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INTELLECTUAL PROPERTY FAVORITISM: WHO WINS IN THE GLOBALIZED ECONOMY, THE PATENT OR THE TRADE SECRET?

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ABSTRACT

In constructing a socially beneficial innovative policy a nation need consider a seemingly infinite number of variables. Striking a mutually beneficial bargain between an innovator and society for each intellectual property right is only the beginning of this calculus. At a broader level, the scope and attributes of each right must be carefully balanced and meticulously synergized. Where two rights cannot be used concurrently, the more socially beneficial right should be made incentivized. By taking this proactive approach, a nation can harness the choice of the innovator to ensure certain social objectives are achieved. Today, the choice between two competing alternatives for protecting certain forms of proprietary information is found most often among the patent and trade secret.

In the United States, the public disclosure requirement for patents has enjoyed a constitutionally inspired favoritism when compared to the secrecy inherent to the trade secret. As a sovereign creation, however, the monopolistic rights provided by the patent are restricted through strict territorial boundaries. In the emergence of the globalized economy, such limitations pose a substantial obstacle for firms seeking to protect certain forms of innovation and proprietary information. As an alternative, the trade secret has grown increasingly attractive. With protection premised on commercial dealings rather than monopolistic rights, the presumption against

extraterritorial application does not prevent extending trade secret protection to misappropriation occurring, in-part, abroad.

As recent judicial and legislative developments enhance the extraterritorial protection offered by the trade secret and re-affirm the strict territoriality of the patent, firms continue to transition from the former to the latter at increasing rates. If the United States seeks to preserve the longstanding favoritism enjoyed by the patent it should not merely be agnostic in this choice. Through yielding the strict territorial limitations of the patent right to further cover conduct that occurs, in-part, abroad, the patent can be made more attractive and regain its historic position. Alternatively, should the well-justified principles of territoriality remain, it may be time to accept the trade secret as the tool most appropriately suited to protect certain innovations in the international marketplace.

I. INTRODUCTION

On October 11, 2011, the Federal Circuit affirmed the International Trade Commission's authority to grant relief for domestic injury based, in part, on trade secret misappropriation in China.[1] In a cautioning dissent, Circuit Judge Moore forewarned that "broadening the scope of trade secret misappropriation to the extraterritorial actions . . . gives additional incentive to inventors to keep their innovation secret . . . [and] denies society the benefits of disclosure stemming from the patent system."[2] These concerns raise the question of whether the preferential benefit provided through patent laws—encouraging innovation and advancement through wide dissemination of technological innovation[3]—has been placed in jeopardy. More importantly, however, is whether such a transition is a necessary element of commercial evolution in a globalized economy.

This paper considers the careful balance that rests between the patent and the trade secret. Part II considers the underlying rationale that has prevented patent protection from extending abroad along with an explanation of certain exceptions within the statutory framework. Part III sets forth the basics of trade secret law. Highlighted in this section is the lack of harmful effects justifying territoriality in the patent system that are not part of trade secret law. After this, certain federal extraterritorial actions in the trade system regiment are

[1] TianRui Grp. Co. Ltd. v. Int'l Trade Comm'n, 661 F.3d 1322, 1323–24 (Fed. Cir. 2011).

[2] *Id.* at 1343 (Moore, J., dissenting).

[3] *See* Roberto Mazzoleni & Richard R. Nelson, *Economic Theories about the Benefits and Costs of Patents*, 32 J. OF ECON. ISSUES 1031, 1038 (1998).

discussed. In Part IV, the balance of the trade secret and patent is discussed, followed by a discussion of their competing nature and the historic favoritism towards the patent. After this brief discussion, this paper will highlight the imbalance that has recently occurred in the system and how the trade secret may be more appropriate to protect extraterritorially. Finally, in Part V, the balance is reconsidered by highlighting the need to either strengthen the patent to reach domestic conduct, or embrace the trade secret.

II. PATENT POLICY AND THE PRESUMPTION AGAINST EXTRATERRITORIAL APPLICATION

Throughout history, the patent has proved a powerful force in incentivizing innovation.[4] Akin to a bargain struck between an inventor and society, the patent promises an inventor exclusive property rights for a time in return for the disclosure of a new and useful invention or discovery, instructions for its use, and eventual donation to the public domain.[5] Containing the characteristics of an agreement, the patent bargain binds only the contracting parties, while protecting non-participants.[6]

These principles are the foundational justification that naturally gives rise to the concept of territoriality that resounds in patent law.[7] Although these boundaries are well-justified, the often fragmented and diverse systems they create stand as diverse obstacles facing the modern commercial enterprise in an otherwise openly globalized and interconnected marketplace.[8] This section outlines the underlying

[4] *See generally* Frank D. Prager, *The Early Growth and Influence of Intellectual Property*, 34 J. PAT. OFF. SOC'Y 106, 111 (1952) (originating with prizes granted for production of silk in ancient China and rugs in Persia); Frank D. Prager, *Brunelleschi's Patent*, 28 J. PAT. OFF. SOC'Y 109–110 (1946) (noting that Filippo Brunelleschi was granted an exclusive right by Florence in 1421). In 1474 Venice enacted a statute that explicitly granted exclusive rights to the inventor of a machine or process, DONALD S. CHISUM ET AL., PRINCIPLES OF PATENT LAW 11 (2004) ("WE HAVE among us men of great genius, apt to invent and discover ingenious devices; and in view of the grandeur and virtue of our city, more such men come to us every day from diverse parts.").

[5] *See* ROBERT P. MERGES, PETER S. MENELL & MARK A. LEMLEY, INTELLECTUAL PROPERTY IN THE NEW TECHNOLOGICAL AGE 21–22, 24 (3d ed. 2003).

[6] *See* E.E.O.C. v. Waffle House, Inc., 534 U.S. 279, 294 (2002) ("It goes without saying that a contract cannot bind a nonparty.").

[7] *See infra* notes 38–49 and accompanying text (giving a brief synopsis of the underlying principles).

[8] *See generally* UNITED STATES PATENT AND TRADEMARK OFFICE, INTERNATIONAL PATENT PROTECTIONS FOR SMALL BUSINESSES (January 2012)

continued . . .

rationale that serves as the continuing justification for these principles of territoriality. Afterwards, a brief introduction will be given on certain exceptions within the patent system.

A. The Essence and Complexity of the Patent

The basic construction of any agreement bespeaks the careful pursuit of each party striving to ensure the benefits they receive outweigh the costs they incur. The patent bargain is no different. For the inventor, the promise of exclusive rights to profit from his invention is often worth the cost of public disclosure.[9] With this promise, the innovator is able to prevent others from taking a "free ride" off of the fruits of his labor,[10] pursue financing during the costly developmental stages,[11] and obtain commercialization in the marketplace.[12] In return, the inventor pays an etymologically straightforward cost: a promise the invention will be open, exposed, and evident.[13] This wide dissemination of the invention's design and the 'best mode' of the invention's use[14] facilitates the exploration and

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[hereinafter "IP SMALL BUSINESS REPORT"], *available at* http://www.uspto.gov/aia_implementation/20120113-ippr_report.pdf (providing a study on problems confronting small businesses in the protection of their intellectual property abroad).

[9] *See* 35 U.S.C. § 154(a)(1) (2006) ("Every patent shall . . . grant to the patentee . . . the right to exclude others"); *see also* 35 U.S.C. § 154(d) (2006) (listing certain provisional rights for royalties a patentee is due as a result of infringing activity).

[10] The 'free-rider' problem arises when the inventor bears the cost of innovation and everyone benefits from the discovery, gaining "incentive to free ride on the innovative efforts of others." *See* Corinne Langinier & GianCarlo Moschini, *The Economics of Patents: An Overview*, *in* INTELLECTUAL PROPERTY RIGHTS AND PATENTING IN ANIMAL BREEDING AND GENETICS 31, 32 (Scott Newman & Max Rothschild eds., 2002); *see also* ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT, PATENTS AND INNOVATION: TRENDS AND POLICY CHALLENGES 9 (2004) [Hereinafter "OECD REPORT"], *available at* http://www.oecd.org/dataoecd/48/12/24508541.pdf, ("[P]atents aim to foster innovation in the private sector by allowing inventors to profit from their inventions.").

[11] Mazzoleni & Nelson, *supra* note 3, at 1040 ("[T]he possession of a patent enables the patent holder to go to capital markets to get development financing.").

[12] *See id.* (patenting at early developmental stages helps ease financial burdens through commercialization backed by the knowledge that the economic rewards can be appropriated).

[13] *See* WEBSTER'S THIRD NEW INTERNATIONAL DICTIONARY 1654 (1971) (The patent's Latin ancestor, *patens*, the present participle of *patere*, meant "to be open."); *see also In re* Bo Thuresson Af Ekenstam, 256 F.2d 321, 323 (C.C.P.A. 1958) (outlining the etymological history of patent).

[14] *See generally* 35 U.S.C. § 111(a)(2) (2006) (noting the patent application shall include both a specification and a drawing); 35 U.S.C. § 112 (2006) (requiring the specification to contain a written description of the invention, the manner and process of making and using it, and "the best mode contemplated by the inventor of carrying out his invention."); 35 U.S.C. § 113 (2006) (detailing the requirement of a

continued . . .

creation of follow-up products and derivative inventions.[15]

Though persuasively straightforward, society's surrender of exclusive rights carries deep-rooted negative consequences.[16] The provision of the patent entitles the patentee a mini-monopoly, effectively undermining the competitiveness in the marketplace.[17] With sole control a market participant is free to determine the supply available as well as the price.[18] Moreover, with several firms pursuing a single right, the winner-takes-all effect may impose a high overall social cost (the forfeited investment of all losing firms), even where a single firm may prosper.[19]

Notwithstanding these costs, policymakers can utilize several tools, tailored to meet the unique goals and needs of the state, to mitigate this harm.[20] First, the duration of the patent need only be long enough to incentivize the innovator, at which point it should be turned over to the public.[21] Second, the breadth of the patent may be carefully narrowed. Otherwise, a patentee with broad patent rights can exclude from the market a broad range of "functionally equivalent" inventions.[22] Finally, the subject-matter on which it may be granted can be limited through the requirement that it be novel, useful, and

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drawing "where necessary for the understanding of the subject matter sought to be patented.").

[15] Mazzoleni & Nelson, *supra* note 3, at 1042 ("[A]n initial discovery or invention is seen as opening up a whole range of follow-on developments or inventions.").

[16] Andrew P. Morriss & Craig Allen Nard, *Institutional Choice & Interest Groups in the Development of American Patent Law: 1790–1865*, 19 SUP. CT. ECON. REV. 143, 146 (2011) ("The negative perspective applies the strong strain of anti-monopoly thinking in Anglo-American law to patents, treating them as an obstacle to commerce and an infringement of the rights of technology users.").

[17] *See* OECD REPORT, *supra* note 10, at 9 (granting the patent holder a monopoly allows them to "set a market price higher than the competitive price and limit the total volume of sales.").

[18] *See generally* Richard A. Posner, *The Social Costs of Monopoly and Regulation*, 83 J. POL. ECON. 807, 818 (1975) (noting that firms in industries where regulatory agencies limit entry and price have greater ability to maintain supracompetitive prices than firms in the manufacturing sector where price collusion is prohibited by the Sherman Act).

[19] *Id*. at 812 (explaining that each of ten firms would spend $100,000 in obtaining a patent if each has an equal chance and is risk-neutral; nevertheless, only one will get the patent and find it profitable, the rest lose all and society on the whole gains nothing).

[20] OECD REPORT, *supra* note 10, at 10.

[21] The duration of a patent in the United States is twenty years. 35 U.S.C. § 154(a)(2) (2006) ("[S]uch grant shall be for a term . . . [of] 20 years.").

[22] *See* Graver Tank & Mfg. Co. v. Linde Air Prods. Co., 339 U.S. 605, 608 (1950) (internal citations omitted) (explaining the doctrine of equivalents).

non-obvious.[23] Such a restriction ensures that certain professed innovations, which are "part of the storehouse of knowledge of all men . . . [remain] free to all men and reserved exclusively to none."[24]

B. Policy in Extraterritorial Application of Patent Law

As a long-standing principle, absent affirmative congressional intent, legislation is presumptively concerned with domestic rather than foreign conditions.[25] The nature of the territorial agreement, crafted to reflect a nation's unique characteristics, presupposes, and convincingly so, that this principle should apply with particular force in patent law.[26] In this section the well-justified presumption of territoriality is briefly discussed, but first, the evolutionary history of innovative patent policy in the United States is provided for context.

1. The United States Experience

As a fledgling nation, the United States required an innovative patent policy, calculated and responsive to changing goals and needs, rather than one evolving fortuitously through happenstance. After a failed experiment preserving individual state autonomy in patent policy, it became evident a centralized guiding force was necessary,[27] and thereafter Congress was constitutionally charged to "promote the [p]rogress of [s]cience and the useful [a]rts."[28] The first step was adopting an approach that emphasized a utilitarian public interest.[29] Although vigorously different than the "natural rights" embraced by

[23] *See generally* 35 U.S.C. §§ 101–103 (2006) (explaining the requirements for a patent to be of appropriate subject matter).

[24] *See* Bilski v. Kappos, 130 S.Ct. 3218, 3225 (2010) (quoting Funk Bros Seed Co. v. Kalo Inoculant Co., 333 U.S. 127, 130 (1948)) ("The concepts covered by these exceptions are 'part of the storehouse of knowledge of all men . . . free to all men and reserved exclusively to none.'").

[25] Morrison v. Nat'l Austl. Bank Ltd., 130 S.Ct. 2869, 2877 (2010) (internal citations omitted).

[26] *See* Microsoft Corp. v. AT&T Corp., 550 U.S. 437, 454–55 (2007) ("The presumption that United States law governs domestically but does not rule the world applies with particular force in patent law.").

[27] Ryan Thomas Grace, *Losing the Forest Among the Trees in the* Festo *Saga—Rationalizing the Doctrine of Equivalents and Prosecution History Estoppel in View of the Historical Justifications for Patent Protection*, 11 J. INTELL. PROP. L. 275, 292 (2004). James Madison and Charles Pinckney suggested the new Constitution should provide for the patent system to be centralized in the federal government to ensure uniformity. *Id.* at 293.

[28] *See* U.S. CONST. art. I, § 8.

[29] *See* Graham v. John Deere Co. of Kan. City, 383 U.S. 1, 9 (1966) ("The patent monopoly was not designed to secure to the inventor his natural right in his discoveries. Rather, it was a reward, an inducement, to bring forth new knowledge.").

more developed nations at the time, such as England and France, it facilitated the enhancement of domestic industry.[30] This early policy sought to encourage *domestic* invention and discriminated against foreign inventions and inventors.[31] As a result, foreign innovation facilitated the growth of American businesses, free of burdensome royalties.[32] The overall process generated competitive markets with lower prices for the public.[33]

As the economy and industry matured and American inventors could effectively compete on an international level, discriminatory practices were eased and later abolished.[34] The empowered and industrially capable patent bar encouraged the innovative policy's initial shift to embracing "natural rights."[35] Accompanying this shift was a more outward looking approach, as explained by the Principal Examiner at the USPTO at the Patent Acts centennial: "Our law . . . recognizes to the fullest extent the international character of property in inventions. In this respect . . . the United States may claim to have

[30] *See* Susan Sell, *Intellectual Property and Public Policy in Historical Perspective: Contestation and Settlement*, 38 LOY. L. A. L. REV. 267, 286 (2005) (This process created an "asymmetry between British and American patent laws" that strongly "favored inventors in the developing, follower, economy of the USA, rather than the more industrialized, leading, econom[ies]." (internal citations omitted)).

[31] B. ZORINA KHAN, COMM'N ON INTELL. PROP. RIGHTS, STUDY PAPER 1A, INTELLECTUAL PROPERTY AND ECONOMIC DEVELOPMENT: LESSONS FROM AMERICAN AND EUROPEAN HISTORY 23 (2002), *available at* http://www.iprcommission.org/papers/pdfs/study_papers/sp1a_khan_study.pdf.

[32] *Id.* (noting that although an American could not appropriate a foreign patent, the invention could be utilized without licensing or other costs); *see also* CHRISTOPHER MAY & SUSAN SELL, FORGETTING HISTORY IS NOT AN OPTION! INTELLECTUAL PROPERTY, PUBLIC POLICY AND ECONOMIC DEVELOPMENT IN CONTEXT 13 (2006), *available at* http://www.dime-eu.org/files/active/0/MaySell.pdf (illustrating how the discriminatory process generated great success in the publishing industry. This sort of piracy led to competitive pricing, where a copy of Charles Dickens' would cost six cents in America, it would be two dollars and fifty cents in England. Ignoring pleas concerning disincentive of American authorship, Congress sympathized with the publishing houses: "All the riches of English literature are ours. English authorship comes to us free as the vital air . . . Shall we build a dam to obstruct the flow of the rivers of knowledge?").

[33] MAY & SELL, *supra* note 32.

[34] *See* KHAN, *supra* note 31, at 12, 22, 23 (Patenting fees in the United States were often ten times less than other countries. Despite fees for Americans at approximately $35, foreigners had to pay anywhere from $300 to $500. The Patent Act of 1861 effectively abolished this discrimination).

[35] Morriss & Nard, *supra* note 16, at 146, 148 (emphasizing the natural rights due an inventor in return for the fruits of their labor was encouraged by the growing influence of the patent bar).

led the world and to be leading it still."[36] Admittedly a glaring contradiction to historical practices, it set the stage for modern innovative policy in pursuit of an international "system in which states would recognize and protect the rights of foreign inventors and artists within states' own domestic borders."[37]

2. Sovereignty, Autonomy and Discretion

With many developing countries now in circumstances similar to the nineteenth century United States, the American experience sheds a revealing light on the debate surrounding patent reform initiatives and "the appropriate patent law institutions for developing economies."[38] Unquestionably, the level of economic progress and the cultural and political atmosphere each nation should consider in constructing an innovative policy varies considerably. The relative availability and importance of human capital needs to be determined.[39] Equally important is each nation's respective level of "economic development and comparative advantages in innovation and imitation."[40] Moreover, the peculiar emphasis placed on the rights and needs of inventors, competitors, and the public, must be added to the equation.[41]

From these, the state must harness its strengths and address its weaknesses to craft an effective, innovative policy.[42] Clearly, considering the infinite economical, political, cultural, and social variables, there is no one-size-fits-all approach.[43] Nevertheless, carefully accounting for each is paramount, as designing institutions to implement the innovated policy and apportion the appropriate level of incentives and opportunities can be a key determinant of the wealth or poverty of nations.[44]

Depending on these circumstances, the relative strength of a patent system appropriate for the nation can be determined. Large, open, and accessible markets, vast human capital, and advanced economies are the attributes of developed nations that advocate far-reaching patent

[36] KHAN, *supra* note 31, at 23 (quoting F.A. Seely, Principal Examiner, United State Patent and Trademark Office).
[37] MAY & SELL, *supra* note 32, at 15.
[38] Morriss & Nard, *supra* note 16, at 144.
[39] *See, e.g.*, *id.* at 184–85 (explaining that an increased investment in widespread free education "played a key role in fostering technological change" and providing a source of human capital).
[40] MAY & SELL, *supra* note 32, at 22.
[41] *See id.* at 25.
[42] *See generally* KHAN, *supra* note 31, at 47.
[43] *See* MAY & SELL, *supra* note 32, at 22.
[44] *See id.* at 23.

systems that offer long-term protection.[45] Countries with smaller economies that lack the human capital and an industrial atmosphere needed to make efficient use of a patent system may have no incentive to implement such a system whatsoever.[46] Historical evidence demonstrates that influencing these latter nations with the policies of the former simply does not foster development more rapidly.[47]

More importantly, encroaching on the sensitive policy choices necessary to craft an efficient system can have far-reaching consequences, especially for developing nations.[48] Imposing strong patent rights into these countries, either through influencing policy considerations or requiring acknowledgment of foreign rights, can undermine their economic growth, innovative capacity, and block indigenous company development.[49]

C. Extraterritoriality in US Patent Law

As demonstrated above, the autonomy and discretion necessary in developing a patent system legitimizes the emphasis placed upon territoriality in patent laws. These principles have profoundly

[45] *See* Gene M. Grossman & Edwin L.-C. Lai, *International Protection of Intellectual Property*, 94 AM. ECON. REV. 1635, 1652 (2004).

[46] *See id.*

[47] Shubha Ghosh, *Open Borders, Intellectual Property & Federal Criminal Trade Secret Law*, 9 J. MARSHALL REV. INTELL. PROP. L. 24, 47 (2009) ("Whether economic development and prosperity would have been stronger and faster with more uniform and robust intellectual property protection seems to ignore the fact that industrial development and prosperity did occur despite a cookie-cutter model of intellectual property.").

[48] *See, e.g.*, Alexandra Cameron et al., *The World Medicines Situation 2011: Medicines Prices, Availability and Affordability*, WORLD HEALTH ORG., 1, 12, 14 (2011), http://www.who.int/medicines/areas/policy/world_medicines_situation/WMS_ch6_wPricing_v6.pdf; Frederick M. Abbott & Rudolf V. Van Puymbroeck, *Compulsory Licensing for Public Health: A Guide and Model Documents for Implementation of the Doha Declaration Paragraph 6 Decision* 1, 1–2, http://siteresources.worldbank.org/INTSAREGTOPHIVAIDS/Resources/DohaGuideJune22005.pdf; Ruth Gana, *Has Creativity Died in the Third World? Some Implications of the Internationalization of Intellectual Property*, 24 DENV. J. INT'L L. & POL'Y 109, 111–112 (1995).

[49] *See* OECD REPORT, *supra* note 10, at 9 ("The impact of patents on innovation and economic performance is complex, and fine tuning of patent design is crucial if they are to become an effective policy instrument."). In certain circumstances where access has been limited to essential knowledge, a broad patent protection can hamper further innovation. *Id*. *See also* Roberto Mazzoleni & Richard R. Nelson, *The Benefits and Costs of Strong Patent Protection: a Contribution to the Current Debate*, 27 RES. POL'Y 273, 281 (1998), *available at* http://dimetic.dime-eu.org/dimetic_files/MazzoleniNelsonRP1998.pdf (noting comparatively weak intellectual property regimes facilitated rapid growth in Japanese, Korean, and Taiwanese manufacturing sectors).

influenced judicial interpretation for well over a century.[50] Nevertheless, statutory exceptions were developed to protect a domestic patent holder from conduct that occurs in-part abroad. Two of these provisions that have received recent attention are: (1) infringement for supplying components abroad for later assembly under Section 271(f) and (2) infringement for an offer to sell under Section 271(a).

1. *Infringement Under Section 271(f) for Supplying Components Abroad*

In 1984, Congress amended the Patent Act, adding paragraph (f) to Section 271, creating liability as an infringer for supplying abroad "all or a substantial portion of the components of a patented invention," for later assembly.[51] However, it was still unclear whether the statute would encompass intangible 'components.' In 2005, the Federal Circuit answered this question, finding that "every component of every form of invention deserves the protection of Section 271(f)."[52] Despite this guidance, those who believed this contravened the presumption against extraterritorial application pushed for legislative action.[53] However, the Supreme Court intervened in 1997 in *Microsoft Corp. v. AT & T Corp.*[54] Though the Court found master disks containing patented material sent abroad and installed onto computers non-infringing, the Court rested its conclusion on the fact

[50] *See* Brown v. Duchesne, 60 U.S. 183, 187 (1856) (noting, "each nation is the proper judge of its own policy," in patent laws).

[51] 35 U.S.C. § 271 (2006)

[52] Eolas Techs. Inc. v. Microsoft Corp., 399 F.3d 1325, 1339 (Fed. Cir. 2005). In this case the court found that Section 271(f)'s protection of "components" included software code that had been incorporated on a master disk and sent abroad for further incorporation. *Id.* at 1341. Not only was this a necessary component of the invention, but a "key part" without which the invention would not work at all. *Id.* at 1339. From a policy standpoint, the same treatment is required under TRIPS to be given to all forms of invention "without discrimination as to the place of invention and the field of technology." *Id.* (quoting Agreement on Trade-Related Aspects of Intellectual Property Rights Part II, Section 5, Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1C, THE LEGAL TEXTS: THE RESULTS OF THE URUGUAY ROUND OF MULTILATERAL TRADE NEGOTIATIONS 320 (1999), 1869 U.N.T.S. 299, 33 I.L.M. 1197 (1994)).

[53] John R. Thomas, *Statutory Subject Matter in Context: Lessons in Patent Governance from* Bilski v. Kappos, 15 LEWIS & CLARK L. REV. 133, 141 (2011). Much of the resistance came from those that believed the holding of the case extended protections of patents to a level that contravened the presumption that patents did not extend extraterritorially. *Id.*

[54] Microsoft Corp. v. AT & T Corp., 550 U.S. 437 (2007).

that the defendant had not 'supplied' the installed copies.[55]

Unfortunately, the Court expressed no opinion on whether intangible components of a method or process fell within the purview of the statute, only that if the method or process was intangible, the combination of its components may be intangible as well.[56] However, the Court indicated "that the territorial limit of patents should not be lightly breached."[57] The Federal Circuit drew upon these principles in *Cardiac Pacemakers, Inc. v. St. Jude Medical, Inc.*,[58] when it considered whether the apparatus utilized to perform the method could properly be considered a component or a 'step' in the process.[59] Relying on precedent,[60] common meaning in language,[61] and comparison to Section 271(c),[62] the court concluded that while the method steps were components, the apparatus used in practicing it was not.[63] After finding the word "supplied" required the provision of a physical object, the court noted the intangible steps could not be supplied abroad.[64] Since the apparatus was not a 'component' of the process, Section 271(f) simply could not apply to method or process patents.[65]

2. *Offers to Sell Infringement Under Section 271(a)*

Historically, the Patent Act only recognized making, using, or selling a patented invention as infringing activities.[66] In 1996, to

[55] *Id.* at 453. Thus, "[u]nder a conventional reading of § 271(f)'s text . . . the foreign-made copies of Windows actually installed on the computers were 'supplie[d]' from places outside of the United States." *Id.* at 452.

[56] *Id.* at 452 n.13.

[57] Cardiac Pacemakers, Inc. v. St. Jude Med., Inc., 576 F.3d 1348, 1362 (Fed. Cir. 2009) (citing *Microsoft* at 454–56).

[58] *Id.* at 1362.

[59] *Id.*

[60] *Id.* at 1363.

[61] *Id.* ("Component" is defined as "a constituent part," "element," or "ingredient.") (quoting WEBSTER'S THIRD NEW INTERNATIONAL DICTIONARY OF THE ENGLISH LANGUAGE 466 (1981)).

[62] *Id.* at 1363–64 (noting that in Section 271(c) there is a clear contrast between a component of a physical machine, manufacture, or composition, and the apparatus used to practice it in the process). Such a finding is a clear indication that Congress intended the component to be distinct from the apparatus used to practice it. *Id.*

[63] *Id.* at 1362.

[64] *Id.* at 1364. (noting that the ordinary meaning of 'supply' is to "provide that which is required," or "to furnish with . . . supplies, provisions, or equipment.") (quoting WEBSTER'S THIRD NEW INTERNATIONAL DICTIONARY OF THE ENGLISH LANGUAGE 2297 (1981)).

[65] *Id.*

[66] *See* 35 U.S.C. § 271 (2006); 35 U.S.C. § 154 (2006); *see also, e.g.*, Schiff v. Hammond Clock Co., 69 F.2d 742 (7th Cir. 1934) (noting infringement on

continued . . .

comply with minimum standards under the TRIPS agreement, infringement for an "offer to sell" was added to the list within Section 271(a).[67] Although the new language could potentially sweep a broad range of conduct as infringement, Congress provided little guidance as to exactly what conduct was covered.[68] In 1999, the question reached the Southern District of Texas as to whether it was sufficient to only have a domestic "offer," even where the sale was contemplated abroad.[69] Answering in the negative, the court concluded that the new language only provided for an earlier stage of liability, and the act of infringement must be contemplated domestically.[70] In reaching this conclusion, the court relied on the presumption against extraterritorial application of patent law and the competitive disadvantage that would befall American businesses.[71]

Shortly thereafter, the Federal Circuit was presented with the same question in *Rotec Industries, Inc. v. Mitsubishi Corp.*[72] The court found that the plaintiff's inability to establish that an "offer to sell" occurred domestically was dispositive, which implicitly suggests that a foreign-contemplated sale would be sufficient.[73] Recognizing this uncertainty, Circuit Judge Pauline Newman criticized the approach taken and believed the conclusion should have been based upon "the

patentee's right to make, use, or sell); Bloomer v. Gilpin, 3 F. Cas. 726, 729 (C.C.S.D. Ohio 1859) (finding infringement from merely making the machine, even though it was not used or sold); Ketchum Harvester Co. v. Johnson Harvester Co., 8 F. 586, 587 (C.C.N.D.N.Y. 1881) (finding manufacture within the United States to be infringement even where the ultimate sale occurred abroad); Beedle v. Bennett, 122 U.S. 71, 78 (1887) (finding a well constructed in such a way that each time "water is drawn from it the patented process is necessarily used").

[67] *See* Rotec Indus., Inc. v. Mitsubishi Corp., 215 F.3d 1246, 1251 (Fed. Cir. 2000) (noting new amendment to Section § 271(a) provided for infringement for "whoever without authority makes, uses, *offers to sell*, or sells any patented invention, within the United States " (emphasis added)).

[68] *Id.* at 1252; *see also* 35 U.S.C. § 271(i) ("As used in this section, an 'offer for sale' or an 'offer to sell' by a person other than the patentee, or any designee of the patentee, is that in which the sale will occur before the expiration of the term of the patent.").

[69] Quality Tubing, Inc. v. Precision Tube Holdings Corp., 75 F. Supp. 2d 613, 624 (S.D. Tex. 1999).

[70] *Id.* (noting an offer to sell, made from the United States, for a foreign sale would not fall under the earlier stage of infringing activity as the contemplated sale itself was not infringement).

[71] *See id.* at 625 ("A reading that requires only that an offer be within the United States . . . may be an impermissible expansion of the territorial scope of U.S. patent laws . . . [and] place a burden on American businesses that would not exist for foreign competitors . . . ." (internal citations omitted)).

[72] *Rotec*, 215 F.3d 1246, 1255.

[73] *Id.* at 1255–57.

straightforward ground that there is no issue of infringement under § 271(a) because, as is undisputed, no offer for sale was made whereby the sale itself could infringe the United States patent."[74]

Lower courts quickly accepted that a domestic offer could be infringing activity, regardless of a foreign sale.[75] In rationalizing their findings, the courts relied on several principles. First, the requirement that the sale itself needs to be infringing would render the "offer to sell" language superfluous.[76] Such a reading left the "offer to sell" language meaning little more than it had previously—a result Congress clearly must not have intended.[77] Second, finding alternatively would do little to bring the United States in sync with international standards, a goal of the "offer to sell" language.[78] Despite these findings, once the *Microsoft* Court re-emphasized territoriality in patent law, a shift occurred, requiring contemplation of the ultimate sale to be within the United States.[79]

In 2010, the Federal Circuit in *Transocean Offshore Deepwater Drilling, Inc. v. Maersk Contractors USA, Inc*. stepped in to pick up where it had left off a decade before.[80] The facts before the court were essentially the opposite of those in *Rotec*: a contract for constructing an allegedly infringing oil rig for delivery and operation in the U.S. Gulf of Mexico had been entered into abroad.[81] Finding it conclusive

[74] *Id.* at 1258 (Newman, J., concurring).

[75] *See* Wesley Jessen Corp. v. Bausch & Lomb, Inc., 256 F. Supp. 2d 228, 233 (D. Del. 2003) (concluding as sufficient an "offer" made in the United States). Likewise, the ultimate sale need not be intended to occur within the territorial limits of the United States. *Id.* at 233–34; *see also* CLS Bank Int'l v. Alice Corp. Pty. Ltd., 667 F. Supp. 2d 29, 38 n.6 (D.D.C. 2009) ("[A]n 'offer to sell' within the United States is an independent infringing act and does not require a further infringing act; *i.e.* an actual sale within the United States, to be actionable.") (citation omitted); SEB, S.A. v. Montgomery Ward & Co., 412 F. Supp. 2d 336, 341 (S.D.N.Y. 2006) (finding sufficient evidence of infringement even though offer had been made within the United States for a sale to occur abroad).

[76] *Bausch & Lomb*, 256 F. Supp. 2d at 234.

[77] *Id*

[78] *Id.*

[79] *See* Wing Shing Prods. (BVI), Ltd. v. Simatelex Manufactory Co., 479 F. Supp. 2d 388, 407 (S.D.N.Y. 2007) (finding it necessary for the sale contemplated by the offer be intended to occur in the United States, and if not, dismissal is appropriate); *see also* Semiconductor Energy Lab. Co. v. Chi Mei Optoelectronics Corp., 531 F. Supp. 2d 1084, 1111 (N.D. Cal. 2007) ("[A]n 'offer of sale' may constitute direct infringement only if the contemplated sale is to take place within the United States.").

[80] Transocean Offshore Deepwater Drilling, Inc. v. Maersk Contractors USA, Inc., 617 F.3d 1296 (Fed. Cir. 2010).

[81] *Id.* at 1307. In *Transocean*, Maersk, Inc., a Danish company contracted to have an oil rig built in Singapore and subsequently delivered to the U.S. Gulf of

continued . . .

that the contracting had occurred abroad, the trial court granted summary judgment of non-infringement.[82] The Federal Circuit reversed and ruled that, "[i]n order for an offer to sell to constitute infringement, the offer must be to sell a patented invention within the United States."[83] After acknowledging it was mindful of the presumption against extraterritoriality, the court noted it would "exalt form over substance" to allow a domestic company to avoid liability for infringement by merely traveling abroad to make offers to sell products back into the country.[84]

III. INTRODUCTION TO TRADE SECRETS

Rather than disclose an invention in return for a patent, an innovator may opt to keep it a secret. Throughout history these "trade secrets" have been an important tool in protecting commercial proprietary information.[85] As a result, the law protects valuable proprietary information if reasonable efforts have been incurred to maintain secrecy.[86] This section briefly introduces the trade secret and the policies that it is used to promote. In doing so, context is provided

Mexico for operation that arguably infringed a patent owned by Transocean. *Id*. The contract noted the Transocean patents and reserved the right to modify the rig if subsequent court decisions prompted action. *Id.* (noting that Maersk had contracted to modify the rig before its delivery into the U.S. "in view of court or administrative determinations throughout the world."). One such case occurred, and Maersk had a casing sleeve installed on the rig to comply with an injunction issued against a different defendant that required the installation of a casing sleeve. *Id.* (citing Transocean Offshore Deepwater Drilling, Inc. v. GlobalSantaFe Corp., No. H-03-2910, 2006 WL 3813778 (S.D. Tex. Dec. 27, 2006)). At a later date, Maersk, Inc., contracted with Statoil Gulf of Mexico LLC to have the rig operated in the U.S. Gulf of Mexico. *Id.*

[82] *Id.* at 1307. The court noted the focus should be on the "location of the future sale that would occur pursuant to the offer" rather than the location of the offer itself. *Id.* at 1309.

[83] *Id.* at 1309.

[84] *Id.*

[85] *See* Robert M. Sherwood, *Trade Secret Protection: Help for a Treacherous Journey*, 48 WASHBURN L.J. 67, 68–69 (2008) (noting the trade secret provided a valuable tool for commercial enterprises and were commonly used in medieval guilds and the Pakistani rug-making communities); A. Arthur Schiller, *Trade Secrets and the Roman Law; The* Actio Servi Corrupti, 30 COLUM. L. REV. 837, 838 (1930) (dating the origins to ancient Rome to provide a remedy in *actio servi corrupti*, for the corruption of a slave, when a competitor influencing another's slave to divulge business secrets).

[86] More specifically, the trade secret is "any information that can be used in the operation of a business . . . that is sufficiently valuable and secret to afford an actual or potential economic advantage over others." RESTATEMENT (THIRD) OF UNFAIR COMPETITION § 39 (1995).

for the broader extraterritorial extension as a result of its absence of monopolistic characteristics. After this groundwork is provided, certain examples of its extraterritorial application are given.

A. Trade Secret Basics

Unlike the patent right, the secret can continue indefinitely, as long as reasonable efforts are undertaken to keep it confidential.[87] Once the secrecy is lost, the proprietary information it covered enters the public domain as a matter of law.[88] While in operation, however, it can provide certain benefits. Employers can feel confident in hiring further employees understanding the safety of valuable information.[89] Additionally, the rights bestowed allow contractual commercialization,[90] and promote commercial integrity and fair dealing among market participants.[91] Finally, although the rights gained are not as expansive as under the patent, the promise of some protection can entice innovation.[92]

The price society pays for the ongoing existence of the trade secret

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[87] *See, e.g.*, ConAgra, Inc. v. Tyson Foods, Inc., 30 S.W.3d 725, 729 (Ark. 2000) (looking at extent of measures taken to guard the secrecy); Elm City Cheese Co., v. Federico, 752 A.2d 1037, 1050 (Conn. 1999) (questioning whether reasonable efforts were undertaken is a "highly fact-specific inquiry" and what may be sufficient in one case may not be in another); Allied Supply Co., v. Brown, 585 So. 2d 33, 36 (Ala. 1991) (finding no reasonable efforts where company lists were not market confidential to at least ten employees, and such lists were kept in duplicate and taken home).

[88] *See* Underwater Storage, Inc. v. U.S. Rubber Co., 371 F.2d 950, 954 (D.C. Cir. 1966) ("The nature of a trade secret is such that, so long as it remains a secret, it is valuable property to its possessor who can exploit it commercially to his own advantage. Once the secret is published to the 'whole world,' however, it loses its protected status and becomes available to others for use and copying without fear of legal reprisal from the original possessor.").

[89] *See* Wexler v. Greenberg, 160 A.2d 430, 435 (Pa. 1960) ("[M]odern economic growth and development has pushed the business venture beyond the size of the one-man firm, forcing the businessman to a much greater degree to entrust confidential business information relating to technological development to appropriate employees.").

[90] *See generally* Aronson v. Quick Point Pencil Co., 440 U.S. 257, 262 (1979) ("Permitting inventors to make enforceable agreements licensing the use of their inventions in return for royalties provides an additional incentive to invention.").

[91] *See* Kewanee Oil Co. v. Bicron Corp. 416 U.S. 470, 492–94 (1974) (discussing benefits of promoting sharing of knowledge and industry efficiency through protecting inventor to realize rewards of labor through contracting with a company able to develop and exploit it, as well as encouraging standards of commercial ethics).

[92] *Id.*

is self-evident. Coupled with the indefinite duration it allows,[93] the secrecy removes any public benefit that would be provided through disclosure.[94] Although the trade secret also receives criticism on restricting mobility in employment,[95] this is often counterbalanced through the employer confidence it creates.[96] Providing significant value otherwise, the trade secret on the whole is a valuable instrument for protecting proprietary information. In recent years, as firms strategize beyond traditional boundaries, this value has continued to increase.[97]

B. Extraterritorial Extension of Trade Secrets

Absent the monopolistic, exclusive rights inherent in the patent, protection offered through a trade secret is more appropriately extended beyond domestic territories. This characteristic, absent in much of patent law, has become appealing to many modern businesses. Below are two instances in which relief can be sought through federal remedies: (1) the Economic Espionage Act, and (2) a complaint through the International Trade Commission.[98]

1. Economic Espionage Act

At the end of the Cold War, government spies had penetrated the private sector, posing a threat to individual businesses and the

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[93] *See id.* at 496 (Douglas, J., dissenting) (criticizing as potentially unconstitutional the genuine inventor being afforded under federal law fourteen to seventeen years of protection, while states allowing perpetual protection articles that were lacking in novelty to receive patentability).

[94] Charles Tait Graves, *Trade Secrets as Property: Theory and Consequences*, 15 J. INTELL. PROP. L. 39, 81 (2007).

[95] *See* Wexler v. Greenberg, 160 A.2d 430, 434 (Pa. 1960) (acknowledging the competing policies of "the right of a businessman to be protected against unfair competition stemming from the usurpation of his trade secrets and the right of an individual to the unhampered pursuit of the occupations and livelihoods for which he is best suited.").

[96] *Id.* at 435.

[97] Karl F. Jorda, *Trade Secrets and Trade-Secret Licensing*, *in* INTELLECTUAL PROPERTY MANAGEMENT IN HEALTH AND AGRICULTURAL INNOVATION: A HANDBOOK OF BEST PRACTICES 1046 (Anatole Krattiger et. al. eds., 2007), *available at* http://www.iphandbook.org/handbook/chPDFs/ch11/ipHandbook-Ch%2011%2005%20Jorda%20Trade%20Secret%20Licensing.pdf ("Trade secrets are the crown jewels of corporations . . . . [o]ver 90% of all new technology is covered by trade secrets.")

[98] Although outside the scope of this article, options are available for a party to bring an action in state court against a foreign defendant if jurisdiction can be attained.

American economy.[99] The absence of any comprehensive federal remedy intensified this danger. Congress responded in 1996 by enacting the Economic Espionage Act.[100] Today, with the value of investment in proprietary information skyrocketing,[101] and increasing use of digitally stored data, the business atmosphere is exposed to substantially greater risk.[102] With an overwhelming portion of the economy reliant upon this intangible value, the danger of misappropriation places individual businesses at risk[103] and threatens the economic strength of the nation.[104]

The intricacies of the Economic Espionage Act are relatively straightforward.[105] Coverage is broken into two different categories of misappropriation. "Economic espionage" requires the intended beneficiary be a "foreign government . . . instrumentality, or . . . agent."[106] Although this section requires the mental component of knowledge attached to the conduct,[107] it attaches not only to actual theft,[108] but also attempting or conspiring to do so.[109] The Act also

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[99] *See* United States v. Hsu, 155 F.3d 189, 194 (3d Cir. 1998) (In 1996 "studies revealed that nearly $24 billion of corporate intellectual property was being stolen each year.").

[100] *Id.* at 195.

[101] *See* OFFICE OF THE NATIONAL COUNTERINTELLIGENCE EXECUTIVE, FOREIGN SPIES STEALING U.S. ECONOMIC SECRETS IN CYBERSPACE, REPORT TO CONGRESS ON FOREIGN ECONOMIC COLLECTION AND INDUSTRIAL ESPIONAGE, 2009-2011 4 (2011) [hereinafter CYBER ESPIONAGE REPORT]. For 2008, corporate and government spending on research and development was nearly $400 billion. *Id.* at 4.

[102] *See id.* at i ("Cyber tools have enhanced the economic espionage threat, and the Intelligence Community (IC) judges the use of such tools is already a larger threat than more traditional espionage methods."). The increasing use of computers and economic reliance on technology has presented new obstacles that electronic surveillance authorities need overcome. Mark D. Young, *Electronic Surveillance in an Era of Modern Technology and Evolving Threats to National Security*, 22 STAN. L. & POL'Y REV. 11, 12–13 (2011).

[103] *See* CYBER ESPIONAGE REPORT, *supra* note 101, at 4 (stating that the wide variety of variables and methods used in calculating losses range widely and are effectively meaningless, rendering values that range from $2 billion to $400 billion.).

[104] 157 CONG. REC. S1985 (daily ed. Mar. 30, 2011) (statement of Sen. Kohl) ("The economic strength, competitiveness, and security of our country rely upon the ability of industry to compete without unfair interference from foreign governments and from their own domestic competitors.").

[105] *See* 18 U.S.C. §§ 1831–39 (2006).

[106] 18 U.S.C. § 1831(a) (2006).

[107] *Id.*

[108] 18 U.S.C. § 1831(a)(1).

[109] 18 U.S.C. § 1831(a)(4)–(5). These cover not only actual theft, but also instances where the party copies without authorization, including downloading, mailing or destroying, as well as merely receiving, knowing it had been obtained without authorization. *Id.* at § 1831(a)(1)–(3).

criminalizes "theft of trade secrets" and attaches to "misappropriation of trade secrets for the economic benefit of anyone other than the true owner." [110] Although such conduct is not limited solely to governmental beneficiaries, three other prosecutorial limitations are in place: (1) an intended economic benefit, (2) knowing the conduct will injure the owner, and (3) information "related to or included in a product produced for or placed in interstate or foreign commerce."[111] Rather than burdensome territorial restrictions, the Act is intended to extend abroad.[112]

Though it has a broad reach, the Act does not provide a private right of action.[113] Recently, however, there has been Congressional movement that might provide such an extension as well as more expansive penalties. The Economic Espionage Penalty Enhancement Act of 2011 was introduced to increase the penalties available against offenders. [114] More importantly, however, an amendment to the Currency Exchange Rate Oversight Reform Act would provide "companies the ability to go to federal court to stop misappropriation of trade secrets and allow[] them to seek compensation for losses due to economic espionage."[115]

2. *International Trade Commission*

The International Trade Commission has broad authority to prohibit general unfair acts and importation of infringing articles as

[110] Joseph W. Cormier et. al., *Intellectual Property Crimes*, 46 AM. CRIM. L. REV. 761, 767 (2009) (citing 18 U.S.C. § 1832(a) (2006)).

[111] *See id.* (quoting 18 U.S.C. § 1832(a)).

[112] *See* 18 U.S.C. § 1837 (2006) (extending jurisdiction abroad when (1) the offender is an American resident or citizen, organization, or political subdivision; or (2) "an act in furtherance of the offense was committed in the United States.").

[113] *See generally* Harrison-Smith v. Bank of Am., N.A., No. 06 C 4254, 2006 WL 2355565 (N.D. Ill. Aug. 10, 2006) (dismissing claim under Economic Espionage Act as it did not provide for a private right of action).

[114] S. 678, 112th Cong. § 3 (2011). *See also* Press Release, Sen. Herb Kohl, Kohl Introduces Economic Espionage Bill to Protect U.S. Business from Intellectual Property Theft (Mar. 30, 2011), *available at* http://kohl.senate.gov/newsroom/pressrelease.cfm?customel_dataPageID_1464=4389.

[115] Press Release, Sen. Herb Kohl, Kohl Offers Amendment to Protect American Businesses (Oct. 5, 2011), *available at* http://kohl.senate.gov/newsroom/pressrelease.cfm?customel_dataPageID_1464=4775; *see also* S.A. 729, 112th Cong., 157 CONG. REC. S622930 (daily ed. Oct. 5, 2011) (submitted by Sen. Coons) (providing for federal jurisdiction under Section § 1832(a) of the EEA if the party specifies the "reasonable measures taken to protect the secrecy of the alleged trade secrets in dispute; and include a sworn representation by the party asserting the claim that the dispute involves either substantial need for nationwide service of process or misappropriation of trade secrets from the United States to another country.").

unlawful activities.[116] Proceedings before the Commission have historically been related to blocking the importation of patent infringing products.[117] In a recent case before the Federal Circuit, *TianRui Group Co. Ltd. v. Int'l Trade Comm'n*, the court affirmed that misappropriation of trade secrets fell under the broader "unfair methods of competition and unfair acts in . . . importation" language even if occurring abroad.[118] In *TianRui*, a domestic company brought a complaint against a foreign manufacturer for importation of a product manufactured through a misappropriated trade secret.[119] Despite an appeal to the presumption against extraterritoriality, the Commission found the foreign manufacturer liable.[120]

On appeal, the Federal Circuit affirmed the extension of authority to reach the misappropriation that occurred in China. Dismissing the presumption against extraterritoriality as non-dispositive and rebuttable, the court offered three reasons for its extension.[121] First, the statute was expressly aimed at imports, an inherently international transaction that demonstrated Congress had more than just "domestic concerns in mind."[122] Second, the extraterritorial conduct was merely an "element of a claim alleging a domestic injury and seeking a wholly domestic remedy" and thus was not purely extraterritorial.[123] Third, Congress carefully chose to prohibit "unfair *methods* of competition"

[116] Peter S. Menell, *The International Trade Commission's Section 337 Authority*, 2010 PATENTLY-O PAT. L.J. 79, 81 (quoting 19 U.S.C. 1337(a)(1)(A) & (a)(1)(B)-(E) (2006)). Though this authority originated from Section 337 of the Tariff Act of 1930, it was in the 1970s that the Commission was commonly utilized as a means of avoiding the burdensome federal courts. *See* Robert G. Krupka, Philip C. Swain, & Russell E. Levine, *Section 337 and the GATT: The Problem or the Solution?*, 42 AM. U. L. REV. 779, 787–88 (1993) (noting Section 337 proceedings were highly criticized by GATT members). In 1988, the Commission's authority was broadened again in order to combat unfair trade practices. Peter S. Menell, *The International Trade Commission's Section 337 Authority*, 2010 PATENTLY-O PAT. L.J. 79, 80.

[117] Menell, *supra* note 116, at 82 (quoting 19 U.S.C. 1337 (a)(1)(B) (2006)).

[118] TianRui Group Co. v. Int'l Trade Comm'n, 661 F.3d 1322, 1324 (Fed. Cir. 2011) (citing 19 U.S.C. § 1337(a)(1)(A) (2006)).

[119] *Id.*

[120] *Id.* The ALJ also addressed TianRui's argument that the domestic industry requirement had not been met. *Id.* at 1326. The court noted that even though the domestic industry was not using the proprietary process, the injury could still occur. *Id.* Current use is not necessary as long as the domestic industry of the owner of the proprietary rights would be substantially injured. *Id.*

[121] *Id.* at 1329.

[122] *Id.* (quoting Pasquantino v. United States, 544 U.S. 349, 371–72 (2005)).

[123] *Id.* The majority contended that this was a domestic element on the cause of action that the dissent overlooked. *Id.* at 1330. Rather, the dissent had focused the case as including entirely foreign conduct. *Id.* at 1330.

which demonstrates the ITC's permissive consideration of conduct that occurs abroad.[124]

In conclusion, the court emphasized that such a reading of Section 337 was not inconsistent with the narrow construction on extraterritorial jurisdiction in patent law, a realm covered by a federal statutory scheme not present in the circumstances.[125] Rather, the Commission had broad authority under Section 337 to prohibit the importation of articles through unfair methods of competition and unfair acts that threaten to substantially injure a domestic industry.[126] The court then added that this has been applied for a considerable time to grant authority for the misappropriation of trade secrets.[127]

IV. THE BALANCE OF INTELLECTUAL PROPERTY RIGHTS

Achieving an efficient intellectual property legal framework requires a carefully crafted innovative policy at both the micro (the individual rights themselves) and macro (the rights collectively) level. At the micro level, the peculiar benefits and costs require balancing to construct a mutually beneficial bargain between society and the innovator.[128] At the macro level, the conflicting and complementary nature of each right should be appropriately aligned and synergized.[129] Nevertheless, under certain circumstances when different intellectual property protections cannot be utilized concurrently, which is often the case between the patent and trade secret, the balance of each must be considered to ensure the most socially beneficial method remains the most preferential.

A. Introducing the Relationship between the Patent and Trade Secret

From the arsenal of intellectual property protections, only the patent and the trade secret protect information. When this information is patentable, although exceptions exist, an innovator must choose

[124] *Id.* at 1330–31 (emphasis added). For a discussion of the legislative history of the Act, see *id.* at 1330–31.

[125] *Id.* at 1333. The court specifically noted that the geographical limitations that had been acknowledged under patent law were not present under trade secret law. *Id.*

[126] *Id.*

[127] *See id.* at 1335.

[128] *See supra* Part II(A) and III(A).

[129] Karl F. Jorda, *Patent and Trade Secret Complementariness: An Unsuspected Synergy*, 48 WASHBURN L.J. 1, 13 (2008). Although one intellectual property species can operate as the central, more important tool, other rights can be used to create supplementary value. *Id.*

whether to: (1) maintain it as trade secret, (2) seek a patent, (3) *or* allow the technology to enter the public domain.[130] Under these circumstances, the choice is mutually exclusive—an inventor simply cannot utilize the patent and trade secret concurrently.[131] The disclosure required to obtain a patent removes the protections offered by a trade secret as a matter of law.[132] The result would be the same even where an application has been made and ultimately denied.[133]

In the circumstances where patent and trade secret protection are incompatible, a state should complement the option that is the most socially beneficial. These adjustments should be continually undertaken, and a state should take a proactive approach to ensuring the social and economic objectives of the preferred method are furthered. The state should not merely be "agnostic" to a company's choice of intellectual property protection.[134] As discussed more fully below, a shift is underway that has made the trade secret appear an attractive alternative to the patent, not only commercially, but as a means of imposing less undue harm on foreign states.

B. Historic Patent Favoritism

The innovative policy in the United States has traditionally viewed the social benefits of patent disclosure preferable to the secrecy

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[130] JOHN R. THOMAS, CONG. RESEARCH SERV., R41391, THE ROLE OF TRADE SECRETS IN INNOVATION POLICY 9 (2010) (emphasis added), *available at* http://www.fas.org/sgp/crs/secrecy/R41391.pdf. *But see* Jorda, *supra* note 129.

[131] *See infra* notes 132–35 and accompanying text (explaining the circumstances that render the trade secret and patent mutually exclusive). However, in certain situations the trade secret and patent are complementary. *See infra* note 166 and accompanying text.

[132] *See* Glaxo, Inc. v. Novopharm, Ltd., 52 F.3d 1043, 1050 (Fed. Cir. 1995) (noting the best mode requirement prevents an applicant from receiving a patent while concealing a more preferential form); *In re* Remington Arms Co., 952 F.2d 1029, 1033 (8th Cir. 1991) ("[O]nce the information . . . is released, the trade secret is lost forever . . . ."); Religious Tech. Ctr. v. Netcom On-Line Commc'n Servs., 923 F. Supp. 1231, 1254 (N.D. Cal. 1995) ("The unprotected disclosure of a trade secret will cause the information to forfeit its trade secret status . . . .").

[133] *See* 35 U.S.C. § 122 (2006) ("[A] a patent [application] shall be published, in accordance with procedures determined by the Director, promptly after the expiration of a period of 18 months from the earliest filing date for which a benefit is sought under this title.").

[134] James R. Barney, *The Prior User Defense: A Reprieve for Trade Secret Owners or a Disaster for the Patent Law?*, 82 J. PAT. & TRADEMARK OFF. SOC'Y 261, 266. *See also* Jonathan D. Carpenter, *Intellectual Property: The Overlap Between Utility Patents, Plant Patents, the PVPA, and Trade Secrets and the Limitations on that Overlap*, 81 N.D. L. REV. 171, 179 (2005).

inherent in the trade secret.[135] The Constitution expressly encourages the use of limited, but exclusive, protection to "promote the progress of science and the useful arts."[136] No such prompt is given for the trade secret. In fact, some would argue it undermines this objective.[137] The Supreme Court has addressed this issue and hinted that a trade secret system which threatened the attractiveness of the patent system could present such a risk:

> [Inventions] which the owner believes to meet the standards of patentability . . . are 'the things which are worth to the public the embarrassment of an exclusive patent.' The interest of the public is that the bargain of 17 years of exclusive use in return for disclosure be accepted. If a State, through a system of [trade secret] protection, were to cause a substantial risk that holders of patentable inventions would not seek patents, but rather would rely on the state protection, we would be compelled to hold that such a system could not constitutionally continue to exist.[138]

Although the Court concluded the risk absent in that case, it stands as a clear signal that if forced to choose, it would be the trade secret left out in the cold.[139]

C. A Change in Tides: Trade Secrets Gain Momentum

Although the historical preference may have been to encourage the innovator to disclose their innovation through a patent, recent trends suggest a change. As Circuit Judge Moore cautioned in *TianRui*,

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[135] *See, e.g.*, Kendall v. Winsor, 62 U.S. 322, 328 (1858) ("[T]he inventor who designedly, and with the view of applying it indefinitely and exclusively for his own profit, withholds his invention from the public, comes not within the policy or objects of the Constitution or acts of Congress. He does not promote, and, if aided in his design, would impede, the progress of science and the useful arts."); Brown v. Campbell, 41 App. D.C. 499, 502 (D.C. Cir. 1914) ("Where an invention is made and hidden away, it might as well never have been made at all,-at least so far as the public is concerned.").

[136] U.S. CONST. art. I, § 8, cl. 8.

[137] *See* Mason v. Hepburn, 13 App. D.C. 86, 94 (D.C. Cir. 1898) (noting that persons who "indefinitely and exclusively for his own profit, withholds his invention from the public, comes not within the policy or objects of the Constitution or acts of Congress . . . [and] would impede the progress of science and the useful arts.").

[138] Kewanee Oil Co. v. Bicron Corp. 416 U.S. 470, 489 (1974) (quoting Thomas Jefferson) (internal citations omitted).

[139] *Id.* (explaining that "[i]n the case of trade secret law no reasonable risk of deterrence from patent application by those who can reasonably expect to be granted patents exists.").

"broadening the scope of trade secret misappropriation to the extraterritorial actions . . . gives additional incentive to inventors to keep their innovation secret . . . [and] denies society the benefits of disclosure stemming from the patent system."[140] With a choice between two equally effective protections, an innovator would no doubt choose the option not requiring disclosure of the fruits of his labor. In the following sections, evidence is presented as to the growing attractiveness of the trade secret as compared to the patent.

> Sample Situation: Altering the facts of *TianRui* ever so slightly, when TianRui acquired the trade secrets, instead of improperly acquiring the secrets from employees of a foreign licensee, it was through contacting an employee within the United States and enticing him to program the methodology of railway wheel production into a computer and sending it abroad. Although the domestic company was actively producing the wheels in the domestic market, thereafter through their joint efforts, the foreign company would manufacture the product and the U.S. employee will solicit foreign orders for foreign delivery, never having the products touch domestic soil.

1. The Case of the Trade Secret

If a complaint is filed with the FBI and suit is brought under the Economic Espionage Act, the conduct of both the employee and the foreign company can be reached. The employee would fall under the Act for intending to steal, appropriate or fraudulently obtain the information.[141] Since the employee, in misappropriating the method relating to the railway wheels currently in commerce, sought an economic benefit, knowing full well it would injure the domestic owner, the prerequisites for liability are met.[142] As a result, the employee could face up to ten years in prison and a monetary fine.[143] Moreover, the foreign company, having clearly satisfied all the same elements, could face substantial monetary penalties of up to five million dollars.[144] Although a civil remedy is currently unavailable, this Act would be a powerful tool that would increase companies'

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[140] TianRui Group Co. v. Int'l Trade Comm'n, 661 F.3d 1322, 1343 (Fed. Cir. 2011).
[141] *See* 18 U.S.C. § 1832(a)(1) (2006).
[142] *See* 18 U.S.C. § 1832 (2006).
[143] 18 U.S.C. § 1832(a).
[144] 18 U.S.C. § 1832(b) ("Any organization that commits any offense . . . shall be fined not more than $5,000,000.").

protection of intellectual property through the trade secret.[145]

2. Supplying Components Abroad

If the method had been patented in the example above, then merely coding the method into a non-patented computer and shipping it abroad for later utilization would not give rise to liability. It is evident that the conduct of the foreign company would be beyond reach.[146] Moreover, the conduct of the employee, although wholly domestic, would not fall under the Patent Act. As interpreted in *Cardiac Pacemakers*, the statute was intended to only cover physical components, not the intangible steps to a method or process.[147] Since the method contained only intangible steps and was incorporated into a non-patented apparatus, the physical properties of which did not constitute a step in the method, no physical components were supplied abroad in violation of the statute.[148]

3. The Case of the Offer to Sell under Section 271(a)

Similarly, the conduct of manufacturing and selling the railway wheels abroad would not expose either the domestic employee or the foreign company to liability under Section 271(a) infringement for an "offer to sell." The recent case, *Ion v. Sercel*, demonstrates the inability for both instances of conduct to be reached through the Patent Act.[149] In that case, a defendant sought to have lost profits damages removed that arose from sales from its French company to foreign buyers.[150] Although it was clear that the offers to the foreign buyers had been made from the headquarters in the United States, the court relied on the *Transocean* rule to find that the ultimate sale need be within the United States, and thus the plaintiff was not entitled to damages.[151]

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[145] *See* 18 U.S.C. § 1832.

[146] *See* Dowagiac Mfg. Co. v. Minnesota Moline Plow Co., 235 U.S. 641, 650 (1915) ("[A]cts *wholly* done in a foreign country" cannot give rise to infringement) (emphasis added).

[147] Cardiac Pacemakers, Inc. v. St. Jude Med., Inc., 576 F.3d 1348,1364 (Fed. Cir. 2009).

[148] *See id.* (finding intangible steps not within physical language "supplied" for purposes of Section 271(f)).

[149] Ion, Inc. v. Sercel, Inc., No. 5:06-CV-236-DF. 2010 WL 3768110 at *1, *4 (E.D. Tex. Sept. 16 2010) ("Thus, unlike *Transocean*, where the Court answered the question regarding foreign offers for domestic sales, the question here is whether domestic offers for foreign sales fall within the scope of U.S. patent protection.").

[150] *Id.* at *1.

[151] *Id.* at *4.

V. RECONSIDERING THE BALANCE

In 1997, Donald S. Chisum predicted that "the increasing interdependence of the global economy and the growing concern over the cost of multinational intellectual property rights procurement and enforcement—will make territorialism an unacceptable obstacle to international trade." [152] The continued clinging to unwavering principles of territorialism in patent law, even where the conduct itself is within the territories of the United States, has proved such an unacceptable obstacle for many firms. As a result, this calls into question whether the patent law requires strengthening, or alternatively, whether the ongoing preference needs to give way to the trade secret.

A. The Battlefield

The world has changed dramatically since the original Patent Act of 1790. Today, a firm that fails to adopt a strategic plan designed to capture international benefits and guard against foreign risks is not only incomplete, but often doomed to fail. Although the patent has provided a valuable tool domestically to facilitate a strategy of competitiveness,[153] once the patent has been disclosed in the domestic markets it can be captured and used abroad diminishing the profitability the domestic firm can attain in the foreign market.[154] What is even more troubling is the actions that diminish these opportunities can be undertaken by a domestic firm without recourse.

B. Option One: Extend Protection

Applying the presumption against extraterritorial application of patent laws in the interpretation of two provisions that were specifically designed to reach conduct that occurred in part abroad appears self-contradictory. Nevertheless, extending domestic patent

[152] Donald S. Chisum, *Normative and Empirical Territoriality in Intellectual Property: Lessons from Patent Law*, 37 VA. J. INT'L L. 603, 616 (1997).

[153] *Cf.* Luigi Bonatti, *Complementary Research Strategies, First-Mover Advantage and the Inefficiency of Patents* 1 (Universita' Degli Studi Di Trento – Department di Economia, Discussion Paper No. 17, 2007) *available at* http://eprints.biblio.unitn.it/archive/00001306/01/17_07_bonatti.pdf (explaining that in knowledge intensive industries, secrecy can play an important role to sustaining first mover advantage, as the "knowledge incorporated in production processes and products is difficult to imitate.").

[154] *See generally* James J. Anton et al., *Policy Implications of Weak Patent Rights*, 6 INNOVATION POLICY AND THE ECONOMY 12 (Adam B. Jaffe, Josh Lerner, & Scott Stern eds., 2006), *available at* http://www.nber.org/chapters/c0203.pdf .

laws abroad to protect a domestic patent can cause substantial harm to foreign economies and social interests.[155] Adhering to these principles, it would thus be necessary that in extending protection, it should only reach the conduct that occurs domestically.[156] This would preserve the important principles, as noted in *TianRui*, of avoiding the "unintended clashes between our laws and those of other nations which could result in international discord . . . and 'preserv[es] a stable background against which Congress can legislate with predictable effects.'"[157] Moreover, it shifts the inquiry from focusing on the foreign conduct in its entirety, to being "merely a predicate" to the charge of the domestic conduct at issue.[158] As a result, any extension of the patent right would need be limited solely to covering the precise conduct solely by a domestic defendant.

A common argument against such an application is to draw upon the ability of the domestic patent holder to acquire a patent abroad. This argument, and its acceptance, poses substantial threats (especially to smaller businesses) as the procurement and enforcement of foreign patents can be exceedingly expensive.[159] Moreover, many foreign markets do not offer patent protection for many of the products that are domestically patentable.[160] This would pose a substantial hurdle for defending medical methods, biotechnology and software code.[161]

As acknowledged by the Supreme Court in *Deepsouth*, imposing liability for conduct places in contention "the right of American companies to compete with an American patent holder in foreign markets."[162] Admittedly, such an argument carries substantial merit.

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[155] *See supra* notes 38–49 and accompanying text (detailing the necessity for discretion in developing a patent system that is unique to the cultural and economic needs of the country).

[156] Admittedly, the stifling of domestic conduct would also carry secondary consequences through the prevention of the products entering the market. Nevertheless, this harm would be the lesser of two evils when compared to the alternative of extending the reach abroad.

[157] TianRui Group Co. v. Int'l Trade Comm'n, 661 F.3d 1322, 1328–29 (Fed. Cir. 2011) (quoting E.E.O.C. v. Arabian Am. Oil Co., 499 U.S. 244, 248 (1991) *and* Morrison v. Nat'l Austl. Bank Ltd.,130 S.Ct. 2869, 2881 (2010)).

[158] *Id.* at 1330.

[159] One of the inquiries looked at the costs that small businesses endured when seeking to enter a foreign market to receive a patent. IP SMALL BUSINESS REPORT, *supra* note 8, at 9. The study found that these costs, which potentially could be larger than $300,000 for entering four major foreign markets, posed substantial barriers to small businesses in protecting their patent rights abroad. *Id.*

[160] *See* Jason Taketa, *The Future of Business Method Software Patents in the International Intellectual Property System*, 75 SOUTH. CAL. L. REV. 942, 944 (2002).

[161] *See id.* at 964.

[162] Deepsouth Packing Co. v. The Laitram Corp., 406 U.S. 518, 531 (1972).

In reference to reaching liability under Section 271(f), a common arrangement was for U.S. companies to send abroad instructions, materials, and other knowledge intensive procedures to foreign locations for manufacturing.[163] If Section 271(f) is interpreted in such a way, it could create potential liability for companies exporting abroad what are arguably steps to a process, even where foreign competitors are not exposed to such risks.[164]

Although such concerns carry force, the fact remains that the domestic companies' ability to draw upon public information to gain a market advantage appears to create disincentive to disclose through the patent system. Under the circumstances above, noting the limited inquiry to "wholly domestic conduct" and the limited harm that would befall the autonomy of foreign states, such an extension seems appropriate.[165] Nevertheless, it would be necessary to accept the prominent role of trade secrets in filling these gaps, as it would be inappropriate to diminish their protection.

C. Option Two: Trade Secret Importance

Regardless of whether patent rights are strengthened to include the conduct implicated, undermining the protections of the trade secret would not be an appropriate mechanism to bolster the patent deficiencies. It is evident the trade secret remains an important aspect of business enterprise, and undermining its reach would create substantial consequences. As noted by Professor Mark Lemley, without trade secret law, firms would be required to engage in additional measures to keep certain proprietary information secretive, and more secrecy would be the result, rather than less.[166] Under many circumstances, the patent and the trade secret are not conflicting and at times can be used complementarily.[167] In these instances, the trade

[163] *See* Chisum, supra note 152, at 606.

[164] *Id.* at 607. The potential harm that could befall American industries from the products then being imported back into the United States was remedied through the addition of Section 271(g), prohibiting products produced through a patented process to be imported into the United States. *See also*, *e.g.*, Gemtron Corp. v. Saint-Gobain Corp., 572 F.3d 1371, 1380 (2009) (infringing apparatus manufactured abroad and imported into the United States, even though manufactured abroad, was infringing).

[165] *See* TianRui Group Co. v. Int'l Trade Comm'n, 661 F.3d 1322, 1329 (Fed. Cir. 2011).

[166] *See* Mark A. Lemley, *The Surprising Virtues of Treating Trade Secrets as IP Rights*, 61 STAN. L. REV. 311, 348 (2008).

[167] *See* Jorda *supra* note 129, at 1 ("Patents and trade secrets are not incompatible but dovetail: the former can protect patentable inventions, and the latter, the volumes of important, if not essential, collateral know-how associated with such inventions."). In fact, Professor Jorda would argue "[i]t is unnecessary and shortsighted to choose one over the other." *Id.* at 19.

secret is utilized to protect subject matter that is not patent eligible.[168] In others, certain corollary information or follow-up products to patents require the immediacy that trade secrets provide.[169] Where the position between the patent and the trade secret is viewed in conflict, it has been consistently viewed as subordinate to the complements each bestows on the other.[170]

More importantly, diminishing the protections offered through trade secrets will cause harm not merely to the ability of firms to protect themselves, but cause financial and economic consequences. Intangible assets, and the research and development of proprietary information are a substantial portion of company assets. [171] Considering that intellectual property and intangible assets derive a significant value from the rights they possess in excluding others and enforcement, diminishing the enforcement and protection afforded the trade secret could render substantial harm to the balance sheets of firms. From a broader perspective, the trade secret does not carry many of the implications the patent does on extending extraterritorially. Although imposing monopolistic patent rights into another country can have far reaching implications, protecting trade secrets is merely part of ensuring commercial integrity, absent these oft-cited anti-patent consequences.

VI. CONCLUSION

Undeniably, the rights of domestic patentees are constantly in danger from conduct that occurs abroad. Where trade secrets provide a better alternative for protection, the USPTO may see a diminishing application pool as inventors choose to protect the fruits of their labor

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[168] *See* Kewanee Oil Co. v. Bicron Corp. 416 U.S. 470, 485 ("Trade secret law will encourage invention in areas where patent law does not reach, and will prompt the independent innovator to proceed with the discovery and exploitation of his invention.").

[169] *See* Jorda, *supra* note 129, at 19 ("Any associated or collateral know-how not required to be disclosed in a *patent* application can and should be retained as a *trade secret*.") (emphasis added).

[170] For example, the historical coexistence of the patent and trade secret has been acknowledge by the Supreme Court, where it was emphasized that each tool is an important part of innovative policy and "the operation of one does not take away from the need for the other." *Kewanee Oil*, 416 U.S. at 493. Circuit Judge Posner recognized the important position the trade secret maintained in preserving the competitive edge in American industry and for offering an attractive substitute for circumstances in which the patent lacked perfection. Rockwell Graphic Sys., v. DEV Indus., 925 F.2d 174, 180 (7th Cir. 1991).

[171] *See* IP SMALL BUSINESS REPORT, *supra* note 8, at 32.

through secrecy rather than trade disclosure for exclusive rights. Essentially, a secret can easily be kept from the world, but a patent can only be protected from the country in which it is granted. Without a move towards making the patent a more attractive option, the policy objectives it seeks to promote will be largely undermined. In this light, either the patent needs an instant strengthening, or the trade secret needs to be embraced as the new favorite intellectual property right for information.