

# 18. The United States response to emerging technological powers

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## 1 INTRODUCTION

If knowledge were a global public good, the geographic location of innovative activity would not be a matter of national concern. Technology would diffuse without regard to national boundaries. Producers and consumers would take advantage of new ideas regardless of their source. But the success of industry has been closely linked to the innovation-component of goods and services<sup>1</sup> and the success of industry has been correlated with national economic growth, employment and standards of living.<sup>2</sup>

Over the past 10 to 15 years the world economy has been transformed by rapid development in a number of the larger developing countries, such as Brazil, China, India, Indonesia and South Africa. This transformation in some developing countries has brought with it profound changes. Increasing technical capacity in the emerging economy countries has placed pressure on wages in developed countries and hastened their shift from goods-based to service-based economies.<sup>3</sup> Competition for natural resources has become more intense as demand for them has risen. Financial markets have become increasingly interconnected, seemingly heightening risks. It is generally a time of stress in the global economy.

In such an environment, it is not surprising that national governments

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<sup>1</sup> Dating back at least to the “high technology” competition between the United States and Japan of the 1970–80s. See Laura D’Andrea Tyson, *Who’s Bashing Whom: Trade Conflict in High Technology Industries*, Washington, DC, Institute for International Economics, 1992.

<sup>2</sup> See, e.g., “Engines of Growth: Manufacturing Industries in the U.S. Economy”, U.S. Department of Commerce, Economics and Statistics Administration, Office of Business and Industrial Analysis, July 1995.

<sup>3</sup> See Thomas Palley, “Rethinking Trade and Trade Policy: Gomory, Baumol, and Samuelson on Comparative Advantage”, Public Policy Brief, No. 86, Levy Economics Institute of Bard College, 2006, regarding economic trends and political reaction to them.

are inclined to pursue “protective” or defensive technology agendas. Technology is perceived as an “asset”. That asset is protected in two basic ways: (1) by physical and technical defenses, such as plant security guards and anti-cyber-attack software; and (2) by intellectual property legal barriers, such as patents. *The New York Times* has recently published a series of articles describing the threat to US industry from cyber-attacks originating from China,<sup>4</sup> following warnings from policy experts.<sup>5</sup> The US government is debating ever-stronger measures to address cyber-threats from abroad<sup>6</sup> and the Obama Administration has launched a “strategy on mitigating the theft of US trade secrets”.<sup>7</sup> Cyber-security portends to be a growth industry worldwide.

On one level, cyber-security measures and patents are designed to protect against the same threat. Both types of security are intended to prevent unauthorized appropriation of valuable technology. But, the contexts are different. Cyber-security devices and physical protective measures are generally designed to function as a form of trade secret protection, keeping technology out of the hands of a competitor (whether private or military). Patents, on the other hand, exist because their owners wish to exploit technology in an environment where it will not remain secret. The purchaser of the patented product would otherwise be able to reverse engineer the technology, and to make and sell a competing product.

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<sup>4</sup> Nicole Perlroth, David E. Sanger and Michael S. Schmidt, “As Hacking Against U.S. Rises, Experts Try to Pin Down Motive”, *New York Times*, 4 March 2013, <http://www.nytimes.com/2013/03/04/us/us-weighs-risks-and-motives-of-hacking-by-china-or-iran.html> (accessed 12 April 2013); David E. Sanger, David Barboza and Nicole Perlroth, “Chinese Army Unit Is Seen as Tied to Hacking Against U.S.”, *New York Times*, 18 February 2013, <http://www.nytimes.com/2013/02/19/technology/chinas-army-is-seen-as-tied-to-hacking-against-us.html> (accessed 12 April 2013).

<sup>5</sup> See, e.g., Richard A. Clarke and Robert E. Knake, *Cyber War: The Next Threat to National Security and What to Do About It*, New York, NY, HarperCollins Publishers, 2010.

<sup>6</sup> See, e.g., David E. Sanger and Thom Shanker, “Broad Powers Seen for Obama in Cyberstrikes”, *New York Times*, 3 February 2013, <http://www.nytimes.com/2013/02/04/us/broad-powers-seen-for-obama-in-cyberstrikes.html?pagewanted=all> (accessed 12 April 2013).

<sup>7</sup> See Executive Office of the President, “Administration Strategy Mitigating the Theft of U.S. Trade Secrets”, The White House, Washington, DC, Defense Security Service, February 2013, [http://www.whitehouse.gov/sites/default/files/omb/IPEC/admin\\_strategy\\_on\\_mitigating\\_the\\_theft\\_of\\_u.s.\\_trade\\_secrets.pdf](http://www.whitehouse.gov/sites/default/files/omb/IPEC/admin_strategy_on_mitigating_the_theft_of_u.s._trade_secrets.pdf) (accessed 12 April 2013). In 2006 the United States ratified the Council of Europe Convention on Cybercrime, becoming a member 1 January 2007. See Declan McCullagh and Anne Broache, “Senate Ratifies Controversial Cybercrime Treaty”, *CNET News*, 4 August 2006.

## 2 LEGAL BACKGROUND

### 2.1 US Section 337

The United States has long been attentive to technological competition from foreign nations. It has maintained legislation intended to prevent the importation of goods that would infringe upon patents in force in the United States.<sup>8</sup> Section 337 of the Tariff Act of 1930 began to be used significantly for IP claims against allegedly infringing imports in the late 1980s and was the subject of a GATT (General Agreement on Trade and Tariffs) dispute initiated by the EU, decided in 1989.<sup>9</sup> The GATT Panel found that, despite its seemingly neutral appearance, the version of Section 337 in force in 1989 was designed to discriminate against imported products by facilitating patent infringement claims against them (as compared with comparable claims involving products within the US domestic stream of commerce).

Section 337 continues to be actively used by holders of US patents in various industry sectors as a means to prevent entry of infringing goods into US commerce. Apple has invoked Section 337 against Samsung.<sup>10</sup> Pfizer has used Section 337 to obtain a global blocking order against imports of sildenafil citrate (Viagra).<sup>11</sup> In a Section 337 proceeding initiated by Fuji Photo, the Court of Appeals for the Federal Circuit ruled that parallel importation of patented products into the United States was unlawful.<sup>12</sup>

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<sup>8</sup> See Frederick Abbott, Thomas Cottier, and Francis Gurry, *International Intellectual Property in an Integrated World Economy*, 2nd edn., New York, NY, Aspen Publishers, 2011, pp. 774–84.

<sup>9</sup> United States – Section 337 of the Tariff Act of 1930, Report by the Panel adopted on 7 November 1989 (L/6439–36S/345).

<sup>10</sup> See United States International Trade Commission, In the Matter of Certain Electronic Digital Media Devices and Components Thereof, Inv. No. 337-TA-796, 2 August 2011 (Complainant Apple Inc.; Respondent Samsung Electronics Co., Ltd., et al.).

<sup>11</sup> United States International Trade Commission, In the Matter of Certain Sildenafil or Any Pharmaceutically Acceptable Salt Thereof, Such as Sildenafil Citrate, and Products Containing Same, Inv. No. 337-TA-489, General Exclusion Order.

<sup>12</sup> *Jazz Photo v. ITC*, 264 F.3d 1094 (Fed. Cir. 2001). It is worth noting that this decision adopting national exhaustion for patents is *not* by the Supreme Court, and that the Supreme Court has adopted international exhaustion with respect to other IP rights. The United States follows a policy of international exhaustion with respect to copyright (see *Kirtsaeng v. John Wiley & Sons, Inc.*, US Supreme Court, Slip Opinion, No. 11–697, decided 19 March 2013), and a policy of international exhaustion for trademark (under a common control doctrine) (see *K Mart Corp. v. Cartier, Inc.*, 486 U.S. 281 (1988)).

## 2.2 The TRIPS Agreement

Section 337 addresses only importation. The United States made its first serious foray toward addressing appropriation of US technology outside its borders by placing negotiations on trade-related intellectual property rights in the GATT Uruguay Round mandate in 1986.<sup>13</sup> Shortly thereafter, Congress enacted Special 301 as part of 1988 amendments to the Trade Act of 1974, establishing a mechanism under which foreign countries might be placed on a special priority IP violators list, subjecting them to accelerated Section 301 trade remedy proceedings.<sup>14</sup> Following seven years of negotiation at the GATT, the WTO TRIPS Agreement emerged. The TRIPS Agreement established baseline substantive and enforcement standards for IP, as well as providing for dispute settlement with potential trade sanctions.<sup>15</sup>

During the Uruguay Round, the concern of the United States was basically with “outright copying” of US-developed technology by foreign enterprises. China was barely a blip on the economic radar screen. The Asian Tigers, including Taiwan, were becoming very adept at replicating US technology, but in the 1980s and early 1990s, these countries were not generating new technology on their own (though expatriates from these countries were helping to fuel the innovation boom in Silicon Valley).

## 3 THE EVOLVING INTERNATIONAL SCENE

### 3.1 The New Form of Competition

Today the character of the competitive innovation threat confronting the United States is shifting. China, India and Brazil are not yet generating

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<sup>13</sup> This observation applies to civilian technologies. After World War II the United States led an effort among “Western” powers to prevent their military technologies from being acquired by Cold War adversaries. This included the creation of the Coordinating Committee for Multilateral Export Controls or “CoCom”. See, e.g., “CoCom”, Wikipedia, <http://en.wikipedia.org/wiki/COCOM> (accessed 12 April 2013).

<sup>14</sup> Regarding enactment of Special 301 and its relation to the Uruguay Round TRIPS negotiations, see Frederick M. Abbott, “Protecting First World Assets in the Third World: Intellectual Property Negotiations in the GATT Multilateral Framework”, *Vanderbilt Journal of Transnational Law*, vol. 22, no. 4, 1989, p. 689.

<sup>15</sup> As discussed later in this chapter, the United States incorporated an IP chapter in the North American Free Trade Agreement (NAFTA) (which entered into force on 1 January 1994) that largely reflected TRIPS Agreement rules.

innovative technologies at the same level as the United States, Germany and Japan, but it seems evident that the capacity-differential is narrowing.<sup>16</sup> In fact, given the ubiquity of the Internet and the development of educational systems in China, India and Brazil, it seems doubtful that elements of the US economy and political system that give it advantages in innovation capacity will persist. No one suggests that American inventors are inherently more intelligent or more capable than Chinese, Indian and Brazilian inventors. For the latter countries, it is a matter of addressing certain infrastructure factors.

American financial markets have been very successful at aggregating capital so that it can be invested in research and development. Private sector companies are supported for investing in innovation, a phenomenon that has been less common in developing countries. This, coupled with a relatively robust IP enforcement system, has supported the US innovation market. Moreover, up until now the university-level education system in the United States is better funded and enjoys qualitative advantages over university systems in China, India and Brazil.

But the alternative Chinese model of government aggregation of capital (and increasingly private market capital aggregation) seems to neutralize to a certain extent the historical investment-related advantages held by the United States. Chinese technological advancement does not appear to have been held back by its relatively weak patent enforcement system, and that system appears to become more robust as local enterprises participate in it. China is investing heavily in education, with a focus on the sciences. India has developed a university system devoted entirely to the pharmaceutical sector (the NIPERs system), experimenting with the concept of educational subject matter targeting.<sup>17</sup> Other emerging markets will no doubt invest in and improve their educational infrastructure as the importance of education to innovation becomes evident, including by reference to countries such as China. Such developments take time, but it seems reasonable to assume that something closer to parity will exist in education by 2020, at least with respect to China.

While the pace of the technology-capacity shift from the “industrialized West” to the emerging market countries can be debated, and it may not be clear which countries will lead among the emerging markets, the general fact of a shift does not appear open to debate. There is evidence

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<sup>16</sup> As Wei Zhuang notes, in Chapter 9 in this volume, the rate of patenting by Chinese nationals has increased substantially, but there is some question at this early stage about the quality of those patents.

<sup>17</sup> See, e.g., information at National Institute of Pharmaceutical Education and Research, Punjab, India, <http://www.niper.gov.in/> (accessed 12 April 2013).

in international patent databases to confirm China's entry among the technological powers.<sup>18</sup> Even if China represents a "new Japan", and not a general trend among emerging economies, given the economic weight of China, the global innovation and technology balance is shifting.

### **3.2 Rethinking International Economics**

Adam Smith, David Ricardo, et al., suggest to us that the growing technological strength of the emerging market countries benefits global economic welfare, as well as the economic welfare of the United States. Looked at solely from the standpoint of the United States, consumers have the benefit of new technology-based products from overseas. If those products arrive less expensively than comparable products developed and produced in the US, enterprises within the US should be shifting to other areas of R&D and production where they may have a comparative advantage. But, there does seem to be some question whether liberal trade theory works in the new technological environment, primarily because of a lack of substitute employment opportunities at comparable wages for displaced workers.<sup>19</sup> Smith and Ricardo may have overestimated the extent to which national economies can move workers into new jobs that pay comparable wages when there is a global oversupply of labor.<sup>20</sup> The ubiquity of information accessible through the Internet and its sub-networks, combined with the possibility of communicating globally at very low cost, is making it increasingly difficult for any particular country, including the United States, to assert an overwhelming human-capacity advantage in a specialized subject matter area. Specialized professional intellect is becoming less geography-specific.

As globalization seemed poised to "hollow out" the US economy, creating an embedded large gap between highly paid professional service providers and blue-collar hourly wage earners, the government has begun to pay more attention to improving the domestic manufacturing base and to "bringing jobs home". The financial crisis of 2007–09 forced labor unions to accept wage accommodations, while discovery of new ways to recover energy resources has improved the overall manufacturing climate. In this

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<sup>18</sup> See Carsten Fink, Chapter 2 in this volume.

<sup>19</sup> See Palley, "Rethinking Trade and Trade Policy", referring to Paul Samuelson and others.

<sup>20</sup> Of course, it is rather difficult to know precisely why the US economy is not doing as well as it might in light of the economic downturn precipitated by the implosion of the housing market as a consequence of imprudent lending, leveraging and borrowing practices.

regard, the United States may be reaching a new equilibrium point where it is more competitive with the emerging markets, as wages and prices in the emerging markets provide less of an advantage, and as US manufacturers increase reliance on automated production processes. Nevertheless, concerns persist about long-term US competitiveness, and these concerns are reflected in the dialogue concerning intellectual property and innovation.

## 4 US RESPONSES TO GLOBAL COMPETITION

### 4.1 Digital and Other Integration of the US IP Framework

At least a part of the US reaction to the increasingly global character of the technology environment is to bring US law into closer alignment with the rest of the world. In 2011, Congress enacted the America Invents Act (AIA) that, among other things, moves the United States from a “first to invent” to a “first of file” inventor priority system, generally aligning it with other countries.<sup>21</sup> The AIA also removes vestiges of discrimination against foreign inventors relating to the form of publication or disclosure that may be used to anticipate prior art. The AIA introduces a significantly more robust post-grant opposition procedure that should be similar to that prevailing in Europe. All of these changes signal a policy interest in the United States of integrating its patent system with that of other countries, perhaps as a prerequisite to a push toward a “global patent”.

The theory behind integrating the US patent system with practices in the rest of the world is that this will facilitate the efforts of US-based multinational companies to secure protection in other jurisdictions. Even for the largest multinational companies, the present global patent system is cumbersome and expensive. While as well-funded actors the multinationals may be better placed to take advantage of this inefficient system, it would appear that interests in securing wider geographic coverage have been determined to trump benefits from restricting the number of participants.

The United States has also been a leader in digitizing and facilitating applications for patents (and other registration-based IP rights).<sup>22</sup> This

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<sup>21</sup> Information concerning the America Invents Act and its implementation can be found at “AIA Resources”, The United States Patent and Trademark Office, Alexandria, VA, [http://www.uspto.gov/aia\\_implementation/resources.jsp](http://www.uspto.gov/aia_implementation/resources.jsp) (accessed 12 April 2013).

<sup>22</sup> Patent tools are available at the US PTO website, at <http://www.uspto.gov/patents/index.jsp>, as are highly automated trademark application tools and databases, at <http://www.uspto.gov/trademarks/index.jsp>.

works to the benefit of smaller enterprises in the United States that are better able to cope with the complexities of the application process (even if still requiring the services of lawyers or patent agents).<sup>23</sup>

On the whole, US policymakers are encouraging US businesses and individuals to secure rights in innovation, branding, etc., across a wider geographic scope. This encouragement also extends to foreign-based businesses that benefit from facilitated application and registration processes. But, this is only one side of the coin.

#### 4.2 Addressing “Unfair Competition”

There is a strong political current in the United States toward protection against what is portrayed as “unfair competition” from abroad, particularly from China. This is an extraordinarily complicated problem given that US enterprises have invested heavily in China, such that a significant part of the competition from China is in fact coming from US-based enterprises. This is one of the peculiar anomalies of the US economic relationship with China. US multinational business has poured investment into China knowing full well the gaps in its IP protection system, and with the Chinese government’s interest in building up its national technological infrastructure self-evident.<sup>24</sup> To the extent that US business complains about the lack of sufficient IP protection in China, this has very largely been a self-inflicted cause for concern. For better or worse, there was no national government policy in the United States restraining US-based businesses from transferring their valuable technologies to China. Rather, the government pretended that sending trade diplomats to confer with Chinese authorities and accepting bilateral promises would somehow override domestic Chinese policy interests.<sup>25</sup> Why anyone might have thought this would transform Chinese domestic policy is baffling.

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<sup>23</sup> But see Peter Drahos, *The Global Governance of Knowledge: Patent Offices and Their Clients*, Cambridge, UK, Cambridge University Press, 2010, noting that patents are issued predominantly to a relatively small group of large multinational corporations.

<sup>24</sup> See, e.g., Frederick M. Abbott, “The Enduring Enigma of TRIPS: A Challenge for the World Economic System”, *Journal of International Economic Law*, vol. 1, 1998, p. 508.

<sup>25</sup> US attempts to secure improved protection for its technology-based enterprises in China began shortly after China’s opening to the West in the late 1980s with the conclusion of two bilateral IP agreements. See Abbott, Cottier, and Gurry, *International Intellectual Property in an Integrated World Economy*, pp. 730–44, and documents in Frederick Abbott, Thomas Cottier, and Francis Gurry, *The International Intellectual Property System: Commentary and Materials*,

Recently, concerns in the United States about losing technology to China have shifted toward Chinese cyber-incursions exploiting weaknesses in Internet security. This is a much different kind of threat than failure by the Chinese government to provide adequate IP protection in its own territory. This is a more aggressive form of exploitative behavior, and does not arise out of a deliberate decision by multinational enterprises to take advantage of China's market. It is entirely possible that the only real solution to cyber-incursion is an increase in US network security that may ultimately end up changing the character of the Internet itself. It may well be that Internet 1.0 is simply too open for its own good, and must give way to a more controlled Internet 2.0. It may be that there will be multiple internets. There is perhaps good reason to be skeptical about whether the problem of cyber-incursions can be addressed by legal rules any better than downloading of MP3 files (or the earliest security problems involving copying of software on floppy disks).

Patent law, however, addresses downstream behaviors in the sense that infringement actions are directed toward products (or services) that enter (or attempt to enter) the stream of commerce. In this regard, patents may represent at least a partial response to cyber-security threats because they may prevent resulting market competition from taking place. Whether patents can successfully perform this market-control response function is not entirely clear. But, whether they can or not, problems of cyber-security and problems of patent law enforcement are rather distinct. It is unlikely that the United States can deter cyber-crime by increasing patent law enforcement.

### 4.3 Bilateral Forums

The United States is finding it difficult to take China on within its own territory. But, it can perhaps better take on China, India and other emerging market countries by tilting the playing field further in favor of US-based multinational companies by establishing IP and other regulatory standards in third-country markets where they will compete with Chinese, Indian and other economic actors.

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*Part Two*, The Hague, Kluwer Law International, 1999. The US secured significant IP-related concessions from China in its WTO accession protocol including, for example, agreement on providing marketing exclusivity for pharmaceutical products based on submission of regulatory data. The US finally brought WTO dispute settlement claims against China in 2007 for alleged IP-related enforcement failures (though none involving patents), but failed to assemble the kind of evidence that might have offered a chance for success. Abbott, Cottier, and Gurry, *International Intellectual Property in an Integrated World Economy*, pp. 731–44.

The United States concluded fairly shortly following the Uruguay Round negotiations that the WTO would not be the preferred arena for further negotiations regarding intellectual property, and shifted toward bilateral and regional negotiations.<sup>26</sup> So far, outside of Australia and South Korea, which are larger advanced economies,<sup>27</sup> US successes in this area have largely involved smaller developing countries that are unlikely to be exporters of high technology products that would compete with US products in the marketplace. Notably, Brazil, India and other major emerging market countries have been unwilling to enter into bilateral negotiations with the USA that are aimed at ratcheting up IP standards. India's negotiations with the EU for a bilateral Economic Partnership Agreement are well advanced. India has committed not to include TRIPS-plus IP standards, at least in the area of pharmaceuticals, though recent pronouncements call into question whether this commitment will be fulfilled.

The present book concerns patents, and this section will focus on the patent elements involved in US bilateral and regional agreements. In its template trade agreement, the United States seeks to fill a number of gaps left open in the TRIPS Agreement.<sup>28</sup> This includes requiring that animals not be excluded from patentability, that patents be allowed for new uses of known substances (including second medical indication patents), that patent term extension be authorized in cases of unreasonable delay by patent offices and that regulatory review exceptions be drafted narrowly. The template incorporates definitions for utility and sufficiency of disclosure.

Related to patents, at least regarding pharmaceuticals and agricultural chemical products, there are provisions operating to prevent the grant of marketing authorization during pendency of the patent, providing notice to the patent owner and the opportunity to intervene in the marketing approval process, including by obtaining an injunction. In addition, the

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<sup>26</sup> For an account of forum shifting, see John Braithwaite and Peter Drahos, *Global Business Regulation*, Cambridge, UK, Cambridge University Press, 2000, ch. 24.

<sup>27</sup> South Korea presently enjoys GDP per capita rivaling those of the Western industrialized economies, and should be considered to have “emerged”. South Korea, which was long chastised by the United States for failing to adequately protect US intellectual property, might provide an interesting case study for whether high IP standards are a good path to developmental success.

<sup>28</sup> See generally, Frederick M. Abbott, “Intellectual Property Provisions of Bilateral and Regional Trade Agreements in Light of U.S. Federal Law”, UNCTAD-ICTSD Project on IPRs and Sustainable Development, Issue Paper No. 12, February 2006.

agreement template establishes a period (including extensions) of marketing exclusivity for pharmaceutical products during which the counterpart country agrees not to grant approval based on submission of regulatory data within any country party to the agreement.

The bilateral and regional agreements also allow for initiation of private investment disputes against host governments in alternative dispute resolution forums (such as ICSID). The agreements typically provide that the grant of compulsory patent licenses will not be considered illegal takings of property, provided that the rules of the TRIPS Agreement are followed. With recent filings by pharmaceutical companies against host governments whose courts have rendered decisions adverse to patent holder interests, such as a case recently initiated by Eli Lilly against the government of Canada,<sup>29</sup> the risks to governments and the public of incorporating such provisions in bilateral and regional agreements are becoming more apparent.

#### 4.4 The EU-USA Bilateral

One of the more interesting recent developments that may qualify as a response by the United States and the EU toward heightened technological competition from emerging market countries is initiation of negotiations on a bilateral FTA between the EU and USA. The ostensible purpose of this bilateral is to address regulatory hurdles to the free movement of goods, including agricultural products, between these two geographical areas.<sup>30</sup> Although the United States will be negotiating on behalf of itself,

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<sup>29</sup> See “Eli Lilly and Company v. Government of Canada”, Foreign Affairs and International Trade Canada, Ottawa, ON, <http://www.international.gc.ca/trade-agreements-accords-commerciaux/topics-domaines/disp-diff/eli.aspx?lang=eng&view=d> (accessed 12 April 2013): “On November 7, 2012, Eli Lilly and Company, a US-based corporation, served the Government of Canada with a Notice of Intent to Submit a Claim to Arbitration under NAFTA Chapter 11. Eli Lilly and Company is alleging that the invalidation of its Strattera pharmaceutical patent by Canada is inconsistent with Canada’s commitments under NAFTA.” Also, Notice of Intent to Submit a Claim to Arbitration Under NAFTA Chapter Eleven, Eli Lilly and Company, Disputing Investor, and The Government of Canada, Disputing Party, 7 November 2012.

<sup>30</sup> See White House, Office of the Press Secretary, “U.S., EU Announce Decision to Launch Negotiations on a Transatlantic Trade and Investment Partnership: Statement from United States President Barack Obama, European Council President Herman Van Rompuy and European Commission President José Manuel Barroso”, Office of the United States Trade Representative, 13 February 2013, <http://www.ustr.gov/about-us/press-office/press-releases/2013/february/statement-US-EU-Presidents> (accessed 12 April 2013).

it is certainly foreseeable that Canada and Mexico as NAFTA countries will seek to be associated with the negotiations in some way.

Establishing new harmonized regulatory measures raises the prospect of establishing barriers or hurdles to market penetration by emerging market-based enterprises. South Africa's Ambassador to the WTO, Faisel Ismael, already has warned of the threat that these negotiations present to the multilateral trading system.<sup>31</sup>

Although there has been some discussion about establishing new "gold standards" of intellectual property protection in an EU-USA FTA,<sup>32</sup> there has been limited concrete discussion about what such gold standards might entail. Further to Article 4 of the TRIPS Agreement, whatever IP "benefits" or "concessions" are conferred on the parties to the agreement, these must be extended on an MFN (most favored nation) basis.

Because of legislative involvement in the drafting of domestic IP rules in both the US and EU, it seems doubtful that an FTA would be the basis for a material change in national IP laws. Still, the creation of a bilateral "super-bloc" between the US and EU that establishes new sets of regulatory compliance standards could act to inhibit growth in and competition from the emerging market countries.

There is a risk, of course, that the US and EU could overplay their hands and encourage emerging market countries to establish their own exclusionary frameworks.

#### **4.5 Plurilateral Forums**

The United States has also pursued plurilateral agreements in the form of the Anti-Counterfeiting Trade Agreement (ACTA) and the Trans-Pacific Partnership agreement (TPP). It appears that through these agreements the United States is attempting to build a "ring fence" around China and other emerging market countries in terms of high standards of IP protection.

This chapter does not explore the ACTA in-depth. The ACTA negotiations started out as a "high protection" vehicle for OECD businesses, but was diluted as the result of pushback from NGOs, developing countries and academics.<sup>33</sup> One area where ACTA negotiators were forced to retreat

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<sup>31</sup> Daniel Pruzin, "South African Envoy Says Proposed U.S.-EU Trade Deal Threatens WTO System", *Bloomberg BNA WTO Reporter*, 25 February 2013.

<sup>32</sup> See, e.g., Stephen Ezell, "Estimating the Potential Benefits of an EU-US Free Trade Agreement", The Information Technology and Innovation Foundation, Washington, DC, 14 March 2013, <http://www2.itif.org/2013-estimating-potential-benefits-eu-us-fta.pdf> (accessed 12 April 2013).

<sup>33</sup> A lesson to producers of "hard goods" such as pharmaceuticals and elec-

was in the field of patents when it became evident that the proposed rules would be inconsistent with US patent law and doctrine, including in the area of remedies. Because the US Congress had just completed significant revisions to the Patent Act through the America Invents Act, there was little chance that Congress would approve a plurilateral agreement that would approach patent law from a different perspective.

The TPP negotiations include proposals on intellectual property. The United States has proposed substantially enhanced protection for pharmaceutical originators. Under the US proposal, the TPP would incorporate patent/marketing approval linkage requirements, define a broad scope of patentable subject matter, specifically preclude adoption of a patentability requirement for new uses based on enhanced efficacy (repudiating India's Section 3(d)), as well as allowing pharmaceutical originators access to government decision-making regarding insurance reimbursement and pricing. The TPP would also include an investment chapter authorizing private to state third-party dispute settlement.

The US proposals for the TPP on patents, and particularly in the area pharmaceuticals, have received considerable pushback from other negotiating countries. Recent investor dispute actions based on alleged takings of intellectual property (e.g., the Phillip Morris claims against Australia's tobacco plain packaging, and the Eli Lilly claim against a patent invalidation by Canada's courts)<sup>34</sup> may have finally alerted governments to the risk of allowing such types of claims.

With respect to the intellectual property chapter of the TPP, the US is following its typical negotiating strategy which is – following initial pushback from other governments – to take the subject matter off the table until close to the end of the negotiations. If form holds, it will resubmit proposals very near to the end as a more or less “take it or leave it” proposition, forcing other negotiating parties to decide whether they are willing to abandon the entire deal over the IP issues. While this strategy has

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tronic equipment from the ACTA negotiations may be to avoid including the entertainment industries within the same set of negotiations. Although one would like to think that the ACTA resistance was founded on concern for access to medicines and other socially important products, the major pushback and effective resistance seemed to come from European pirate parties and others interested in free access to digital entertainment.

<sup>34</sup> Regarding the Eli Lilly claim, *see* “Eli Lilly and Company v. Government of Canada”. Documents regarding Australia's Tobacco Plain Packaging legislation can be found at “Investor-State Arbitration – Tobacco Plain Packaging”, Australian Government Attorney-General's Department, Barton, ACT, <http://www.ag.gov.au/Internationalrelations/InternationalLaw/Pages/Tobaccoplainpackaging.aspx> (accessed 12 April 2013).

worked with smaller economy countries like Costa Rica and Colombia, it is not clear that it will work with Australia and Canada, but time will tell.

The curious thing about the US bilateral and plurilateral strategy is that it may no longer be an effective way to address the fundamental issue of innovation competition coming from countries such as China, India and Brazil. The latter countries may today begin to find it in their own interest to enter markets with stronger IP protection for their own goods and services, and not be so concerned with confronting higher standards. Particularly for China, the costs of litigation may no longer pose a significant hindrance to engaging in battles on the patent and IP fronts.

## 5 MEANINGFULLY ADDRESSING COMPETITION IN INNOVATION FROM EMERGING MARKETS

Over the coming decade it seems doubtful that the main preoccupation of IP policymakers in the United States will be over technology leakage to Chinese, Indian or Brazilian enterprises. Rather the concern will likely be how US companies can maintain competitive advantage in the technology arena. Outside the pharmaceutical sector where patents continue to play a meaningful role in allowing long-term recovery of R&D expenses as against relatively straightforward reverse engineering, recent studies have suggested that most competitive advantage comes from entering the market first with innovative products and successfully marketing them.<sup>35</sup> In a global environment in which access to basic technical skills is more widely shared, it may be that business management skills become as important as the ability to create new products.

Predictably, there will be two tracks of effort to maintain US competitive advantage in high technology products. The first will be “offensive” in terms of investing in innovation. Here the possibilities have been fairly well defined: (1) reliance on patent protection as a general incentive for investment in innovation; (2) government-targeted subsidization of R&D directed toward defined goals, including government commissioning of large-scale scientific infrastructure projects; (3) creative use of prize mechanisms; (4) providing fiscal and tax incentives toward establishment of R&D facilities, and; (5) subsidizing and encouraging scientific education and training.

The United States is already discovering that the patent system must be

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<sup>35</sup> Stuart J.H. Graham et al., “High Technology Entrepreneurs and the Patent System: Results of the 2008 Berkeley Patent Survey”, *Berkeley Technology Law Journal*, vol. 24, no. 4, 2009, pp. 255–327.

used judiciously as a stimulant for innovation because excessive patenting is liable to create roadblocks, particularly in fields such as computer software, standards and consumer electronic goods.<sup>36</sup> In this regard, one of the major challenges to the United States in meeting competition from emerging market innovators is to find the appropriate balance that rewards truly substantial advances in technology, but does not stifle more ordinary technical progress. Even then, given the acceleration in technology cycles, it might be that additional balancing is required, such as by decreasing the term of patents so as to reduce the roadblocks following innovation (or to adopt a system in which a period of exclusivity is followed by a mandatory licensing system).

In the current political environment in the United States there is a bias against government subsidization of new programs, including those that promise to advance science and industry, except insofar as the science relates to military application. Even the US space exploration program is moving toward a privatization model. Nonetheless, the success of the Airbus program in Europe and high-speed rail in China may give rise to some rethinking as to whether governments can successfully nurture technical progress.

As noted, there are other elements that would go into a program to advance US innovation as an “offensive” strategy. And, assuring that patent protection is available to US companies in foreign markets where competitors might emerge may be considered part of that strategy. In an environment where lead time to market is the key to commercial success, there remains a commercial advantage in increasing the time it takes for competitors to enter the market.

But, can and should patents be used as a means to deter Chinese, Indian, Brazilian and other emerging market enterprises from increasingly penetrating the lucrative US consumer market, or other foreign markets? In the late 1980s, US companies turned to Section 337 of the Trade Act of 1930 in efforts to forestall Japanese high-tech entry into the US market. Those efforts may have borne some fruit at the margins, but did little to affect the overall balance of trade. What they mainly did was to instruct Japanese companies regarding how to “game” the US economic system, resulting in quite sophisticated IP strategies followed by Japanese companies.

Today, at least in theory, US-based enterprises can limit import penetration of high technology products based on patents because

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<sup>36</sup> United States Department of Justice and Federal Trade Commission, “Antitrust Enforcement and Intellectual Property Rights: Promoting Innovation and Competition”, April 2007.

US-based enterprises (and European and Japanese enterprises) are the preponderant owners of US patents.

Chinese enterprises have increased their patent filings in the United States, but not yet in very large numbers. However, it seems likely this will change as a reflection of the rapid increase in patenting within China, and use of the Patent Cooperation Treaty system. This raises the possibility that during the course of the next decade Chinese enterprises will begin to pursue infringement claims against companies based in the United States and against imports from rivals from other countries (and their own). How will the United States react? Will China be just another Japan doing business in the United States? Or, will Chinese enterprises be portrayed by policymakers as a threat to US economic and/or national security interests?

Part of the answer will depend on the extent to which China successfully transitions away from government ownership and/or control of industry. If US policymakers perceive Chinese inroads into the US market as part of a government program, the reaction is more likely to be hostile. If Chinese enterprises are legitimately private sector, this would seem to present less of a target for hostility because it would not be perceived as bolstering a foreign government with potential to affect national security interests. Finally, the role of the lawyers must be considered. Presumably Chinese users of the US patent system will be paying the fees of US lawyers and patent agents, and the legal community is fairly adept at protecting its sources of income.