmacogenomics*, 10 VA. J.L. & TECH. 2, 12 (2005).

¹²⁶ *Id.*

¹²⁷ See, e.g., 35 U.S.C. § 261 (patents have the attributes of personal property under U.S. law); General Agreement on Tariffs and Trade — Multilateral Trade Negotiations (The Uruguay Round): Agreement on Trade-Related Aspects of Intellectual Property Rights, Including Trade in Counterfeit Goods, Preamble, Dec. 15, 1993, 33 I.L.M. 81, 84 (1994) [hereinafter TRIPS] (“[r]ecognizing that intellectual property rights are private rights”). The essential element of a patent right is that it confers upon its owner the right to exclude others from practicing the invention. WILLIAM D. NORDHAUS, INVENTION, GROWTH, AND WELFARE: A THEORETICAL TREATMENT OF TECHNOLOGICAL CHANGE 70 (1969) (patents create incentives by conferring monopoly power for a limited period of time). The patent right can also be sold or licensed like a tangible property right.

¹²⁸ Stephanie Greene, *A Prescription for Change: How the Medicare Act Revises Hatch-Waxman to*

industry responds positively to patent protection, much more so than do other industries.¹²⁹ Investment in research and development really does appear to track substantive protection for pharmaceutical patents.

¶36 On the other hand, the information embodied in valuable medicines presents a tempting target for acquisition. From a social perspective, the desire to increase access to all those in need may conflict with the pricing or distribution plans of the property owner.¹³⁰ From an economic perspective, the ability to reap local profits from high-cost innovation produced in other nations may lead to an equally strong desire to limit property protection.¹³¹ In both cases, the countervailing forces to intellectual property incentives present a classic test of commitment to industrialized nation ideals for the BRICs. They provide a useful lens for predicting the high technology future of these nations.

B. Recent Progress Toward Basic Protection

¶37 It may not come as a complete surprise that the BRICs as a group have only recently included substantive patent protection for pharmaceutical compounds. But this fact glosses over the historical complexity of patent rights in this area and suggests the existence of opportunism on the part of the BRICs that is inaccurate. In the first place, the fact that a nation should confer patent protection to a pharmaceutical was not a foregone conclusion before the TRIPS agreement. In fact, at the time the language was settled, over 50 countries (including many industrialized nations) did not provide patent protection for pharmaceuticals.¹³² The reasons were varied, including narrow subject matter provisions as well as public health policy. Secondly, it is undeniable that the BRICs have made significant efforts to adopt TRIPS compliant—some would say, Western—patent rights for pharmaceuticals; the playing field is much more level today than it was only 15 years ago.

¶38 India provides perhaps the most interesting case of transitioning patent protection. Its lack of pharmaceutical patent protection leading up to TRIPS was actually the result

Speed Market Entry of Generic Drugs, 30 J. CORP. L. 309, 316 n.30 (2005)

¹²⁹ See, e.g., Edwin Mansfield, *Patents and Innovation: An Empirical Study*, 32 MGMT. SCI. 173, 174–75 (1986). See also FED. TRADE COMM’N, TO PROMOTE INNOVATION: THE PROPER BALANCE OF COMPETITION AND PATENT LAW AND POLICY 4–14 (2003) (“Representatives from the pharmaceutical industry stated that patent protection is indispensable in promoting pharmaceutical innovation for drug products containing new chemical entities.”).

¹³⁰ Multinational companies often engage in open price discrimination, wherein goods are sold at different prices in across the globe, based not on differences in production or distribution costs, but on the maximum price that can be obtained in different markets. Patricia Danzon & Adrian Towse, *Differential Pricing for Pharmaceuticals: Reconciling Access, R&D and Patents*, 3 INT’L J. HEALTH CARE FIN. & ECON. 183, 201–02 (2003).

¹³¹ See *supra* note 115 and accompanying text.

¹³² Kelley A. Friedgen, *Rethinking the Struggle Between Health & Intellectual Property: A Proposed Framework for Dynamic, Rather than Absolute, Patent Protection of Essential Medicines*, 16 EMORY INT’L L. REV. 689–696–97 (2002). A very interesting discussion by Julio Nogués notes how recent pharmaceutical patent protection is many of the world’s most economically powerful countries. Julio Nogués, *Patents and Pharmaceutical Drugs*, World Bank Working Paper PS 502, at pp. 3–4 (1990), available at http://www-wds.worldbank.org/servlet/WDSContentServer/WDSP/IB/1990/09/01/000009265_3960929170142/Rendered/PDF/multi0page.pdf (stating that pharmaceutical patents have only been available in Germany since 1968, Italy since 1978, Japan since 1976, Sweden since 1978 and Switzerland since 1977).

of a change in the law in the 1970s. Prior to that time, owing to its colonial lineage to Britain, India did provide patent protection to both pharmaceutical compounds and methods for manufacture.¹³³ However, the 1970 revisions to the Indian Patent Act removed protection for compounds.¹³⁴ The rationale was entirely practical—India determined that foreign investment in its domestic pharmaceutical industry was lacking, and local drug development was unlikely to occur in the near future.¹³⁵ The country could do far better by fostering the growth of a local generic industry founded on the production of drugs created in Western nations. This move was extremely successful from the standpoint of industrial development. India's generic drug industry is now one of the most robust in the world. The fact that this growth was underpinned on the unrecouped investment of developed nations did not escape the TRIPS negotiators, and countries like India were expected to include compound protection as a consequence of membership.¹³⁶ A transition period was instituted that allowed developing countries time to create such protection.¹³⁷ That period ended for India in 2005, when it formally introduced patent rights for pharmaceutical compounds.¹³⁸

¶39 As described above, Brazil's pattern of pharmaceutical protection is similar to India's but without the early post-colonial period of patent protection. Brazil added pharmaceutical compound protection in 1997.¹³⁹ The revised law now complies with TRIPS, at least in regard to subject-matter protection. Very soon after, in 1999, Brazil instituted a formal system for the approval of generic pharmaceuticals.¹⁴⁰ These provisions have ensured that Brazil has a strong domestic manufacturing industry, though it has been suggested it would be stronger if the government's public stance on IP were more favorable to innovation.¹⁴¹

¶40 On the other hand, as a communist nation, China did not provide private ownership of patents on pharmaceuticals.¹⁴² The first break in the barrier to invention rights came in

¹³³ Samira Guennif & Julien Chaisse, *Present Stakes Around Patent Political Economy: Legal and Economic Lessons from the Pharmaceutical Patent Rights in India*, 2 ASIAN J. WTO & INT'L HEALTH L. & POL'Y 65, 69 (2007).

¹³⁴ *Id.* at 69-70.

¹³⁵ *Id.*

¹³⁶ See TRIPS, *supra* note 127, at art. 27 (requiring that patents be available in all areas of technology, with a few specific exceptions such as multicelled plants and animals and medical methods for the treatment of humans or animals).

¹³⁷ *Id.* at arts. 65 & 70.8; Peter K. Yu, *The International Enclosure Movement*, 82 IND. L.J. 827, 863 (2007).

¹³⁸ The Patents (Amendment) Act, 2005, No. 15, Acts of Parliament, 2005, available at http://www.ipindia.nic.in/ipr/patent/patent_2005.PDF. The transition was not entirely smooth. In 1996, the United States filed a dispute against India in the WTO, alleging that India failed to provide the necessary interim protection for existing pharmaceutical compounds. Panel Report, India-Patent Protection for Pharmaceutical and Agricultural Chemical Products, WT/DS50/R (Sept. 5, 1997).

¹³⁹ Lei No. 9.279, de 14 de Maio de 1996, D.O., 15/05/1996 (93, 1): 8353, 15.05.1996, translation available at <http://www.cptech.org/ip/health/cl/brazil1.html>; Marques, *supra* note 53, at 473.

¹⁴⁰ Lei No. 9.787, de 10 de fevereiro de 1999. See Vera Valente, *Generics in Latin America: An Analysis of the Brazilian Experience*, 4 J. GENERIC MEDS. 30, 31 (2006).

¹⁴¹ See, e.g., Lawrence A. Kogan, *Brazil's IP Opportunism Threatens U.S. Private Property Rights*, 38 U. MIAMI INTER-AM. L. REV. 1, 23-24 (2006) (suggesting that, due to the Brazilian government's anti-IP policies, European investment in research and development is shifting to the United States).

¹⁴² Averie K. Hason & Jean E. Shimotake, *Recent Development in Patent Rights for Pharmaceuticals in China and India*, 18 PACE INT'L L. REV. 303, 305 (2006) (noting that China had a form of patent protection dating from the 1950s, but ownership resided in the state); Jeffrey A. Andrews, *Pfizer's Viagra Patent and the Promise of Patent Protection in China*, 28 LOY. L.A. INT'L & COMP. L. REV. 1, 6 n.20 (2006)

1984, when China agreed to establish a basic patent system.¹⁴³ However, like India a decade and a half before, rights were extended only to processes, not compounds.¹⁴⁴ It wasn't until the 1992 MOU that China agreed to extend protection to pharmaceutical compounds.¹⁴⁵ Interestingly, a regulatory procedure existed under China's Drug Administration Law, which protected any pharmaceutical product that had not been previously manufactured in China as a new drug.¹⁴⁶ Because foreign sales were not included under the original provision, local manufacturers could copy foreign drugs and sell them with exclusivity, even as against the company that originally developed the drug.¹⁴⁷

¶41 Owing to its communist past, Russia, like China, also did not have a system for protecting intellectual property rights.¹⁴⁸ However, patent rights were protected prior to the communist revolution.¹⁴⁹ Whether this has smoothed the way toward a modern intellectual property system is open to question. At any rate, since the fall of the Soviet Union, Russia has instituted modern patent property rights with individual ownership.¹⁵⁰ As part of this system, Russia currently protects pharmaceutical patents, though it offers an interesting enforcement exception to pharmacies in making prescriptive preparations.¹⁵¹

¶42 Thus, despite divergent pasts, the BRICs are generally on the same page today when it comes to the protections afforded pharmaceuticals. Of course, granting the rights on paper is only the first step. All of the BRICs have faced difficulties in convincing developed countries that their respective pharmaceutical granting and enforcement regime are reasonably rigorous and unbiased. This has led to accusations that the rights are but a first step, contingent on a serious follow-through yet to be seen.¹⁵² Incidents

¹⁴³ Hason & Shimotake, *supra* note 142, at 305 (citing Patent Law of the People's Republic of China (promulgated by the Standing Comm. of the Sixth Nat'l People's Cong., Mar. 12, 1984, effective Apr. 1, 1984) (P.R.C.)); Andrews, *supra* note 142, at 6.

¹⁴⁴ *Id.* (stating that "pharmaceutical products and substances obtained by means of a chemical process" was one of the areas excepted from patentability).

¹⁴⁵ Memorandum of Understanding between the United States of America and the People's Republic of China (1992), TIAS No 12,036; Joseph A. Massey, *The Emperor is Far Away: China's Enforcement of Intellectual Property Rights Protection, 1986-2006*, 7 CHI. J. INT'L L. 231, 235 (2006).

¹⁴⁶ Eliza Yibing Zhou, *Chinese Biogenerics and Protection of IP*, GENETIC ENG'G & BIOTECHNOLOGY NEWS, Sep. 1, 2006, at 58, available at <http://www.genengnews.com/articles/chitem.aspx?aid=1875>.

¹⁴⁷ *Id.*

¹⁴⁸ Sergey Budylin & Yulia Osipova, *Total Upgrade: Intellectual Property Reform in Russia*, 1 COLUM. J. E. EUR. L. 1, 4 (2007); Mariyetta Meyers, *Russia and the Internet: Russia's Need to Confront and Conquer Trademark Infringement in Domain Names and Elsewhere on the Web*, 9 GONZ. J. INT'L L. 200, 204 (2006).

¹⁴⁹ Meyers, *supra* note 144, at 204 n.10; Julian Zegelman, *Features — Researching Intellectual Property Law in the Russian Federation* (Aug. 19, 2005), <http://www.llrx.com/features/russiaiplaw.htm>.

¹⁵⁰ Marina Portnova, *Ownership and Enforcement of Patent Rights in Russia: Protecting an Invention in the Existing Environment*, 8 IND. INT'L & COMP. L. REV. 505, 511-12 (1998). Russia also grants patents as a member of the Eurasian Patent Organization, along with many of the former Soviet republics. See Hugh Brett, *Origins and Activities of the Eurasian Patent Organization* (May 2004), <http://scientific.thomson.com/free/ipmatters/patof/8224240/>.

¹⁵¹ Patentnyi Zakon Rossiiskoi Federatsii [Patent Law of the Russian Federation] No. 3517-1, Sept. 23, 1992, 42 VSND i VS RF No. 42, item 2139 (1992), amended by Federal Law No. 22-FZ, Feb. 7, 2003, at art. 11, translation available at http://www.fips.ru/ruptoen2/law/patent_law.htm (Russia) (Acts not recognized as infringements on the Exclusive Right of the Patent Owner).

¹⁵² See, e.g., *Asia Market Survey: IP Issues for Rights Owners*, ASIALAW, Apr. 1, 2007, at 1 ("Despite considerable improvements to the legislative environment in several key jurisdictions in Asia, particularly

have included somewhat expected variants on pharmaceutical counterfeiting in China,¹⁵³ Russia,¹⁵⁴ and Brazil.¹⁵⁵ However, the most prominent disputes that epitomize the complexity of the issues come from India and China.

¶43 With the introduction of its pharmaceutical product patent regime in 2005, India sought to delineate between groundbreaking invention and obvious extension of known compounds.¹⁵⁶ At first glance, this seems like the typical standard that patentable inventions be nonobvious¹⁵⁷ (or have sufficient inventive step¹⁵⁸). However, it has been argued that India's system seeks to go further by excluding so-called "me too" drugs or "evergreening" – extending the basic pharmaceutical protection with less innovative modifications that keep the drug under proprietary control for a longer period of time.¹⁵⁹ To the extent that this precludes protection for legitimate inventions, branded drug companies are concerned.

¶44 A recent dispute that elucidates this point concerned the anti-cancer drug Gleevec, produced by Novartis.¹⁶⁰ In 2005, India's patent office denied a patent on the pharmaceutical compound, stating that it was not sufficiently inventive over previous iterations of the chemical, and Novartis appealed.¹⁶¹ Novartis argued that the exception to patent protection in the new Indian statute is a blatant attempt to deny protection to a very common class of drugs—those that make viable treatments by improving on less useful compounds—in favor of permitting early generic competition.¹⁶² According to Novartis, this violated TRIPS guarantees.¹⁶³ In August, 2007, this contentious battle concluded with the somewhat uneventful decision that the Indian courts had no

China and India, intellectual property rights advocates remain concerned about haphazard enforcement.”).

¹⁵³ See, e.g., Walt Bogdanich & Jake Hooker, *From China to Panama, a Trail of Poisoned Medicine*, N.Y. TIMES, May 6, 2007, at 1.1; Geoff Dyer, *Chinese Students 'Copied Tamiflu'*, FIN. TIMES, Aug. 31, 2007, at 2.

¹⁵⁴ See, e.g., Andrew E. Kramer, *Drug Piracy: A Wave of Counterfeit Medicines Washes Over Russia*, N.Y. TIMES, Sep. 5, 2006, at C.1.

¹⁵⁵ See, e.g., Laurie Goering, *Contraceptive Pill Scam Shakes Brazil*, TIMES-PICAYUNE, Jul. 19, 1998, at A.27.

¹⁵⁶ Patents (Amendment) Act, 2005, No. 15, Acts of Parliament, 2005 (India), section 3(d) (prohibiting a new form of a known substance from being patented unless this new form has considerably better accuracy).

¹⁵⁷ See 35 U.S.C. § 103 (2000).

¹⁵⁸ The phrase “inventive step” as used in Europe and Japan is equivalent to the U.S. “obviousness” requirement. See Convention on the Grant of European Patents art. 56, Oct. 5, 1973, 1065 U.N.T.S. 254, 273, at art. 56. (“An invention shall be considered as involving an inventive step if, having regard to the state of the art, it is not obvious to a person skilled in the art.”); David J. Abraham, Shinpo-Sei: *Japanese Inventive Step Meets U.S. Non-Obviousness*, 77 J. PAT. & TRADEMARK OFF. SOC'Y 528, 529–30 (1995)

¹⁵⁹ Tatum Andersen, *Rejected Novartis Cases Leave India's TRIPS Compliance Unchallenged*, INTELL. PROP. WATCH, Aug. 7, 2007, <http://www.ip-watch.org/weblog/index.php?p=712&res=1024> (“[Section 3(d) was drafted with the prevention of a particular practice in mind: evergreening, where pharmaceutical companies patent frivolous changes to their drugs in order to extend patent protection, thereby preventing generic companies from manufacturing cheaper drugs the poor can better afford.”).

¹⁶⁰ *Id.*

¹⁶¹ Affidavit filed on Behalf of Petitioner, Novartis AG v. Union of India, W.P.No.24759 (Madras H.C. May 17, 2006) [hereinafter *Novartis Affidavit*], available at http://www.lawyerscollective.org/%5Eamtc/%5EPatent_Oppositions/W.P.NO.24759.doc.

¹⁶² *Id.* at 17-20; Novartis Press Release, *Improving Indian Patent Law Benefits Patients and Societies* (created Jun. 12, 2007), available at http://www.novartis.com/downloads/about-novartis/Novartis_position-Glivec_Gleevec_patent_case_india.pdf

¹⁶³ *Novartis Affidavit*, *supra* note 161, at 17-19.

jurisdiction to assess what is essentially an international trade dispute.¹⁶⁴ Given the Swiss government's reluctance to take the dispute to the WTO on behalf of Novartis,¹⁶⁵ it is likely that India will remain to have a diminished forum for pharmaceutical patents for quite some time.¹⁶⁶

¶45 In contrast is the Chinese patent office's decision in 2004 to deny protection on the core compounds for Pfizer's blockbuster drug, Viagra.¹⁶⁷ Given the success in convincing various patent offices across the world of Viagra's patentability, Pfizer publicly accused the Chinese government of reneging on its promise to provide substantial protection to pharmaceuticals (particularly those owned by foreign firms) in compliance with TRIPS.¹⁶⁸ Many viewed the dispute as a test of China's dedication to intellectual property compliance.¹⁶⁹ In the end, a Chinese appellate court reversed the decision of the patent office in 2006 and granted the protection Pfizer sought.¹⁷⁰

C. Exceptions and Negotiation advantages

¶46 The intellectual property future of the BRICs is certainly told in the first chapter by the rights accorded and the enforcement thereof. This is indeed important and has rightly received the most attention as a critical first step. However, there is a second chapter that may be more meaningful for qualifying the conditions of the future BRIC relationship with developed countries. This is a chapter that concerns official TRIPS-sanctioned exemptions permitted to rights enforcement—instances in which patent rights may legitimately be ignored or relaxed—creating an impact that is both political and economic. It may be possible for the BRIC nations to adopt an approach to these flexibilities that is predictable, yet different than developed countries, providing the optimal benefit to the citizens of these respective nations. The context of pharmaceuticals provides an early highlight of the power and effect of such an approach that should translate into other fields.

¶47 While there are a variety of possible enforcement nuances created by legislatures (as well as courts in the case of common law countries like India¹⁷¹), the most important limitation on private rights is the ability of the government to appropriate for public use.

¹⁶⁴ *Novartis AG v. Union of India*, W.P. Nos. 24759 and 24760 (Madras H.C. Aug. 6, 2007), available at http://www.lawyerscollective.org/%5Eamtc/current_issues/Judgement.pdf.

¹⁶⁵ See Andersen, *supra* note 159 (noting that the Swiss government signed an intellectual property "memorandum of understanding" with the Indian government on August 7, suggesting alternate means of resolving TRIPS-oriented disputes).

¹⁶⁶ It is possible that India's local pharmaceutical companies may challenge the provision at some point in the future, as they have become prominent innovators in the pharmaceutical arts. See *Financial Insight: Subtle Win in Patent Loss*, WALL ST. J., Aug. 8, 2007, at C.14.

¹⁶⁷ Gardiner Harris, *Pfizer Reports China has Lifted its Viagra Patent*, N.Y. TIMES, Jul. 8, 2004, at C.1.

¹⁶⁸ Andrews, *supra* note 142, at 1-2; Yu, *supra* note 108, at 988-89.

¹⁶⁹ See, e.g., James Kynge, *China Overtakes Viagra Patent*, FIN. TIMES, Jul. 8, 2004, at 27; Ken Howard, *Patent Fights Rumble in China*, 3 NATURE REV. DRUG DISCOVERY 988, 988 (2004). According to one report, after six months on the market, 90% of the Viagra sold in Shanghai was fake. *Pfizer Wins Chinese Viagra Ruling*, BBC NEWS, Jun. 5, 2006, <http://news.bbc.co.uk/2/hi/business/5047640.stm>

¹⁷⁰ Nicholas Zamiska, *Beijing Court Backs Patent Protection for Viagra*, WALL ST. J., Jun. 3, 2006 at A.3.

¹⁷¹ India might be more accurately described as "mixed common law," because it incorporates other legal traditions. See Wayne R. Barnes, *Contemplating a Civil Law Paradigm for a Future International Commercial Code*, 65 LA. L. REV. 677, 684 (2005). But it is clearly not a civil law country.

Such appropriations are usually referred to as compulsory licenses because monetary compensation in exchange for the use is proffered.¹⁷² The TRIPS agreement actually requires “adequate remuneration,”¹⁷³ though this term is ambiguous to say the least.¹⁷⁴ This compulsory license appropriation theoretically could take the form of an *ex ante* exception that permits a government the right to automatically use a right, but this appears to be prohibited in the patent context¹⁷⁵ by the TRIPS requirement that “authorization . . . be considered on the individual merits.”¹⁷⁶ More relevant is the *ex post* compulsory license, a post-invention determination to relax property rights for some overarching purpose. Historic examples have included licenses for military use, public works, the development of local industry, and public health.¹⁷⁷

¶48

All the BRIC countries have compulsory license statutes. Moreover, despite the difference in historical development of intellectual property rights, the BRICs have surprisingly similar exemptions. This likely stems from the fact that such rights have been retained by most industrialized nations for over 100 years¹⁷⁸—not to mention enshrined in the historic 1898 Paris Convention for the Protection of Intellectual Property¹⁷⁹—and the BRIC statutes and policies are simply derivative of what other nations have generally agreed upon. More broadly, compulsory license rights can be viewed as one aspect of a government’s sovereign power over property rights within its domain,¹⁸⁰ making the existence of such powers in the BRICs as well as most other nations unsurprising.

¹⁷² Daniel R. Cahoy, *Confronting Myths and Myopia on the Road from Doha*, 42 GA. L. REV. (forthcoming 2007), available at <http://ssrn.com/abstract=989817>, at p. 10.

¹⁷³ TRIPS, *supra* note 127, at art. 31(h)

¹⁷⁴ See generally Cahoy, *supra* note 172.

¹⁷⁵ Interestingly, *ex ante* compulsory licenses do exist prominently in other contexts. For example, in United States copyright law, there is an automatic compulsory license for making and distributing phonorecords. See 17 U.S.C. § 115 (2000).

¹⁷⁶ TRIPS, *supra* note 127, at art. 31(a).

¹⁷⁷ Jerome H. Reichman & Catherine Hasenzahl, *Non-Voluntary Licensing of Patented Inventions*, UNCTAD-ICTSD Issue Paper No. 5 (2004), available at http://www.ictsd.org/pubs/ictsd_series/iprs/CS_reichman_hasenzahl.pdf.

For a consideration of examples in the United States, see Daniel R. Cahoy, *Treating the Legal Side Effects of Cipro®: A Reevaluation of Compensation Rules for Government Takings of Patent Rights*, 40 AM. BUS. L.J. 125, 135-36 (2002).

¹⁷⁸ Carlos M. Correa, *Intellectual Property Rights and the Use of Compulsory Licenses: Options for Developing Countries*, South Centre, at Part II (1999), <http://www.southcentre.org/publications/complicence/toc.htm> (stating that compulsory licensing exist in various forms in the patent laws of approximately one hundred countries and dates back to the English Statute of Monopolies in 1623).

¹⁷⁹ July 14, 1967, 21 U.S.T. 1583, T.I.A.S. No. 6295, 828 U.N.T.S. 305 [hereinafter Paris Convention], at art. 5(a).

¹⁸⁰ This could be analogous to eminent domain power in the United States, which is generally understood to underlie the statutory compensation mechanism. See Cahoy, *supra* note 177, at 142-151 (describing the ambiguity in treating 28 U.S.C. § 1498 as an eminent domain jurisdictional statute – the “eminent domain theory” – versus an exception to the patent grant – the “established statutory theory.”). However, the recent Federal Circuit case of *Zoltek Corp. v. U.S.*, 442 F.3d 1345, 1352 (Fed. Cir. 2006) (citing *Schillinger v. United States*, 155 U.S. 163 (1894)), casts some doubt on this notion, ruling that § 1498 was not based on eminent domain because the Supreme Court had previously ruled that government infringement and eminent domain are different acts. Many countries appear to treat compulsory license compensation as something less than the full taking of a tangible property right. See Cahoy, *supra* note 172, at p. 35-36. At least one author has argued that this view may be inconsistent with the obligations attendant to bilateral investment treaties. Carlos M. Correa, *Investment Protection in Bilateral and Free*

¶49

The component available in all the BRIC compulsory licensing statutes is the provision for government use in times of national emergency.¹⁸¹ This would certainly include health care crises, but it could also encompass other subjects of national importance such as anti-terrorism initiatives. Additionally, India, Brazil and Russia have what might be termed “local working” provisions, meaning that failure to manufacture a patented article locally may lead to the imposition of a license.¹⁸² Similarly, India, China and Russia permit private parties to request a license to exploit the patent right following the failure of negotiation with the patent owner, regardless of evidence of local working.¹⁸³

Table 1: Comparison of BRIC Compulsory License Statutes

	National Emergency	Local Working	Failure of Negotiation	Price or Needs of Market	Article 31bis Exports	Dependant on other Patents
Brazil	X	X		X		X
Russia	X	X ¹⁸⁴	X			X
India	X	X	X	X	X	X
China	X		X		X	X

¶50

Perhaps the most significant compulsory license use by BRIC countries will come not from supplying the home market, but rather from exporting pharmaceuticals to developing or least-developed countries that have taken out licenses. As noted above, India, China and Brazil each have significant pharmaceutical manufacturing sectors and

Trade Agreements: Implications for the Granting of Compulsory Licenses, 26 MICH. J. INT’L L. 331, 348-51 (2004).

¹⁸¹ Lei No. 9.279, de 14 de Maio de 1996, D.O., 15/05/1996 (93, 1): 8353, 15.05.1996 (Brazil), *translation available at* <http://www.cptech.org/ip/health/cl/brazil1.html>, at art. 71; Patent Law (adopted at the 4th Meeting of the Standing Comm. Nat’l People’s Cong., Mar. 12, 1984, amended Sept. 4, 1992, amended again Aug. 25, 2000 (P.R.C.), *translation available at* http://www.sipo.gov.cn/sipo_English/laws/lawsregulations/200203/t20020327_33872.htm, at art. 49; Patentnyi Zakon Rossiiskoi Federatsii [Patent Law of the Russian Federation] No. 3517-1, Sept. 23, 1992, 42 VSND i VS RF No. 42, item 2139 (1992), amended by Federal Law No. 22-FZ, Feb. 7, 2003 (Russia), *translation available at* http://www.fips.ru/ruptoen2/law/patent_law.htm, at art. 11; Patents (Amendment) Act, 2002, No. 38, Acts of Parliament, 2002 (India), at sect. 92.

¹⁸² Lei No. 9.279, de 14 de Maio de 1996, D.O., 15/05/1996 (93, 1): 8353, 15.05.1996 (Brazil), *translation available at* <http://www.cptech.org/ip/health/cl/brazil1.html>, at art. 68; Patentnyi Zakon Rossiiskoi Federatsii [Patent Law of the Russian Federation] No. 3517-1, Sept. 23, 1992, 42 VSND i VS RF No. 42, item 2139 (1992), amended by Federal Law No. 22-FZ, Feb. 7, 2003 (Russia), *translation available at* http://www.fips.ru/ruptoen2/law/patent_law.htm, at art. 10; Patents (Amendment) Act, 2002, No. 38, Acts of Parliament, 2002 (India), at sect. 92.

¹⁸³ Patent Law (adopted at the 4th Meeting of the Standing Comm. Nat’l People’s Cong., Mar. 12, 1984, amended Sept. 4, 1992, amended again Aug. 25, 2000 (P.R.C.), *translation available at* http://www.sipo.gov.cn/sipo_English/laws/lawsregulations/200203/t20020327_33872.htm, at art. 48; Patentnyi Zakon Rossiiskoi Federatsii [Patent Law of the Russian Federation] No. 3517-1, Sept. 23, 1992, 42 VSND i VS RF No. 42, item 2139 (1992), amended by Federal Law No. 22-FZ, Feb. 7, 2003, (Russia), *translation available at* http://www.fips.ru/ruptoen2/law/patent_law.htm, at art. 10; Patents (Amendment) Act, 2002, No. 38, Acts of Parliament, 2002 (India), at sect. 91.

¹⁸⁴ The Russian license to enable local working can be first imposed four years after the patent grant. Patentnyi Zakon Rossiiskoi Federatsii [Patent Law of the Russian Federation] No. 3517-1, Sept. 23, 1992, 42 VSND i VS RF No. 42, item 2139 (1992), amended by Federal Law No. 22-FZ, Feb. 7, 2003, (Russia), *translation available at* http://www.fips.ru/ruptoen2/law/patent_law.htm, at art. 11.

are accomplished at producing generic medications. It is entirely reasonable that if the rarely-used TRIPS article 31*bis* becomes more widely applied,¹⁸⁵ these BRIC members have a good opportunity to become significant players. Notably, nothing in article 31*bis* suggests that companies located in exporting members should not have the ability to make a profit. As long as the final price of the generic pharmaceutical is sufficiently advantageous in view of additional costs and royalties to patent owners, a significant profit margin may be possible.¹⁸⁶

¶51 Despite the similarities in compulsory licensing provisions, there is a significant divergence in how those flexibilities have been historically utilized in the BRICs. The differences serve as an outline of relative intellectual property development, and may provide a metric for future evaluation. More importantly, it is possible that one path will provide the paradigm for the other BRICs seeking a balance between rights and access.

¶52 By far the most extreme use of compulsory licenses has come from Brazil. In recent years, Brazil has threatened to impose compulsory licenses for AIDS medicines, only to pull back at the last minute after achieving negotiation victory.¹⁸⁷ However, in May of 2007, Brazil finally issued a patent compulsory license after failing to achieve the desired price on the drug, Efavirenz.¹⁸⁸ It is likely that the move was at least partially sparked by the desire to obtain the same price Thailand secured following its successful issuance of several compulsory licenses for AIDS and heart drugs.¹⁸⁹ As noted above, Brazil clearly intends to aggressively push the envelope on property rights flexibilities.¹⁹⁰ However, that posture has generated a lot of controversy.¹⁹¹ As a result, it is possible that Brazil may lose some foreign direct investment opportunities and face other multinational “sanctions” for its behavior.¹⁹² While the costs may currently be outweighed by the benefits of access to IP, it is possible that companies’ desire to punish Brazil will become a more important obstacle in the future.

¹⁸⁵ See Cahoy, *supra* note 172, at 17-21 (noting that recent international agreements have paved the way to increased compulsory licensing).

¹⁸⁶ *Id.* at 15-17.

¹⁸⁷ Yu, *supra* note 137, at 846-47.

¹⁸⁸ Concede licenciamento compulsório, por interesse público, de patentes referentes ao Efavirenz para fins de uso público nãoocomercial. Decreto No. 6.108, de 4 de Maio de 2007, D.O.U. de 07.04.2007 (Brazil)

¹⁸⁹ See Andrew Jack & Richard Lapper, *Brazil Spurns Patent on HIV Drug*, FIN. TIMES, May 5, 2007, at 9 (“Talks broke down earlier in the week between the authorities and Merck, which resisted Brazil’s calls to reduce its price from Dollars 1.57 a patient a day to the 65 cents at which it is sold to Thailand.”).

¹⁹⁰ See *supra* notes 52-73, and accompanying text.

¹⁹¹ Not surprisingly, the outcry against Brazil’s license has come from the pharmaceutical industry and property rights advocates. See, e.g., Richard A. Epstein, *AIDS Drugs: Are Property Rights and Human Rights in Conflict*, FT.COM, May 7, 2007 at 1 (“[D]ecisions like those in Brazil and Thailand cripple incentives to invest in new drugs, particularly for AIDS, for which sick people worldwide will pay the price tomorrow.”). In favor of Brazil’s actions have been several NGOs that promote access to medicines in developing countries. See, e.g., Essential Action, *Brazil Decides to be Held Hostage No More* (May 4, 2007), available at <http://lists.essential.org/pipermail/ip-health/2007-May/011110.html> (“Brazil’s initiative is a crucial step to help the country maintain its effective program to treat people with HIV/AIDS, the viability of which is threatened by high brand-name prices for second-generation drugs.”).

¹⁹² See, e.g., Merck & Co., Press Release, *Statement on Brazilian Government’s Decision to Issue Compulsory License for Stocrin* (May 4, 2007), available at http://www.merck.com/newsroom/press_releases/corporate/2007_0504.html (“This decision by the GOB will have a negative impact on Brazil’s reputation as an industrialized country seeking to attract inward investment, and thus its ability to build world-class research and development.”).

¶53 Although India has not had a history of compulsory licensing in goods covered by patent rights, it has prominently set out to act as the low-cost drugstore to the developing world. The most significant move in this regard is India's enactment of a provision to permit pharmaceutical exports to countries that have enacted article 31*bis* compulsory licenses.¹⁹³ Moreover, when issues have arisen about the global availability of generic versions of essential medicines, Indian companies have publicly stood out as primary providers.¹⁹⁴

¶54 On the other end of the spectrum is Russia. It has been largely absent in the compulsory licensing game to date and pharmaceutical patent rights are not a prominent topic of discussion. There are no reports of such licenses in any field, and Russia has not set itself up as an exporter of licensed, patented goods.¹⁹⁵ One reason for the lack of compulsory license activity may be the relative weakness of intellectual property rules in Russia coupled with the fact that the WTO does not act as a strengthening force (because Russia is not yet a member).¹⁹⁶ It appears that Russia's position may be due to the extreme ground it must cover in developing rights, but one would expect it will face the same issues as the other BRIC countries very soon.

¶55 And then there is China. The country has also made very public gestures to establish itself as an intellectual property proponent rather than a free rider.¹⁹⁷ It has never granted a compulsory license.¹⁹⁸ On the other hand, it clearly intends to be a player in the generic medicines trade. Most prominently, China publicly agreed to refrain from using the provisions of TRIPS article 31*bis* to import pharmaceuticals, the only BRIC to do so.¹⁹⁹ The country appears to be working toward a quiet balance of investment incentives and flexibilities. Because China retains options but no longer openly provokes, it may attract foreign investment while serving its particular interests as a developing nation. This model of intellectual property balance may present the best articulation for the future of the BRICs.

¹⁹³ Patents (Amendment) Act, 2005, No. 15, Acts of Parliament, 2005 (India), at sect. 92A.

¹⁹⁴ See Andrew Jack & Khozem Merchant, *Indian Drugs Groups in Talks to Provide Generic Copies of Tamiflu*, FIN. TIMES, Dec. 12, 2005, at 3 (describing the quick response of Indian drug companies to the possible need for generic copies of Tamiflu in the wake of a bird flu epidemic); David W. Opperbeck, *Patents, Essential Medicines, and the Innovation Game*, 58 VAND. L. REV. 501, 522-25 (2005)

¹⁹⁵ Knowledge Ecology International ("KEI") keeps a fairly accurate list of countries that have enacted legislation to enable article 31*bis* compulsory licenses. See KEI, *Legislation to Allow for the Export of Pharmaceuticals Produced Under Compulsory License*, <http://www.cptech.org/ip/health/cl/cl-export-legislation.html> (last visited Sep. 21, 2007).

¹⁹⁶ WTO, *Accessions: Russian Federation*, http://www.wto.org/english/thewto_e/acc_e/a1_russie_e.htm (last visited Sep. 21, 2007) (describing negotiations on the Russian Federation's accession to the WTO). But see Frances Williams, *Ukraine Ahead of Russia in WTO Entry Bid*, FIN. TIMES, Jul. 27, 2007, at 2 (noting that Russia has a chance of joining the WTO by the end of 2007).

¹⁹⁷ Massey, *supra* note 145, at 236 ("[C]entral government leaders and their policies no longer ignore or promote the infringement of intellectual property."); Yu, *supra* note 108, at 906-922 (detailing the dramatic changes China has made in its intellectual property laws since accession into the WTO).

¹⁹⁸ Eu Jin Chua, *The Laws of the People's Republic of China: An Introduction for International Investors*, 7 CHI. J. INT'L L. 133, 152 (2006).

¹⁹⁹ WTO, *Compulsory Licensing of Pharmaceuticals and TRIPS* (Sep. 2006), available at http://www.wto.org/English/tratop_e/TRIPS_e/public_health_faq_e.htm.

D. Toward a BRIC Model of IP Protection for Developing Countries

¶156 In view of the economic power of the BRICs, the need to develop innovative industries, and the serious health issues faced by the population of each, it seems fairly obvious that neither extreme of the existing intellectual property rights model fits perfectly. The BRICs have good reason for agreeing to strengthen rights to a degree, but also have a great need to limit the intellectual property power envisioned by the Western paradigm. And they pack the power to resist capitulation that is not in their interest. The relative similarities of these key aspects of BRIC industrial development suggest that a hybrid model of intellectual property protection may serve them best.

¶157 What are the key aspects of the BRIC hybrid intellectual property model? In essence, it must include provisions and negotiation tactics that demonstrate an overall respect for intellectual property, while maintaining the ability to act in the social interest of their respective populations. It should generally eschew blatant free riding or protectionism, while publicly declaring the right to subrogate rights in times of crisis. It may end up being closely aligned to China's current strategy. In any case, the essential points can be articulated rather simply: (1) respect for rights and the development of dependable institutions; (2) exploitation of TRIPS flexibilities when public health goals can be impacted; and (3) exploitation of TRIPS flexibilities to cement bargaining power with foreign firms. As important as these broad principles, however, is to ensure that the BRIC transnational intellectual property posture is no longer an ad hoc process, but the result of serious academic and political deliberation to achieve a truly balanced perspective. The deliberation must entail an understanding of what flexibilities are necessary, ensuring they are adequately preserved, and providing strong intellectual property protection in all other circumstances.

¶158 As a first step toward solidifying this model, the BRIC countries must engage in serious investigation to determine what kind of cost-cutting will actually further the goals of public health. If the desire is to increase access, lower prices do not always guarantee more users. For example, when Brazil introduced its generic pharmaceutical regime in 1999, the expectation was that lower-priced generics would necessarily filter down to populations that could not previously afford the medications.²⁰⁰ But data demonstrates that this often did not occur, with prescription rates after the introduction of generics remaining stable.²⁰¹ In reality, the same population simply switched to lower-priced drugs, shifting the income away from branded pharmaceutical companies but leaving access essentially the same.²⁰² Utilizing a TRIPS flexibility to serve a public health goal should include the understanding of whether the population lacking the drug is without access for reasons other than simple economics.

¶159 Second, the BRICs must work to ensure that intellectual property flexibilities remain. Perhaps the greatest threat to the BRIC's desire to maintain control over the intellectual property balance is the use of so-called "TRIPS-plus" trade agreements by

²⁰⁰ *Generic Drugs in Brazil Are a Hard Pill for Big Pharma to Swallow*, KNOWLEDGE@WHARTON, Mar. 10, 2006, <http://knowledge.wharton.upenn.edu/article.cfm?articleid=1338>.

²⁰¹ *Id.* (“[W]e are selling exactly the same volume we sold before generics [came on the market]. What happened was that middle-class buyers bought generic products instead of branded products.”) (quoting Jorge Raimundo, president of Interfarma, a Brazilian association representing global pharmaceutical companies).

²⁰² *Id.*

industrialized countries.²⁰³ In such agreements, a developing nation agrees to give up some of the flexibilities it has under TRIPS in order to gain some other trade advantages.²⁰⁴ While it would be somewhat paternalistic to suggest that the BRIC nations should not have the ability to determine what form of agreement best serves their interests, it is fair to say that TRIPS-plus provisions reduce the ability to address future uncertainties. The full consequences of the agreement may not be available to either party for many years. This is likely one reason that the European Union has recently indicated that it will no longer seek TRIPS-plus provisions in trade agreements.²⁰⁵ It appears that it would be wise for BRIC nations to avoid them as well, and consider whether an alternative arrangement could provide the same advantages. For example, to the extent that TRIPS-plus provisions are inserted under the threat of reduced foreign direct investment, the impact may be blunted or avoided by collective action on the part of developing countries to make use of TRIPS flexibilities.²⁰⁶

III. CONCLUSION

¶60 Although much has been written about the BRICs separately, especially India and China, there is little scholarship examining the BRIC nations as an emerging collective. The influence of the BRICs shall likely be felt on a variety of ways, including political, military, and socio-cultural effects. One arena where controversy and conflict is inevitable is in the defense of administration of intellectual property rights, the topic of this symposium.

¶61 In spite of having diverse histories, the BRIC economies are receiving roughly similar treatment from the wealthiest nations. Either through coercion or negotiation, the BRICs are being pressured to adopt a Western concept of intellectual property protection. That means formal titling of inventive works, enforcement through statutory regimes, and the inevitable demand for even greater protection as the diffusion of technology enables cheaper and more effective methods of pirating products.

¶62 These pressures come at a price. Like many nations in the developing world, citizens of the BRIC economies are badly in need of medicines invented and sold by the very multi-national organizations pressing for strong protection. Whereas restrictions on cell phone technology or Harry Potter books are rarely fatal, controls of any sort on anti-retroviral drugs and other medicines can cost thousands of lives. The debate over

²⁰³ Bryan Mercurio, *TRIPS-Plus Provisions in RTAs: Recent Trends*, in REGIONAL TRADE AGREEMENTS AND THE WTO LEGAL SYSTEM (Lorand Bartels & Federico Ortino eds., 2006); Carsten Fink & Patrick Reichenmiller, *Tightening TRIPS: The Intellectual Property Provisions of Recent US Free Trade Agreements* (2005), available at <http://www.cptech.org/ip/health/trade/worldbank02072005.pdf>.

²⁰⁴ Peter K. Yu, *Currents and Crosscurrents in the International Intellectual Property Regime*, 38 LOY. L.A. L. REV. 323, 392-400 (2004) (discussing the move to bilateral trade agreements as a response to resistance to multilateralism).

²⁰⁵ European Parliament Press Release, *More Measures Needed on Access to Medicines Says EP Resolution* (Jul. 7, 2007), http://www.europarl.europa.eu/news/expert/infopress_page/026-9059-190-07-28-903-20070710IPR09047-09-07-2007-2007-false/default_en.htm (“The resolution calls on the Council to restrict the mandate to the Commission in order not to negotiate pharmaceutical-related TRIPS-plus provisions affecting public health and access to medicines . . .”).

²⁰⁶ See generally, Robert Bird & Daniel R. Cahoy, *The Impact of Compulsory Licensing on Foreign Direct Investment: A Collective Bargaining Approach*, 45 AM. BUS. L.J. (forthcoming, 2008) (on file with authors).

pharmaceutical protections has thus become the touchstone for broader economic and social issues that divide the developing from the developed nations.

¶63 The BRIC nations may not be the poorest countries in the world, but can plausibly act as their proxy in the world stage. Brazilian shaping of global public opinion muted U.S. pressure to more stringently enforce patent rights and no doubt other nations will follow Brazil's lead. China and Russia show how economic and political power respectively can change the negotiating posture of the United States. Skillful procedural wrangling by Indian legislators shows how very long it takes for coercive pressure to actually have an impact on improving national codes. The result is the BRICs have all found their own way in preserving at least some legal sovereignty in the intellectual property arena. These paths, taken together, may provide a model for other middle-developed countries that hope a better balance between intellectual property rights and national economic and social interests.

¶64 It seems almost too obvious to state that Western interests will have to work with and not brush aside the wishes of BRIC nations in shaping a global intellectual property regime. The public demand for and the psychological satisfaction of public coercion will not easily fade, and it is only matter of time before the United States or the European Union becomes embroiled in another adversarial controversy over patents, trademarks, or copyrights. The accuracy of the predictions of Goldman Sachs will be the ultimate measure of whether the BRICs emerge as a robust economic force or remain emerging players by the year 2050.