

FREE TRADE IN PATENTED GOODS: INTERNATIONAL EXHAUSTION FOR PATENTS

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ABSTRACT

Modern international trade law seeks to increase global welfare by lowering barriers to trade and encouraging international competition. This “free trade” approach, while originally applied to reduce tariffs on trade, has been extended to challenge non-tariff barriers, with modern trade agreements targeting telecommunication regulations, industrial and product safety standards, and intellectual property rules. Patent law, however, remains inconsistent with free-trade principles by allowing patent holders to subdivide the world market along national borders and to forbid trade in patented goods from one nation to another. This Article demonstrates that the doctrines thwarting free trade in patented goods are protectionist remnants of long-abandoned pre-Industrial Age economic theories, and the modern arguments for restricting international trade in patented goods—most notably, the possible desirability of permitting price discrimination—provide an insufficient justification for restricting trade across national frontiers. The Article concludes that modern patent law doctrine should be modified to permit free international trade in patented goods and that, if price discrimination or other goals are thought desirable, better alternatives are available to achieve those goals.

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I. INTRODUCTION

Modern international trade law seeks to increase global welfare by lowering barriers to trade and encouraging competition. Multilateral treaties such as the 1947 General Agreement on Tariffs and Trade¹ have significantly lowered tariffs and led to increased trade. What is more, the theories underlying modern trade law have been applied to non-tariff barriers to

1. General Agreement on Tariffs and Trade, *opened for signature* Oct. 30, 1947, 61 Stat. A-3, 55 U.N.T.S. 187 [hereinafter GATT].

trade,² so that the World Trade Organization (“WTO”) includes agreements addressing subjects as diverse as telecommunication, industrial and product safety standards, and intellectual property. While the overriding purpose of the WTO is to encourage free trade, this principle has not been fully applied to patent law, placing the two fields in tension. In short, patent law grants rights that are fortified by national borders while trade law aims to diminish the relevance of borders.

Patent law has shed many geographical distinctions from its pre-Industrial Age roots that conflict with the formalities of free trade. These roots were planted in patent and trade theories that emphasized gains to the state, domestic industries and workers, and domestic consumers at the expense of other countries.³ Under a mercantilist theory of commerce, patents were granted based on the introduction of new goods to a country, without a focus on invention.⁴ Continued protection was based on the patent holder’s willingness to produce goods locally and employ apprentices to learn the trade.⁵ Patent law was not overly concerned with rewarding innovators for the sake of innovation, but rather with spurring domestic industry and supplying the domestic market with new goods. In contrast, patents are now available without regard to the location of invention, the nationality of the inventor, or the location (or fact) of production. These changes show a commitment to encouraging innovation for its own sake and a hands-off approach to effects on domestic industry and consumer welfare. The modern approach is consistent with modern trade theory, which eschews protectionism and posits net gains in worldwide welfare through decreased barriers to competition and trade.⁶ One consequence of these changes is that any attempt to retain some sort of protectionism through exhaustion rules would not just run counter to current ideas about the role of patents and trade, but it would be misguided; protection of U.S. patent holders is not protection of U.S. industry or consumers.

Despite patent law’s incorporation of some free-trade principles, however, patents remain territorial rights, and in one very important respect patent law remains at odds with modern trade theory. Under current law, a U.S. patent holder may block the importation, use, or sale of patented goods

2. JOHN H. JACKSON ET AL., LEGAL PROBLEMS OF INTERNATIONAL ECONOMIC RELATIONS: CASES, MATERIALS & TEXT 410–12 (4th ed. 2002).

3. *See infra* Section III.A.

4. *See infra* notes 79–89 and accompanying text.

5. *See infra* notes 83–84 and accompanying text.

6. *See generally* Alan O. Sykes, *Comparative Advantage and the Normative Economics of International Trade Policy*, 1 J. INT’L ECON. L. 49 (1998) (offering an explanation of comparative advantage, the case for free trade, and its caveats, *inter alia*).

purchased abroad, even if purchased from a seller licensed under a foreign patent. In contrast, an unconditional purchase of a patented good within the United States exhausts the patent holder's rights with respect to that good.⁷ The doctrine of exhaustion—also called the first sale doctrine—advances consumer interests by limiting restraints on alienation and fosters efficient use of goods and competition by lowering transaction costs in resale markets while limiting the patent holder to a single reward for each sale. However, because there is no doctrine of international exhaustion for patents, there is no free trade in patented goods.

This topic is particularly timely given the conflict between the Executive and Judicial branches on the question of international exhaustion of intellectual property rights. One might expect that, given the United States' traditionally strong free trade stance in negotiations, the Executive branch would push for a rule of international exhaustion for patents. However, the United States Trade Representative is currently negotiating a trade agreement—the Trans-Pacific Partnership—requiring that member countries *not* recognize international exhaustion in intellectual property rights.⁸ This stance is not uniform throughout the branches of government. For example, the Supreme Court recently held in *Kirtsaeng v. John Wiley & Sons, Inc.* that the first sale of a book published with the copyright owner's permission—anywhere in the world—exhausts the owner's rights in that book.⁹ Thus, there was no infringement of a U.S. copyright when a graduate student imported and sold textbooks that were lawfully purchased from a licensed publisher in Thailand. Given this conflict, the Court will likely face the question of whether an international rule of exhaustion should be applied to patent law as well, although it need not follow the same rule as it established for copyright.

While neither trade nor patent theory supports the continuation of national exhaustion,¹⁰ the effects of a harmonized international exhaustion regime in patent law are uncertain. The standard economic argument against international exhaustion draws on the potential gains to patent holders and to consumers in low-income countries from geographic price discrimination. This argument describes the current rule as allowing patent holders to market goods worldwide, adjusting prices for countries with lower purchasing power

7. *See infra* Part IV.

8. *See infra* notes 175–76 and accompanying text.

9. *Kirtsaeng v. John Wiley & Sons, Inc.*, 133 S. Ct. 1351, 1355–56 (2013).

10. In this Article, “national exhaustion” only recognizes exhaustion of the rights associated with patents in the country of sale. In contrast, “international exhaustion” applies exhaustion to relevant patents worldwide.

while continuing to reap rewards in high-income countries.¹¹ An international exhaustion regime, according to this view, will push patent holders either to restrict sales to high-income markets or to offer goods at a globally uniform price, to the detriment of consumers in low-income countries.¹² However, geographical price discrimination is but one of many options for identifying and marketing to populations with differing abilities to pay; many goods, regardless of patent protection, are available in different versions at different prices worldwide. Geographic price discrimination is desirable to firms because of its effectiveness at preventing arbitrage and because enforcement costs are shared by states through customs enforcement. It may not be the most desirable form of price discrimination for consumers, however, because it is imprecise in identifying differing demand curves. This is particularly true for countries with large or growing income disparities.¹³ A shift to international exhaustion would likely result in changes in how firms market goods, but would not necessarily entail the wholesale welfare losses that the standard argument suggests, because that argument compares geographic price discrimination with no price discrimination at all.

The global welfare effects of an international exhaustion rule are more complex for the drug industry, given the heavy involvement of other regulatory regimes and a number of patent law measures that currently serve to remove the industry from typical market forces. In particular, geographical price discrimination may be more desirable in the drug industry because current price differentials reflect regulatory choices rather than demand differences, other forms of price discrimination may not be ethical, and access concerns tend to be more pressing in that industry.¹⁴ While these concerns are valid, they are better met through regulatory regimes that already control market access in the industry or through trade mechanisms, rather than through maintenance of a patent law rule that no longer makes sense for other industries.

We can also expect that in industries amenable to it, a rule of international exhaustion would lead to new forms of restrictive licensing replacing outright sales. Software is particularly susceptible to restrictive licensing because of the technological possibilities of restricting the ability to resell or reuse it. Increased restrictive licensing may shift the exhaustion rule from an absolute bar on downstream constraints to a default rule that can be licensed around and is one method to retain price discrimination that need

11. *See infra* notes 217–20 and accompanying text.

12. *See infra* notes 217–20 and accompanying text.

13. *See infra* notes 222–23 and accompanying text.

14. *See* discussion *infra* Section V.E.

not be geographic in nature. However, there is nothing inherently “international” about this problem, although its importance may increase under an international exhaustion regime. Addressing the desired bounds and strength of such licenses is beyond the scope of this Article, besides noting that adoption of international exhaustion would leave the area ripe for further inquiry.

Adopting international exhaustion for patents would make this area of patent law consistent with the free-trade theory that informs the rest of patent law. Reducing barriers to trade in order to encourage efficient production and increased consumer welfare—the primary goals of international trade law—provides a compelling argument for an international exhaustion regime in patent law.

The Article proceeds as follows. Part II discusses modern theories of patent and trade law, and shows how the doctrine of international exhaustion fits into both. Part III describes mercantilist trade theory, its influence on patent law, and the evolution of both fields toward free trade principles. This Part situates national exhaustion as anomalous in modern patent law, raising the question of whether there are reasons to maintain the current rule of national exhaustion. Part IV explains the doctrinal development of patent exhaustion in the United States—both the domestic embrace of exhaustion as a means to limit transaction costs in downstream markets and the courts’ rejection of international exhaustion, despite the applicability of the values embodied in domestic exhaustion doctrine. Part V looks at potential methods of implementing an international exhaustion regime and responds to criticisms such a change faces. In particular, this Part responds to some economic critiques of international exhaustion, addresses potential strategic reactions to such a rule, and develops a potential carve-out for pharmaceutical products. Part VI concludes.

II. PATENT LAW AND INTERNATIONAL TRADE: CONFLICTS AND CONFLUENCES

Patent law is territorial and protects markets, whereas trade theory has been on a relentless march to bring down barriers to cross-border trade and foster competition in manufacturing. Thus, at first glance it appears that their treatment of the question of international exhaustion for patents would also be directly opposed. However, a closer look reveals that patent law has been moving away from protection of national markets and that trade law may sometimes deviate from pure free trade principles in its approach to intellectual property matters.

A. PATENT LAW PERSPECTIVE

Patents and copyrights are exclusive rights granted to authors and inventors in order to encourage progress in science and the useful arts.¹⁵ The regimes are governed by separate statutes and common law. Nevertheless, the constitutional underpinnings and much of the governing theories are the same. Through a time-limited right to exclude others from exploitation of their works, authors and inventors are encouraged to create, invent, and disseminate the fruits of their labor to the benefit of society at large. Excluding competition gives a patent holder the opportunity to sell goods at a premium price, the size of which will depend on demand for the invention and the availability of noninfringing substitutes.¹⁶ Patents are “widely considered essential . . . to provide appropriate incentives for innovation.”¹⁷ They encourage investment in innovation by allowing inventors to reap a higher reward for their inventions during the patent term.¹⁸

Patents are granted by the U.S. Patent and Trademark Office (“PTO”) for inventions that are new, useful, and nonobvious.¹⁹ For the duration of the patent term,²⁰ its holder may bring suit against infringers seeking damages and injunctive relief.²¹ Unauthorized use, manufacture, sale, or importation of a patented invention constitutes infringement that can be challenged in federal district courts, resulting in damages and/or a permanent injunction.²²

15. U.S. CONST. art. I, § 8, cl. 8.

16. See Mark A. Lemley & Carl Shapiro, *Patent Holdup and Royalty Stacking*, 85 TEX. L. REV. 1991, 1997 (2007) (discussing the relevance of noninfringing substitute goods to reasonable royalty rates); see also Roger D. Blair & Thomas F. Cotter, *Rethinking Patent Damages*, 10 TEX. INTELL. PROP. L.J. 1, 13–14 (2001) (noting the effect noninfringing substitutes should have on damages calculations before discussing the difficulty of assessing substitutability).

17. JACKSON ET AL., *supra* note 2, at 922; see also Mark A. Lemley, *Ex Ante Versus Ex Post Justifications for Intellectual Property*, 71 U. CHI. L. REV. 129, 130 (2004).

18. See *Pfaff v. Wells Elecs., Inc.*, 525 U.S. 55, 63 (1998) (“[T]he patent system represents a carefully crafted bargain that encourages both the creation and the public disclosure of new and useful advances in technology, in return for an exclusive monopoly for a limited period of time.”).

19. 35 U.S.C. §§ 101–03 (2012) (detailing subject matter, novelty, and nonobviousness requirements). In addition, patents require disclosure of the invention sufficient to allow others to reproduce it upon expiration of the right. 35 U.S.C. § 112 (2012).

20. Currently, the patent term lasts twenty years from the date of application. 35 U.S.C. § 154(a)(2) (2012).

21. See 35 U.S.C. §§ 283–84 (2012) (allowing courts to “grant injunctions in accordance with the principles of equity” and compensatory and punitive damages).

22. 35 U.S.C. § 271(a) (2012) (Infringement occurs when someone “without authority makes, uses, offers to sell, or sells any patented invention, within the United States or imports into the United States any patented invention” during the patent term). The statute

In addition, a patent holder can seek to exclude infringing imports from the domestic market by bringing suit at the International Trade Commission (“ITC”) and proving importation of articles that infringe U.S. patents.²³ A U.S. patent cannot be used to stop infringing conduct abroad; the patent laws do not apply extraterritorially.²⁴ This is one reason the Patent Act designates importation of infringing goods as an act of infringement as well.²⁵

The patent grant results in the social benefits associated with spurring innovation that would not have occurred—or would have occurred later—but for the incentive²⁶ as well as allowing others to benefit from—and build upon—the information contained in the disclosure.²⁷ There are also social costs, such as diminished access to the invention during the patent term for would-be users and downstream innovators engaged in incremental innovation. The diminished access is a result of the higher prices a patent holder can command during the patent term. The utilitarian analysis of the

was amended in 1994 to include importation as a means of infringement. *See* Uruguay Round Agreements Act, sec. 533, § 271, Pub. L. No. 103-465, 108 Stat. 4809, 4988–90 (1994).

23. Complaints may be initiated at the ITC alleging sale for importation or U.S. sales following importation of patented products or products that are produced through a patented process. 19 U.S.C. § 1337(a)(1)(B) (2012). The provision also outlaws importation of copyrighted materials. *Id.* Subsequent provisions outlaw importation of articles that violate U.S. trademarks or registered semiconductor chip masks, § 1337(a)(1)(C)–(D), and, pursuant to a 1999 amendment, articles protected by design patents, § 1337(a)(1)(E).

24. *Pellegrini v. Analog Devices, Inc.*, 375 F.3d 1113, 1117 (Fed. Cir. 2004). However, the globalization and fragmentation of manufacturing supply chains has resulted in a changing definition of what constitutes extraterritorial application of patent laws and an expanded understanding of what constitutes infringing activity subject to U.S. patent law. Timothy R. Holbrook, *Territoriality and Tangibility after Transocean*, 61 EMORY L. J. 1087 (2012) (discussing expanded extraterritoriality); Timothy R. Holbrook, *Extraterritoriality in U.S. Patent Law*, 49 WM. & MARY L. REV. 2119 (2008) (suggesting that decisions involving extraterritorial application of U.S. patent protection should look to foreign patent law); *see also* *Transocean Offshore Deepwater Drilling, Inc. v. Maersk Contractors USA, Inc.*, 617 F.3d 1296, 1309 (Fed. Cir. 2010) (holding that an offer to sell that was made abroad, but contemplated a sale “within the U.S., for delivery and use within the U.S. constitutes an offer to sell within the U.S. under § 271(a)”; *NTP, Inc. v. Research in Motion Ltd.*, 418 F.3d 1282, 1317–18 (Fed. Cir. 2005) (affirming a finding of infringement of patented system despite location of Relay in Canada but rejecting infringement of method claims where the Relay step was performed in Canada).

25. 35 U.S.C. § 271(a). Even without the importation provision, any of the other prohibited actions (such as use or sale) of imported, infringing goods would have been actionable. Designation of importation and offers to sell as infringing activity was a result of the TRIPS Agreement. *See* Timothy R. Holbrook, *Territoriality Waning? Patent Infringement for Offering in the United States to Sell an Invention Abroad*, 37 U.C. DAVIS L. REV. 701, 722 (2004).

26. Michael Abramowicz & John F. Duffy, *The Inducement Standard of Patentability*, 120 YALE L.J. 1590 (2011).

27. Jeanne C. Fromer, *Patent Disclosure*, 94 IOWA L. REV. 539 (2009); *see also* Sean B. Seymore, *The Teaching Function of Patents*, 85 NOTRE DAME L. REV. 621 (2010).

costs and benefits of a patent system is the dominant one among patent law scholars,²⁸ attractive because it suggests that there is an ideal balance of interests and that—where that balance is not promoted—the law can be tailored to do so.²⁹ These tailoring measures are usually adaptations of the limits that already exist in patent law. Thus, from the basic structure and trade-off of patent law, scholars, courts, and the government have studied, proposed, and engaged in tailoring measures to address specific instances in which the law has led to holdup or other problematic outcomes that fail to meet the theoretical ideal balance of interests.³⁰

One limitation on patent holders' exclusive rights is the doctrine of exhaustion, which frees from infringement downstream sales and uses of inventions initially sold with the particular patent holder's authorization.³¹ As a result, the patent holder need not "authorize" each and every sale for subsequent sales and uses to be non-infringing, and would-be purchasers need not research and understand myriad restrictions attached to all the goods they purchase.³² The exhaustion doctrine thus reduces transaction costs of disposing of purchased goods while vindicating ideas of consumer rights in the goods they own. It also limits a patent holder's control over sales and uses that may compete with her own sales, thereby fostering competition in resale markets. Another explanation for exhaustion puts it in

28. ROBERT P. MERGES, JUSTIFYING INTELLECTUAL PROPERTY 2–3 (2011).

29. Sarah R. Wasserman Rajec, *Evaluating Flexibility in International Patent Law*, 65 HASTINGS L.J. 153, 160 (2013).

30. See, e.g., DAN L. BURK & MARK A. LEMLEY, THE PATENT CRISIS AND HOW THE COURTS CAN SOLVE IT (2009); Dan L. Burk & Mark A. Lemley, *Policy Levers in Patent Law*, 89 VA. L. REV. 1575 (2003); Michael W. Carroll, *One Size Does Not Fit All: A Framework for Tailoring Intellectual Property Rights*, 70 OHIO ST. L.J. 1362 (2009); Anna B. Laakmann, *An Explicit Policy Lever for Patent Scope*, 19 MICH. TELECOMM. & TECH. L. REV. 43 (2012) (suggesting patentable subject matter doctrine as a potential policy lever for calibrating patent scope); Gideon Parchomovsky & Michael Mattioli, *Partial Patents*, 111 COLUM. L. REV. 207 (2011) (suggesting two new patent forms that would mitigate the social costs of traditional patents and increase access by subsequent inventors); Sarah R. Wasserman Rajec, *Tailoring Remedies to Spur Innovation*, 61 AM. U. L. REV. 733, 742–48 (2012) (suggesting that courts analyze the public interest in encouraging innovation and promoting access in determining the appropriateness of a permanent injunction when a patent holder lacks market share).

31. See *Quanta Computer, Inc. v. LG Elecs., Inc.*, 533 U.S. 617, 625 (2008); see also Amelia Smith Rinehart, *Contracting Patents: A Modern Patent Exhaustion Doctrine*, 23 HARV. J.L. & TECH. 483, 484 (2010) ("The right of a purchaser to control the downstream sale and use of patented goods without obtaining consent from the patent owner conflicts with the right of a patent owner to exclude others from practicing his invention when selling or using those goods."); *infra* Part III.

32. Molly Shaffer Van Houweling, *The New Servitudes*, 96 GEO. L.J. 885, 914 (2008) (discussing information-processing obstacles and costs associated with servitudes on chattel).

terms of what the inventor deserves—namely, a single reward for each product she sells—and no more.³³ Exhaustion has developed as a common law doctrine in the United States,³⁴ and is consistent with property law’s aversion to restrictive servitudes³⁵ and restraints on alienation,³⁶ in addition to economic ideas about reducing transaction costs.³⁷ Typically called simply “exhaustion,” the doctrine has generally been applied only to goods that have been sold within the United States,³⁸ and this Article refers to it as “national exhaustion” to distinguish it from international exhaustion.

International patent exhaustion would extend the current rule to patented goods first sold abroad, so that the first unconditional, authorized sale anywhere in the world would exhaust a patent holder’s rights in the U.S. patent.³⁹ Currently, foreign sales do not exhaust domestic patent rights and unauthorized importation constitutes infringement. This position appears consistent with a traditional understanding of the scope of rights associated with a patent. Each nation’s patent law has historically provided nothing more or less than territorial exclusion rights, whereas a rule of international

33. *See infra* Part IV.

34. *See infra* Part IV. A similar doctrine is that of “implied license,” according to which the sale of a good comes with an implied license to use, repair, and sell it according to the common and reasonable expectations of the buyer. Although the system in the United States adheres more closely to the exhaustion formulation, the language of applied license is still used to draw the lines between “making” a new patented product and “using” a previously purchased product. *See, e.g.,* *Bowman v. Monsanto*, 133 S. Ct. 1761 (2013). Exhaustion for copyright also developed as a common law doctrine, but was later codified. *See* discussion *infra* Section V.A.

35. *See* Michael J. Madison, *Law as Design: Objects, Concepts, and Digital Things*, 56 CASE W. RES. L. REV. 381, 430–34 (2005) (discussing exhaustion cases and questioning the theoretical basis for limiting servitudes by recasting use restrictions as a type of product design).

36. *See, e.g.,* Herbert Hovenkamp, *Post-Sale Restraints and Competitive Harm: The First Sale Doctrine in Perspective*, 66 N.Y.U. ANN. SURV. AM. L. 487, 493 (2011) (noting that national exhaustion reflects “the common law’s strong policy against restraints on alienation . . .”); *see also infra* Part IV (discussing the doctrinal development of national exhaustion).

37. *See* Van Houweling, *supra* note 32, at 915.

38. *See infra* Part IV.

39. International exhaustion would not apply to goods made without authorization—for such goods importation constitutes infringement regardless. Nor would it affect the treatment of goods that a U.S. patent holder has authorized someone to import—this already renders the importation (and subsequent sales and use) non-infringing. Rather, an international exhaustion regime would mean that an authorized sale abroad exhausts domestic patent rights so that importation does not constitute infringement, even if the authorization was limited to sales in a particular foreign market—it is subsequent uses and sales that would not be subject to claims of infringement.

exhaustion frustrates territorial exercise of those rights.⁴⁰ A strictly national rule of exhaustion allows a patent holder to control the first sale of patented goods in the domestic market without competition from unauthorized imports, thus securing the market and allowing her to reap whatever reward the market will bear. In contrast, international exhaustion permits those who have bought patented goods abroad to use and sell them domestically without authorization from the patent holder, diminishing the patent holder's control of the domestic market. Just as a rule of exhaustion limits rewards to an inventor, so would a move from a rule of national exhaustion to one of international exhaustion.

However, the factors motivating a national exhaustion rule can also apply to goods purchased abroad. The nature of manufacturing, sales, and personal life are ever more globalized, making the information and transaction cost arguments from national exhaustion applicable to international transactions as well.⁴¹ Margreth Barrett espouses the single reward argument in the international context and suggests that inventors can choose whether to place their goods into the stream of commerce abroad, but once they do, the opportunity for further reward should be extinguished.⁴² And arguments about the proper scope of exhaustion and in what circumstances it can be contracted around also translate to the international setting.⁴³ Thus, although at first glance patent laws are territorial and would appear not to support a rule of international exhaustion, the theories that support it in a domestic

40. See ADELMAN ET AL., *GLOBAL ISSUES IN PATENT LAW* 3 (2011) (“[T]here is no such thing as a ‘global patent.’”).

41. See *infra* Part IV (discussing the territorial limitations—within the United States—at issue in early exhaustion cases).

42. Margreth Barrett, *The United States’ Doctrine of Exhaustion: Parallel Imports of Patented Goods*, 27 N. KY. L. REV. 911, 965 (2000) (“The key is that the patentee chose to make the initial sale. If a sale is not sufficiently beneficial, or undercuts his financial position in other sales, the patentee may refrain from making it.”). Barrett’s article is from 2000, when the U.S. position on international doctrine was somewhat less clear. She argued that the United States had a modified international exhaustion regime on the basis of doctrinal development to that point. See *id.*

43. There is nothing specific to domestic transactions that changes the relevance of arguments that, on the one hand, allowing for contractual circumvention of exhaustion when there is notice will result in more efficient transactions, or, on the other hand, the associated information and transaction costs attached to goods circulated in high volume are so high that consumers are not able to meaningfully distinguish them, and will therefore accept restrictions they are unaware of and that are ultimately inefficient. Compare Vincent Chiappetta, *Patent Exhaustion: What’s It Good For?*, 51 SANTA CLARA L. REV. 1087 (2011) (arguing that exhaustion ought to be a default rule that can be contracted around), with Van Houweling, *supra* note 32, at 914–15 (discussing the notice and information costs associated with allowing servitudes to run with chattel).

setting apply equally internationally, and a historical understanding of patent law does little to justify the distinction.⁴⁴

B. TRADE LAW PERSPECTIVE

Patent law interests only partially explain the arguments in favor of exhaustion. The choice between a national and international exhaustion regime sits squarely at the intersection of patent and trade law and theory. And from a distance, the patent law and trade law views on international exhaustion appear to be in conflict.⁴⁵ However, there are trade arguments on both sides of the issue as well. In the context of international trade law, national exhaustion may be considered a barrier to efficient trade on the one hand, or a means of price discrimination that accords greater access to countries with lower incomes, on the other.

Modern international trade law seeks to increase global welfare by lowering barriers to trade and encouraging competition. Increased trade leads countries to specialize in industries in which they have a comparative advantage over others.⁴⁶ This specialization, in turn, leads to scaling of industries, which achieves further efficiencies.⁴⁷ Comparative advantage may arise from differences in the abundance of factors of production, such as labor (skilled or unskilled), arable land, or even innovation—either in general

44. See *infra* Part III. Just as there is nothing specific to patent law that requires only national exhaustion, in the copyright context, the Court in *Kirtsaeng* explained that, although publishers might like to charge different prices in different markets, they could “find no basic principle of copyright law that suggests that publishers are especially entitled to such rights.” *Kirtsaeng v. John Wiley & Sons, Inc.*, 133 S. Ct. 1351, 1370 (2013).

45. Abdulqawi A. Yusuf & Andrés Moncayo von Hase, *Intellectual Property Protection and International Trade: Exhaustion of Rights Revisited*, 16 *WORLD COMPETITION* 115, 116 (1992) (noting “the tension between free trade, which is a basic objective of the international trading system, and the exercise by private entities of the exclusive rights conferred under intellectual property legislation,” and its manifestation in the application of exhaustion, in particular).

46. KRUGMAN ET AL., *INTERNATIONAL ECONOMICS: THEORY & POLICY* 24 (2012). The book gives an example in which the United States produces 10 million roses for Valentine’s Day but, with the same resources, could have produced 100,000 computers instead. In contrast, sunny Columbia can produce 10 million roses easily, and devoting those resources to making computers would only yield 30,000 computers. The difference in price ratios means that roses are relatively more expensive to produce in the United States in winter than in Columbia, and vice versa with respect to computers. Trade allows the United States to stop growing winter roses and Columbia to shift its resources out of computer manufacturing. Both countries are better off than before. This is the (very) basic explanation of the gains from trade based on comparative advantage, generally attributed to the economist David Ricardo. See Sykes, *supra* note 6, at 55.

47. KRUGMAN, *supra* note 46, at 24.

or for specific industries.⁴⁸ Of course, if transportation costs are high or countries impose large tariffs on imports, it is harder for foreign goods to compete, even if they are made more efficiently than domestic goods. If the costs associated with trade are low, however, we can expect greater efficiency in manufacturing, leading to higher social welfare.⁴⁹ Tariffs are barriers to efficient trade because they artificially inflate the prices of goods from abroad and result in suboptimal levels of specialization.

The traditional explanation for the benefits from international trade and the barriers presented by tariffs underlies the Generalized Agreement on Tariffs and Trade (“GATT”), a multilateral agreement signed in 1947, the purpose of which was the “substantial reduction of tariffs and other trade barriers and . . . the elimination of preferences, on a reciprocal and mutually advantageous basis.”⁵⁰ The agreement and subsequent rounds of negotiation resulted in thousands of tariff reductions affecting tens of billions of dollars of trade.⁵¹ Further efforts led to establishment of the World Trade

48. Sykes, *supra* note 6, at 55–56 (noting that “nations with lots of innovators and skilled workers may tend to have comparative advantage in producing relatively new products, but over time comparative advantage may shift toward ‘imitator’ nations with less-skilled but cheaper work forces”); see also Anupam Chander, *How Law Made Silicon Valley*, 63 EMORY L.J. 639 (2014) (describing how local laws have given rise to the United States’ comparative advantage in internet innovation).

49. Lowering tariffs is Kaldor–Hicks efficient—that is, it is a move that does not make everyone universally better off, but provides a net gain to the world when taking into account the losses. For example, workers in an industry that does not have a competitive advantage will be worse off if their plants close due to competition from imports. One solution to this is to pay the “losers” from trade out of the surplus. Trade Adjustment Assistance in the United States is such a scheme, providing some form of financial and educational benefits to workers in industries affected by trade. See Sykes, *supra* note 6, at 61 (“the removal of impediments to trade is likely to be Kaldor-Hicks efficient, but not in general Pareto efficient”); JACKSON ET AL., *supra* note 2, at 669–71 (describing Trade Adjustment Assistance).

50. GATT, *supra* note 1, pmbl.

51. See Douglas A. Irwin, *International Trade Agreements*, in THE CONCISE ENCYCLOPEDIA OF ECONOMICS 298 (David R. Henderson ed., 2008), available at <http://www.econlib.org/library/Enc/InternationalTradeAgreements.html> (explaining that the “annual gain from removal of tariff and nontariff barriers to trade as a result of the Uruguay Round Agreement . . . has been put at about \$96 billion, or 0.4 percent of world GDP”). The negotiations that led to the World Trade Organization (“WTO”) that subsumed and expanded on GATT recognized that as tariffs were reduced, other non-tariff barriers to trade would become more relevant obstructions to trade. One such potential barrier was intellectual property. The TRIPS Agreement addresses the barrier of different levels of IP protection and requires all member countries to implement a baseline level of intellectual property rights, but leaves it to members to determine the appropriate stance on exhaustion. Frederick M. Abbott, Second Report (Final) to the Committee on International Trade Law of the International Law Association on the Subject of the Exhaustion of Intellectual Property Rights and Parallel Importation (Sept. 6, 2000), in 69TH CONFERENCE OF THE

Organization and associated agreements to reduce tariffs and non-tariff barriers to trade as a means of enhancing welfare worldwide.⁵² The TRIPS Agreement that forms part of the WTO, for example, characterizes variations in the protection of intellectual property rights as a non-tariff barrier to trade, and seeks to minimize such variations through minimum requirements for protection of intellectual property rights.⁵³ The removal of these various trading restrictions has fostered the growth of multinational companies and transnational supply chains.⁵⁴

From a trade viewpoint, a national exhaustion rule may be characterized as a trading cost that hinders efficient downstream sales and uses of products because of the requirement to seek authorization for each contemplated resale market. This viewpoint appears to pit patent law against trade. For example, Frederick Abbott describes the national exhaustion regime as a claim that “the value of protecting intellectual property at the national and regional level exceeds the value to the world economic system of open trade among nations and regions.”⁵⁵ A rule of international exhaustion, then, would limit the patent right after the patent holder authorizes sale in one country, paving the way for subsequent importation to—and resale in—all WTO member countries. This would result in more efficient manufacture and distribution through increased competition.⁵⁶ However, because even international exhaustion allows monopoly control over initial market placement, the trade literature demonstrates concern over a possible loss in global welfare if international exhaustion leads lower-income markets to be unserved or underserved.⁵⁷ In other words, unlike the typical comparative advantage story, patent holders can choose not to compete with imports by

INT'L LAW ASSOC., July 2000, at 13 (explaining that “[t]he TRIPS Agreement was designed to assure an adequate level of legal protection for the technology and expression components of goods and services in world trade.”).

52. See Marrakesh Agreement Establishing the World Trade Organization pmbli., Apr. 15, 1994, 1867 U.N.T.S. 154 [hereinafter Marrakesh Agreement] (stating desire of members to substantially reduce tariffs and other barriers to trade in order to raise standards of living and employment levels, expand the production of and trade in goods and services, and allow for optimal use of world resources).

53. Agreement on Trade-Related Aspects of Intellectual Property Rights, Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1C, 1869 U.N.T.S. 299 [hereinafter TRIPS].

54. See Irwin, *supra* note 51.

55. Abbott, *supra* note 51, at 13.

56. See, e.g., Frederick M. Abbott, *Parallel Importation: Economic and Social Welfare Dimensions*, INT'L INSTITUTE FOR SUSTAINABLE DEVELOPMENT (2007), http://www.iisd.org/pdf/2007/parallel_importation.pdf.

57. See discussion *infra* Section V.B.

choosing not to sell abroad, thus undermining, rather than enhancing, the benefits of trade.⁵⁸

III. RECONCILING PATENT AND TRADE THEORY: EVOLUTION IN TANDEM

Although at first glance patent law supports rights that are confined to national borders, and trade law aims to diminish the relevance of borders, the full story is more complicated. Each discipline offers counterarguments to its respective “first glance” position. However, an understanding of seventeenth century patent and trade law gives context to the emphasis patent law has placed on domestic enforcement of rights. This understanding shows how national exhaustion is built on protectionist ideas that have consistently been excised from patent law and leads us to question whether it is still justified.

The roots of patent law are entwined with those of international trade, and though their guiding theories have evolved, it has been an evolution in tandem. From mercantilist mechanisms of domestic market and industry control to free market mores that do not discriminate based on the origin of goods and encourage a global marketplace, the natures of patent laws and trade regulation have changed to fit evolving ends. And like patent law, trade law represents a balancing of interests.⁵⁹ The content of those interests and the level and type of regulation used to promote them are radically different now than during the seventeenth century. In trade, strong government involvement and restrictive border measures have given way to free markets, nearly nonexistent tariffs, and even reductions in non-tariff barriers to trade. In patent law, invention has become an essential requirement where before a willingness to introduce a new product was more important.⁶⁰ The origin of an inventor and the place of invention are no longer relevant to patentability

58. See *infra* note 213 and accompanying text. The economic arguments for and against international exhaustion will be discussed in Part V; here, it suffices to note that there is a counterargument to the unequivocal lowering of barriers to trade that has characterized much of modern trade law and theory.

59. “Since the time of the ancient Greek philosophers,” writes Douglas Irwin, “there has been a dual view of trade: a recognition of the benefits of international exchange combined with a concern that certain domestic industries (or laborers, or culture) would be harmed by foreign competition.” Douglas A. Irwin, *A Brief History of International Trade Policy*, LIBRARY OF ECONOMICS AND LIBERTY (Nov. 26, 2001), <http://www.econlib.org/library/Columns/Irwintrade.html>.

60. The Case of Monopolies, (1603) 77 Eng. Rep. 1260 (K.B.); 11 Co. Rep. 84 b. The Statute of Monopolies limited the ability of the sovereign to grant monopolies but included an exception for invention patents, thus carving out inventions as deserving of privileges that were otherwise becoming frowned upon. Statute of Monopolies, 1624, 21 Jac., c. 3 (Eng.).

standards.⁶¹ And provisions meant to ensure local manufacture and domestic availability of goods have given way to laws that allow patent holders to enforce patents they do not practice.⁶² These shifts away from protectionist methods of controlling markets are evident in modern trade and patent law. From this viewpoint, a rule of limited, national exhaustion appears as one more vestige of a national policy that regulated the market in order to entice the production and sale of innovative products in the patent-granting country. The elimination of such measures from trade law suggests their elimination from patent law as well. In addition, other changes in patent law consistent with free trade ideas have rendered a national exhaustion rule ineffective at achieving protectionist purposes. Situating the protection of national markets for sales in patented goods in its historical context makes a strong theoretical case for an international exhaustion rule.

61. William Hubbard explains:

[U]nder the Patent Act of 1793, U.S. patents could only issue to “a citizen or citizens of the United States.” In 1800, Congress amended the Patent Act to extend patent eligibility to foreign inventors, but only if those inventors resided in America for two years and took an oath of their intention to become United States citizens. For more than forty years, the United States offered no patent protection to the discoveries of nonresident foreign inventors, so that “foreign inventions could be introduced to America without the additional cost of the inventor’s monopoly rights.” In 1836, Congress amended the Patent Act to allow nonresident foreign inventors to obtain U.S. patents, but simultaneously introduced a protectionist scheme of patent application fees. The fee schedule required that a U.S. citizen pay \$30 to file a patent application, a “subject of the King of Great Britain” pay \$500, and any other nonresident noncitizen pay \$300 to file an application for a U.S. patent. Protectionist application fees remained in place until 1870, when Congress established uniform fees for all patent applicants regardless of nationality or residency.

William Hubbard, *Competitive Patent Law*, 65 FLA. L. REV. 341, 356–57 (2013) (citations and quotations omitted). In addition, until 1994, U.S. inventors had advantages over foreign patent applicants in establishing relevant invention dates. *Id.* at 357. However, the TRIPS Agreement requires that patents be available “without discrimination as to the place of invention . . .” TRIPS, *supra* note 53, art. 27. As a result of the TRIPS Agreement, the United States changed its law to allow use of foreign activity to prove invention dates. More recently, the United States has eliminated requirements of proving dates of invention in passing the America Invents Act, which requires that a patent issue to the first inventor to file as opposed to the first to invent. Leahy–Smith America Invents Act, Pub. L. No. 112-29, 125 Stat. 284 (2011).

62. For example, 35 U.S.C. § 271(d)(4) was enacted in 1988 allowing recovery for infringement even when the patent holder did not practice the patent and refused to license it. Patent Misuse Reform Act of 1988, Pub. L. No. 100-703, 102 Stat. 4674.

A. MERCANTILIST TRADE AND PATENT LAWS

The availability of goods from other lands has been recognized as desirable for thousands of years.⁶³ Patent law, too, has a long history; its origins have been traced to fifteenth century Venice.⁶⁴ This Section focuses on theories that emerged as dominant in the seventeenth and eighteenth centuries and which coincide with the rise of the industrial era.⁶⁵ During this time, the scale of trade and technological innovation grew dramatically, concurrent with “the rise of nation-states as political entities.”⁶⁶ Although there were parallel themes in other countries, this Section focuses on England, both because it is representative and because English patent law provided the model for United States law.

The trade literature in England before and during the Industrial Revolution included varied ideas on the benefits of trade, but certain interconnected themes run through it. These pro-trade and pro-regulation views are broadly referred to as mercantilism. Mercantilist literature placed

63. DOUGLAS A. IRWIN, *AGAINST THE TIDE* 11 (1996) (quoting 12 PLUTARCH, *On Whether Water or Fire is More Useful*, in PLUTARCH'S *MORALIA* 299 (Loeb Classical Library 1927) (“the sea brought the Greeks the vine from India, from Greece transmitted the use of grain across the sea, from Phoenicia imported letters as a memorial against forgetfulness, thus preventing the greater part of mankind from being wineless, grainless, and unlettered”). And for just as long, it has been recognized that limits on that trade might be desirable as well. *Id.* at 14–15 (discussing Aristotle’s suggestion that “import trade should stop at the provision of certain essential items, such as food for consumption and timber for shipbuilding”).

64. CHRISTINE MACLEOD, *INVENTING THE INDUSTRIAL REVOLUTION, THE ENGLISH PATENT SYSTEM, 1660–1880*, at 10 (1988). Earlier exclusive grants for creative behavior have also been chronicled. *See, e.g.*, Ramon A. Klitzke, *Historical Background of the English Patent Law*, 41 J. PAT. OFF. SOC’Y 615, 617 (1959) (describing a decree by Roman Emperor Constantine in A.D. 337 exempting “artisans of certain trades” from all civil duties for working on their craft “and instructing their sons” in it). Klitzke also cites an account of an exclusive right to produce for inventors from 500 B.C.: “in Sybaris, a Greek colony famous for luxurious living and self-indulgence, if any confectioner or cook invented a peculiar and exclusive dish, no one else was allowed to make it for a year.” *Id.* at 617 (citing Athenaeus, *The Deipnosophists*, in 3 BOHN’S CLASSICAL LIBRARY 835 (1854)).

65. *See* John F. Duffy, *Inventing Invention: A Case Study of Legal Innovation*, 86 TEX. L. REV. 1, 20–23 (2007) (describing fourteenth and fifteenth century grants of exclusivity as “proto-patents” and “quasi-patents,” before suggesting that mid-fifteenth century Venetian law provided the model for other European countries to institute invention-based patent grants (quoting Hansjoerg Pohlmann, *The Inventor’s Right in Early German Law: Materials of the Time from 1531 to 1700*, 43 J. PAT. OFF. SOC’Y 121, 122 (1961); F.D. Prager, *The Early Growth and Influence of Intellectual Property*, 34 J. PAT. OFF. SOC’Y, 106, 123 (1952))).

66. IRWIN, *supra* note 63, at 28 (generally providing excellent incarnations of theories that gained momentum and began to have worldwide impact when the industrial revolution led to a remarkable expansion in both trade and material amenable to patenting); MACLEOD, *supra* note 64 (same); Klitzke, *supra* note 64 (same).

particular value on regulating trade in order (1) to reach a favorable balance of trade—promoting national wealth and economic growth through the accumulation of gold and silver, (2) to increase employment, and (3) to protect and foster domestic industry.⁶⁷ Although mercantilism emphasized the potential benefits of trade to domestic interests, government regulation was considered important to counter situations where “merchants might pursue profitable commercial activities that could prove detrimental to the nation as a whole.”⁶⁸ At the same time, mercantilist thought was by no means entirely based on consumer interests. The result, explains Thomas Nachbar, was that “not only profit but also free competition was discouraged, for while competition might maximize supply, it would result in prices too low for craftsmen to live on.”⁶⁹ According to the mercantilists, national governments could provide incentives that would shape the actions of traders to enrich the nation as a whole by encouraging exports while discouraging over-consumption of luxury imports.⁷⁰ This in turn would maintain a favorable balance of trade. It also encouraged a composition of trade that would promote economic development and employment in manufacturing.⁷¹

The value of a favorable balance of trade was that a net exporting country became richer relative to other countries because of its increase in gold and silver stores.⁷² The pursuit of a favorable balance of trade demonstrates how mercantilists were focused on the benefits of trade to a particular nation and the protection of national interests.⁷³ In this sense, mercantilists saw international trade as a zero-sum game. Regulation of the composition of traded goods was one of the means mercantilists suggested for controlling the balance of trade. For example, importing raw goods that were relatively cheap, promoting domestic manufacturing, and exporting the resulting goods would increase England’s store of wealth. Regulation of the composition of trade served other purposes as well, promoting employment and the advance of domestic industry. The prevailing view was that the export of raw materials that would be used by manufacturers abroad was not

67. IRWIN, *supra* note 63, at 26 (quoting A. W. COATS, *Mercantilism: Economic Ideas, History, Policy*, in ON THE HISTORY OF ECONOMIC THOUGHT 40, 46 (1992)).

68. *Id.* at 31–32.

69. Thomas B. Nachbar, *Monopoly, Mercantilism, and the Politics of Regulation*, 91 VA. L. REV. 1313, 1318–19 (2005).

70. IRWIN, *supra* note 63, at 32–33.

71. *Id.* at 33–34 (discussing low or zero-interest government loans to merchants who were engaged in export).

72. *Id.* at 34–35.

73. *Id.*

in the national interest, whereas exporting manufactured goods was a benefit.⁷⁴ As Irwin explains, mercantilists thought that “[b]ecause processing activities generated more value and employment than other sectors, the economy should be oriented toward importing raw materials and exporting finished goods.”⁷⁵

It is also interesting to note the secondary role played by the interests of consumers. While international trade certainly made a greater variety of goods available to a greater swath of society, this was not seen as a driving interest for trade law. Trade regulation was effected through the grants of “exclusive trade privileges” of different sorts, including grants that resemble modern patent grants to inventors or grants for inventions and industries that the recipient had introduced to England, regardless of inventorship.⁷⁶ All of these exclusive grants were termed “letters patent,” although this association was not necessarily beneficial—exclusive grants came under heavy criticism as they were frequently bestowed by the Crown upon favorite merchants.⁷⁷ The passage of the Statute of Monopolies in 1623 aimed to curb abusive grants of letters patent by the Monarchy, but did not necessarily end the use of monopoly grants for trade regulation by the state.⁷⁸

Because there was no formal distinction between patents for invention and these other grants, it is no stretch to say that our patent system has its roots in trade law. Mercantilist values informed the development of the patent system and are evident in many of its early characteristics. Holger

74. *Id.* at 38 (suggesting that this is a proposition with which “[v]irtually all mercantilists would agree”).

75. *Id.*

76. Nachbar, *supra* note 69, at 1323–25 (describing four categories of such privileges, all of which were called “letters patent”: (1) patent-type privileges, (2) the exemption from other regulations, such as requirements to use English shipping or export prohibitions, (3) rights to supervise a particular trade, and (4) common trade monopolies unrelated to inventions).

77. *See* Duffy, *supra* note 65, at 25 (detailing how monopolies were granted for commonly available commodities such as “vinegar, salt, horns, iron, bags, [and] bottles”); Klitzke, *supra* note 64, at 632–33.

78. Scholars also point to the earlier *Case of Monopolies*, invalidating a monopoly on the manufacture and import of playing cards for its role in curbing abusive monopoly grants. *See, e.g.,* Duffy, *supra* note 65, at 26; *see also* Nachbar, *supra* note 69, at 1327–34 (providing a detailed recounting of the case and pointing to routine grants of exclusive trade privileges that occurred for years following the *Case of Monopolies* to argue that the case was “an assault on the monarchy, not on exclusive trade privileges”). For a discussion of one later, state-granted monopoly, see William A. Pettigrew, *Free to Enslave: Politics and the Escalation of Britain’s Transatlantic Slave Trade, 1688–1714*, 64 WM. & MARY Q. 3 (2007) (discussing the Royal African Company’s monopoly on slave trade, the political fight to end it, and the resulting expansion of slave trade).

Hestermeyer suggests that patent law developed primarily as “a means to promote the industrial advancement of the nation.”⁷⁹ Similarly, Stephen Van Dulken writes that “[t]he patent system in England gradually evolved out of the royal prerogative used to encourage new trades, especially from abroad.”⁸⁰ The English progenitors of patents, “letters of protection,” were meant to encourage the development of new crafts and industry in the country. Letters of protection were granted “by the English crown to named foreign craftsmen, mainly weavers, saltmakers and glassmakers, with the intention of encouraging them to settle in England and transmit their skills to native apprentices.”⁸¹ The characteristics of these grants of privilege, and later monopolies, to those who brought industrial know-how to England reveal them as encouraging employment for citizens, self-sufficiency through technology transfer, and curbing the flow of money out of England.⁸²

Local manufacture and the promise to take apprentices were seen as the important gains from patent grants.⁸³ The requirement that a patent be worked locally is consistent with mercantilist ideas about the balance of trade by ensuring that manufacture was done in England. Local working encouraged the importation of raw materials and the export of worked materials. It also supported domestic industry. In particular, by requiring that patent holders take apprentices, patent grants ensured that the industry could continue to operate even following the expiration of the patent term.⁸⁴

79. HOLGER HESTERMAYER, HUMAN RIGHTS AND THE WTO, THE CASE OF PATENTS AND ACCESS TO MEDICINES 21 (2007).

80. STEPHEN VAN DULKEN, BRITISH PATENTS OF INVENTION 1617–1977, A GUIDE FOR RESEARCHERS 2 (1999). The first patent monopoly in England may have been granted in 1449, to John of Utynam, who returned to England from Flanders to “instruct divers lieges of the king in many arts never used in the realm besides glass making,” and who was thereby allowed the right to grant or withhold consent for others to practice such arts for twenty years. Klitzke, *supra* note 64, at 627 (quoting ARTHUR ALLAN GOMME, PATENTS OF INVENTION: ORIGIN AND GROWTH OF THE PATENT SYSTEM IN BRITAIN 5–6 (1946)).

81. MACLEOD, *supra* note 64, at 10. MacLeod explains how the fifteenth-century Venetian patent system spurred the development of other, modern patent systems: “Emigrant Italian craftsmen, seeking protection against local competition and guild restrictions as a condition of imparting their skills, disseminated knowledge of their patent systems around Europe.” *Id.* at 11.

82. Klitzke, *supra* note 64, at 628 (citing 1 WALKER ON PATENTS 3 (Anthony William Deller ed., 1937) (citing a letter from Chancellor Moreton to Parliament during the reign of Henry VII)).

83. Klitzke, *supra* note 64, at 624 (explaining how patent grants were conditioned on taking apprentices).

84. A number of scholars have suggested that the purpose of the fourteen-year patent term was to allow for teaching two generations of apprentices. *See, e.g.*, MACLEOD, *supra* note 64, at 18; P.J. Federico, *Origin and Early History of Patents*, 11 J. PAT. OFF. SOC’Y, 292, 304 (1929) (“The term of apprenticeship was seven years. Fourteen years may have been chosen

The characteristics of early invention patents align with mercantilist trade purposes rather than focusing solely on encouraging innovation.⁸⁵ For example, invention was not the *sine qua non* of the patent that it is today. As Christine MacLeod explains, “[t]he connection between inventing and patenting is historically tentative; it only started to be firmly established in the second half of the eighteenth century.”⁸⁶ Instead, it was important that a merchant be introducing a previously unknown technology or good to England—this act, more than showing responsibility for invention, was of importance.⁸⁷ John Duffy further recounts how nonobviousness, a central characteristic of patentable inventions today, was of no import at all in the seventeenth century in England and did not become important there until the nineteenth century.⁸⁸ From the absence of these requirements, the

as the proper duration of a patent to allow for the teaching of several generations of apprentices.”). *But see* EDWARD COKE, *THE THIRD PART OF THE INSTITUTES OF THE LAWS OF ENGLAND: CONCERNING HIGH TREASON, AND OTHER PLEAS OF THE CROWN, AND CRIMINAL CAUSES* 184 (W. Clarke & Sons 1817) (1644) (suggesting that seven years was an appropriate duration for patents for inventions and noting that this was the length of a single apprenticeship); Edward C. Walterscheid, *Defining the Patent and Copyright Term: Term Limits and the Intellectual Property Clause*, 7 J. INTELL. PROP. L. 315, 326–27 (2000) (suggesting that the term limit was instead a compromise between those who favored the traditional monopoly term of twenty-one years and those, like Lord Coke, who thought seven years was a sufficient term).

85. MacLeod explains that the romanticized notion of the individual inventor, deserving of a patent grant, was not associated with seventeenth and early eighteenth century patenting:

There was no glory attached to being a patentee. The purchase of a patent was a commercial transaction. Patents were expensive to obtain, and nobody sought them without an economic end in view. This aim might have been to protect and exploit an invention; or it might have been to impress potential customers or investors; to escape the control of a guild, or to replace a guild’s protective cloak, when that began to grow threadbare and competition to increase.

MACLEOD, *supra* note 64, at 7.

86. *Id.*; *see also* Klitzke, *supra* note 64, at 624. *But see* Sean Bottomley, Patent Cases in the Court of Chancery, 1714–1758, at 14 (unpublished manuscript) (on file with author) (pushing the dating back to the first half of the eighteenth century by showing that some inventors in that period were obtaining patents and enforcing them in court).

87. The purpose remained the encouragement of introduction of inventions “into the realm,” rather than the encouragement of invention, *qua* invention. *See* Klitzke, *supra* note 64, at 627.

88. *See* Duffy, *supra* note 65, at 33. Duffy recounts the development of the doctrine of nonobviousness in the United States, tracing it to language imported from the French Patent Law of May 25, 1791 and enacted as part of the U.S. patent law in 1793. *Id.* at 35–36.

mercantilist values underlying early patent law are apparent: the availability of inventions was important; rewarding the inventor was far less so.⁸⁹

This discussion of pre-industrial age English patent law has not specifically addressed the prohibitions on importation that require a choice between a national and international rule of exhaustion. The reason for that should be clear; these early grants were aimed at encouraging domestic manufacture of goods. Where patents were granted for importation, however, they carried the exclusive right to it.⁹⁰ The strong control of imports and exports by the government meant that the idea that someone else might be able to bring in goods and compete with a patent holder during its term was not contemplated and would have run counter to the purposes of the patent. Patents secured the national market to the patent holder, but came with the requirement of domestic manufacture—a requirement that would have been vitiated by the import of manufactured goods.⁹¹ For

89. I do not mean to suggest that there was no interest in encouraging innovation, only that it was not the primary driving force behind regulations. *See, e.g.*, Jeremy Phillips, *The English Patent as a Reward for Invention: The Importation of an Idea*, 3 J. LEGAL HIST. 71, 74 (1982) (detailing a patent grant to George Cobham that states it is made “to encourage others to discover like good engines and devices.” (citation omitted)).

90. A sample of cases ruling on the circumstances in which patents for imported goods could be extended show the disfavor in which importation was held. *See* VALE NICHOLAS, *THE LAW AND PRACTICE RELATING TO LETTERS PATENT FOR INVENTIONS* 138–39 (2d ed. 1904). Nicholas quotes various cases that held, somewhat enigmatically, that:

The merit of an importer is less than that of an inventor. The fact that the invention was imported does not take away the merit, but it makes it much smaller If the imported invention is of considerable commercial value, and the importer has embarked a large capital in endeavouring to introduce it, the patent may be extended

Id.

91. Thus, the only cases from that time period of which I am aware address the validity and extension of a British patent for importation of goods manufactured abroad, under a foreign patent. One such case holds that a patent on such imported goods shall not be granted an extension in England. *Id.* at 139; *see also* ROGER WILLIAM WALLACE & JOHN BRUCE WILLIAMSON, *THE LAW AND PRACTICE RELATING TO LETTERS PATENT FOR INVENTIONS* 372 (1900). Wallace and Williamson describe the case of *Johnson’s Patent* from 1871, in which a patent:

had been taken out in England for an invention also patented in America, France, and Belgium. An extension of the patent had been granted in America, and the value of the invention was great; but it was shewn that the articles protected were manufactured exclusively in America and thence imported into England. The Committee refused prolongation.

Id. The court explained that with patents in both countries, the importer had brought goods to England that would have been imported even if there had been no English patent, with the only difference that “the patentee would not have had the monopoly of his patent, and would not, therefore, have had any opportunity of securing the monopoly of prices.” *Id.* *But*

mercantilist England, the entire domestic market was the reward that was offered, but the price was local working, in keeping with notions of maintaining a favorable balance—and composition—of trade.

It was only after the Statute of Monopolies that invention became more important⁹² and the requirement for a written description eliminated the requirements of local working—or practicing a patent at all.⁹³ These developments in patent law mirrored those in trade, and show that import restrictions are a relic of mercantilist theories that are at odds with current law.

B. MODERN PATENT LAW: A FOCUS ON INNOVATION

This Article has discussed the question of exhaustion from modern patent and trade perspectives, suggesting that they appear to point in different directions.⁹⁴ Approaching the possibility of an international exhaustion regime with the understanding of the evolution of patent law in concert with changes in trade theory casts the issue in a new light. In particular, the changes in patent law that increased the importance of innovating activity by a focus on rewarding the rightful inventor and limiting grants to inventions that are nonobvious are in line with the movement of trade toward a global welfare model. The intentions of the inventor—whether to introduce technology to the U.S. market or not—are no longer of such importance. The move from a working requirement to a disclosure requirement is also in line with the idea that invention and disclosure are themselves the benefits that patent law seeks to promote. Under this understanding, no specific protection of the national market is necessary, because there is no quid pro quo of local manufacturing or even local

see Sean Bottomley, *The British Patent System During the Industrial Revolution, 1700–1852*, at 78 (July 2012) (unpublished Ph.D. dissertation, University of Cambridge) (on file with author) (discussing *Berry's Patent*, an 1850 case in which the patent holder on an imported invention was granted an extension, with Lord Brougham stating that importation provides “a benefit to the public incontestably, and, therefore, they render themselves entitled to be put upon somewhat, if not entirely, the same footing as inventors.” (citing PETER HAYWARD, 6 HAYWARD'S PATENT CASES 1600–1883, at 30 (1987))).

92. *See, e.g.*, *Pennock v. Dialogue*, 27 U.S. (2 Pet.) 1, 20 (1829) (discussing the importance of invention and novelty in the English Statute of Monopolies: “That act, after prohibiting monopolies generally, contains, in the sixth section, an exception in favour of letters patent and grants of privileges for fourteen years or under, of the sole working or making of any manner of new manufactures within this realm, *to the true and first inventor and inventors of such manufactures, which others, at the time of making such letters patent and grants, shall not use.*” (emphasis added) (citing Statute of Monopolies, 21 Jac. ch. 3 (1624))).

93. John M. Golden, “*Patent Trolls*” and *Patent Remedies*, 85 TEX. L. REV. 2111, 2155 n.164 (2007).

94. *See supra* Part II.

availability. The aspects of mercantilist patent law that made a rule against international exhaustion a foregone conclusion are therefore discredited.

Modern patent law has shed many of the mercantilist trappings of its early incarnation. The United States has no local working requirement—and no requirement to serve the domestic market at all. John Golden explains how United States patent law has mostly avoided a working requirement and has “instead viewed disclosure of a patentable invention as essentially full compensation for a right to exclude”⁹⁵ The notion that the patent is issued “[i]n consideration of its disclosure and the consequent benefit to the community”⁹⁶ is a far cry from the rights discussed above that came with requirements to manufacture locally and train apprentices.⁹⁷ The focus on invention over introduction to the domestic market similarly supports the notion that spurring innovation, wherever it may happen and whatever its result, underlies modern patent law. These rules admittedly may result in less access to goods for domestic consumers and the potential for manufacturing industries to be relocated, but these possibilities are contemplated and accepted by free trade theorists.⁹⁸ By positioning patent holders to control market entry and manufacturing decisions, the current system embraces the free market notion that worthwhile inventions will become available and those that are not worthwhile will not receive undue encouragement.⁹⁹ The focus on invention (in contrast to earlier conditions that simply related to the availability of goods) and an acceptance that some patents might not be practiced both show a reluctance to engage in regulation of markets.

In addition, patent law is not protectionist in its formalities, and does not distinguish based upon the native country of applicants and companies or the

95. See Golden, *supra* note 93, at 2155 n.164; see also 35 U.S.C. § 271(d)(4) (2012) (stating that relief for infringement may not be denied for “refus[al] to license or use any rights to the patent”).

96. *Bonito Boats, Inc. v. Thunder Craft Boats, Inc.*, 489 U.S. 141, 151 (1989) (quoting *United States v. Dubilier Condenser Corp.*, 289 U.S. 178, 186 (1933)).

97. In *Continental Paper Bag Co. v. Eastern Paper Bag Co.*, the Supreme Court held that a competitor might choose to practice one among a number of patents and that such a choice was a reasonable business decision that should not deprive the patent holder from excluding others from selling patented goods. 210 U.S. 405 (1908). While *eBay v. MercExchange*, 547 U.S. 388 (2006), limited the availability of injunctions for non-competitor firms, injunctions remain available for companies that do not practice their patents if they are able to show that the infringement will result in a loss of market share. See Rajec, *supra* note 30, at 751–58.

98. See Sykes, *supra* note 6, at 61.

99. Of course, this notion is subject to criticism: sometimes we may find that access is more important than uniform levels of encouragement to innovate and sometimes competitive firms may choose to repress new technologies so as not to cannibalize their own markets. This claim is therefore descriptive.

location of invention.¹⁰⁰ This was not always the case; however, the requirement of TRIPS that patents be available “without discrimination as to the place of invention, the field of technology and whether products are imported or locally produced,” has resulted in the elimination of disparate treatment for foreign inventive activity or publications for the purposes of determining patentability.¹⁰¹ The mercantilist notion of enticing innovators to one’s shores to manufacture goods for one’s population is anathema to the current system. There is nothing constitutive of patent law that requires protecting the national market for the patent holder’s benefit when the patent holder does nothing *for* the domestic market in exchange. Moreover, this vestige of market protection will not, on its own, further the purposes of aiding domestic industry or encouraging the introduction of goods that would otherwise not be available.¹⁰² From the domestic perspective, the benefits of the national exhaustion regime are available for all U.S. patent holders, regardless of whether they manufacture or market goods domestically,¹⁰³ and there is a consensus that the current rule results in higher prices for American consumers.¹⁰⁴ In addition, with greater harmonization among patent regimes worldwide, there should be less need to ensure patent holders of their rewards in the domestic market. The strong baseline level of intellectual property rights in WTO member countries allows patent holders to reap rewards in foreign markets that they could not have expected in the past. These gains were ostensibly for the sake of fewer barriers to trade. However, the control patent holders hold over trade in patented goods remains a barrier to trade.

100. Although under the Patent Act of 1793, U.S. patents were only available to citizens of the United States, Patent Act of 1793, ch. 11, § 1, 1 Stat. 318, 318–19, patents have been available to foreign inventors living elsewhere since 1836, Patent Act of 1836, ch. 357, sec. 8, 5 Stat. 117, 120–21.

101. TRIPS, *supra* note 53, art. 27(1); see U.S. Patent Statistics Chart Calendar Years 1963–2012, http://www.uspto.gov/web/offices/ac/ido/oeip/taf/us_stat.htm (showing the radical increase in percentage of patents resulting from foreign filings from 18% in 1963 to 40% in 1982, and again to 52% in 2012); see also Hubbard, *supra* note 61, at 356–58.

102. See Hubbard, *supra* note 61, at 374 (suggesting that changes to U.S. patent laws are not useful tools for making American firms more competitive globally, in part because the laws are non-discriminatory to foreign inventors and companies filing U.S. patent applications, as required by TRIPS).

103. The availability of an exclusion order at the ITC is dependent on a patent holder’s ability to show injury to a domestic industry. However, that requirement is not as strong as it sounds, and a patent holder who could not meet that low bar would still have a case for infringement through importation in federal district court. See Colleen V. Chien, *Protecting Domestic Industries at the ITC*, 28 SANTA CLARA COMPUTER & HIGH TECH. L.J. 169 (2011).

104. See, e.g., Abbott, *supra* note 51, at 18; Jeffery Atik & Hans Henrik Lidgard, *Embracing Price Discrimination: TRIPS and the Suppression of Parallel Trade in Pharmaceuticals*, 27 U. PA. J. INT’L ECON. L. 1043, 1044 (2006).

IV. DOCTRINAL DEVELOPMENTS

The arguments about undesirable downstream control of goods and the benefits of competition, on the one hand, and the ability and potential gains of dividing markets, on the other, are not new. They inform the common law development of the principle of national exhaustion in patent law and have reemerged in considerations of an international patent exhaustion regime.

A. NATIONAL PATENT EXHAUSTION: DOCTRINE AND THEORY

The evolution of the national exhaustion doctrine in U.S. law shows concerns for many of the same principles discussed so far. Early cases wrestled with the extent to which patent holders should be able to subdivide the national market for goods, weighed against the interests of consumers in using and reselling their goods as they wished. The case law also treats the issue in terms of the ability of licenses to constrain downstream behavior. The question of restrictive licensing is one that is becoming ever more important when many software-based goods are licensed rather than sold, and as technological blocks to resale are becoming more prevalent. In fact, it may be that the ability to distinguish licenses from sales is becoming ever more difficult and will only become more important if exhaustion is extended internationally.¹⁰⁵ However, even in the late nineteenth century courts were balancing freedom to contract with competitive marketplaces.

The Supreme Court case establishing patent exhaustion involved geographic limitations, albeit domestic limitations imposed by license. In *Adams v. Burke*, the Court reviewed a patent infringement claim arising from the use of patented coffin lids by an undertaker who bought the lids from a licensed manufacturer.¹⁰⁶ The manufacturer had been assigned all rights in the patent by the patentee, *within ten miles of Boston*.¹⁰⁷ The manufacturer sold a patented coffin lid to an undertaker within the prescribed area, but the lid was subsequently used farther away.¹⁰⁸ The Court held that the right to sell may indeed have been restricted by geographical area, but that the purchaser “acquired the right to [the] use of it freed from any claim of the patentee”¹⁰⁹ The Court based its holding on the single reward theory—

105. *See infra* Part V.

106. *Adams v. Burke*, 84 U.S. (17 Wall.) 453 (1873).

107. *Id.* at 456.

108. The use was in Natick, Massachusetts, a full seventeen miles from Boston. *Id.* at 454.

109. *Id.* at 457; *see id.* at 457–58 (Bradley, J., dissenting). Justice Bradley explained that the Patent Act of 1836 expressly authorized:

not only an assignment of the whole patent, or any undivided part thereof, but a “grant and conveyance of the exclusive right under any patent, to make and use, and to grant to others to make and use the thing

the idea that once the patent holder has received her royalties for the use of the invention, “it is open to the use of the purchaser without further restriction on account of the monopoly of the patentee.”¹¹⁰ The opinion recognized both the interests of patent holders in dividing territory for the purposes of licensing and the interests of purchasers in using the goods they buy without further restrictions, considerations that inform the debate on international exhaustion of intellectual property now. In addition, the Court noted the single-use nature of the invention at issue.¹¹¹

In these early cases, the exhaustion doctrine can be seen as balancing an interest in allowing patent holders contractual freedom to license their patent as they see fit with an interest in reducing complex limitations on downstream use.¹¹² Such restrictions were considered a restraint on competition, and the early exhaustion decisions “used the Patent Act to create limitations on both vertical and horizontal territorial restraints that the Supreme Court would apply under the antitrust laws as well.”¹¹³ Thus, early exhaustion cases—in similar fashion to their modern counterparts—frequently involved questions of the scope and ability of licenses to restrict downstream uses.¹¹⁴ Occasionally, restrictions on use that are included in a

patented within and throughout any specified part or portion of the United States.”

Id. (emphasis omitted).

110. *Id.* at 456; *see also* *United States v. Masonite Corp.*, 316 U.S. 265, 278 (1942) (patent exhaustion depends on “whether or not there has been such a disposition of the article that it may fairly be said that the patentee has received his reward for the use of the article”); *Bloomer v. McQuewan*, 55 U.S. (14 How.) 539, 553–54 (1852) (explaining that the congressional power to grant an extension of a patent does not imply “that Congress may, from time to time . . . reinvest in [an inventor] right of property which he had before conveyed for a valuable and fair consideration”).

111. The Court limited its holding to “the class of machines or implements we have described” referring to “an instrument or product of patented manufacture which perishes in the first use of it, or which, by that first use, becomes incapable of further use, and of no further value.” *Adams v. Burke*, 84 U.S. at 456–57.

112. *See* Christina Mulligan, *A Numerus Clausus Principle for Intellectual Property*, 80 TENN. L. REV. 235, 286–89 (2013) (suggesting that a *numerus clausus* principle in intellectual property would result in a first sale doctrine in digital works, and looking to the real property analog of the historic prohibition on servitudes in chattel for theoretical support); *see also* Andrew T. Dufresne, Note, *The Exhaustion Doctrine Revived? Assessing the Scope and Possible Effects of the Supreme Court’s Quanta Decision*, 24 BERKELEY TECH. L.J. 11, 14–15 (2009) (explaining how the exhaustion doctrine exhibits “an aversion to personal property servitudes”).

113. Herbert Hovenkamp, *Innovation and the Domain of Competition Policy*, 60 ALA. L. REV. 103, 110–11 (2008).

114. In *Bloomer v. McQuewan*, the Court addressed the issue of whether an assignment of rights, title, and interest in a patent made during the first term of the patent allowed the licensee to continue using a machine made pursuant to the license during the second term. The Court held that continued use of the patented machines did not constitute infringement.

first sale have been honored such that violations are treated as cases of patent infringement.¹¹⁵ However, there is some uncertainty as to what characteristics define allowable licenses and what makes such a license unenforceable, either through contract or patent law.

In 2008, the Supreme Court decided *LG Electronics v. Quanta* and expanded the reach of the exhaustion doctrine again, restricting a patent holder's ability to limit downstream uses of patented technology through patent infringement suits.¹¹⁶ The *Quanta* Court discussed a series of cases in which the Court had limited restrictive licenses that constrained purchasers' use of patented products, situating the exhaustion doctrine as a counterweight to attempted expansions of patent rights beyond their

55 U.S. (14 How.) 539 (1852). In *Mitchell v. Hawley*, the Court explained that the right to "mak[e] or vend[] the patented machine" was dependent "upon the nature of the conveyance," whereas someone who had gained complete title to a patented machine has full right to use the machine, which "ceases to be within the limits of the monopoly." 83 U.S. (16 Wall.) 544 (1872) (affirming a judgment of infringement because the patent holder had issued a license that restricted the licensee's right to make, use, and license others to use the machines to the original patent term, specifying that the licensee was not to license rights beyond that original term). The Court therefore held that when two downstream licensees continued to use their machines after the original patent term had ended—but the extended term had not—they were engaging in an unauthorized use and therefore infringing the patent.

115. In one notable case, the Federal Circuit ruled on whether a patent holder's "single use only" restriction on a patented medical device could limit use of the devices, such that a company infringed the patent when it reconditioned and sterilized the parts to make them suitable for reuse. *Mallinckrodt, Inc. v. Medipart, Inc.*, 976 F.2d 700, 709 (Fed. Cir. 1992). The court relied on the idea that sales may be conditioned on particular uses if the license does not go beyond the patent grant "and into behavior having an anticompetitive effect not justifiable under the rule of reason." *Id.* at 708. Some suggest *Mallinckrodt* was likely overruled, *sub silentio*, by the Supreme Court's decision in *Quanta Computer, Inc. v. LG Elecs.*, 553 U.S. 617 (2008). See Hovenkamp, *supra* note 113, at 111 n.35 (stating that *Quanta* overruled *Mallinckrodt*); see also *Static Control Components, Inc. v. Lexmark Int'l, Inc.*, 615 F. Supp. 2d 575, 585 (E.D. Ky. 2009) ("this Court is persuaded that *Quanta* overruled *Mallinckrodt sub silentio*"). However, it is possible that *Mallinckrodt* is distinguishable because it involved an initial sale of the patented article that was conditional on single use, whereas *Quanta* involved restrictions on a downstream sale. See, e.g., *Chiappetta*, *supra* note 43, at 1113–15 (2011) (discussing the absence of *Mallinckrodt* from the Court's analysis and the potentially narrow scope of the Supreme Court's decision).

116. In *Quanta*, patent holder LG Electronics granted Intel a license to method patents practiced in Intel's chipsets, permitting Intel to manufacture, use, sell, and import its own products that practice the patents; but, under a separate agreement, Intel agreed to notify customers that while none of the products they purchased infringed patents, the license did not extend to combining Intel products with non-Intel products. *Quanta* purchased chipsets and combined them with other products in a computer, and LG Electronics sued. *Quanta*, 553 U.S. 617 (2008).

intended scope.¹¹⁷ The Court then found that the patent license between the parties did not restrict what Intel could sell, and that therefore Intel had sold the chipsets to Quanta with no restrictions and thus exhausted LGE's patent rights.¹¹⁸

These cases leave the impression that exhaustion was developed to target a type of patent misuse through limiting restrictions on downstream prices and uses of goods. What emerges is a general rule granting deference to the terms of a license between a patent holder and manufacturer or retailer, limited by an abiding suspicion toward restrictions that accompany patented products beyond the privity of the initial contracting parties and thereby attempt to cabin the behavior of downstream consumers or resellers. The application of the doctrine of exhaustion to restrictive licenses thus targets anti-competitive behaviors.¹¹⁹

Courts have been more lenient toward restrictions that travel with goods when those goods are long lasting and easy to replicate perfectly. One area where exhaustion is consistently revisited is in regards to self-replicating technology.¹²⁰ The Court in *Adams v. Burke* relied in part on the single-use nature of the patented coffin lids,¹²¹ a characteristic that ensures the single reward limitation does not deprive the patent holder of rewards from multiple future uses of a good. Although someone who purchased a machine could use it as he pleased without being subject to claims of infringement,

117. *Id.* at 625–26 (citing *Bauer & Cie v. O'Donnell*, 229 U.S. 1, 14–17 (1913) (holding that the right to sell exclusively secured in the patent statute does not include the right to downstream price-fixing that “prevents competition by notices restricting the price at which the article may be resold”); *Motion Picture Patents Co. v. Universal Film Mfg. Co.*, 243 U.S. 502, 518 (1917) (disallowing a claim of patent infringement against downstream users who disobeyed a notice affixed to the patented projecting-kinetoscopes they had purchased and used film produced by another manufacturer in the machines); *United States v. Univis Lens Co.*, 316 U.S. 241 (barring, under a doctrine of exhaustion, price-fixing by a patent holder who sold unfinished lenses for glasses to licensed wholesalers and retailers who ground the lenses into patented products—with the requirement that they be sold to consumers at a fixed rate).

118. *Id.* at 636–37; *see also* F. Scott Kieff, *Quanta v. LG Elecs.: Frustrating Patent Deals by Taking Contracting Options Off the Table?*, 2008 CATO SUP. CT. REV. 315, 316 (2008) (criticizing *Quanta* for its likely restrictions on contracting freedom, arguing that the case “may greatly frustrate the ability of commercial parties to strike deals over patents”).

119. Depending on the observer, patent misuse is either coextensive with—or consumed by—antitrust doctrine. *See, e.g.*, *USM Corp. v. SPS Tech., Inc.* 694 F.2d 505, 512 (7th Cir. 1982) (Posner, J.) (suggesting that antitrust “consumes” the misuse doctrine); HERBERT HOVENKAMP ET AL., *IP AND ANTITRUST*, 3–12 (supp. 2012) (“Generally speaking, patent misuse doctrine is largely coextensive with antitrust doctrine.”).

120. *See, e.g.*, *Bowman v. Monsanto*, 133 S. Ct. 1761 (2013); *Capitol Records, LLC v. ReDigi Inc.*, 934 F. Supp. 2d 640 (S.D.N.Y. 2013); discussion *supra* note 115.

121. *Adams v. Burke*, 84 U.S. (17 Wall.) 453, 456–57 (1873).

the purchase did not entitle him to manufacture, use, or sell replicas of that machine. And yet, some technologies replicate themselves by force of nature or design. Most recently, the Supreme Court was faced with a patent infringement claim brought by Monsanto, which holds patents on soybean seeds, genetically modified to withstand being sprayed with the herbicide Roundup.¹²² The Court held that the farmer who bought patented seeds from a grain elevator and, without permission, planted the seeds and harvested the newly-grown seed crop had infringed Monsanto's patents, based in part on Monsanto's restrictive licensing agreement.¹²³ When Monsanto sued Bowman, Bowman claimed that the authorized sale of seeds to the grain elevator exhausted Monsanto's patent rights, such that the company could not claim infringement based on how a subsequent purchaser used the seeds.¹²⁴ The Supreme Court held that while Bowman could have consumed the seed, fed it to animals, or sold it to others, his use of the patented seeds to "make" new, patented seeds was infringement.¹²⁵

In *Bowman v. Monsanto*, the Court recognized that while the exhaustion doctrine is meant to limit the patent holder to a single reward on each patented object, it should not be used to limit the patent term to "only one transaction" by allowing a purchaser to make unlimited copies of the patented good.¹²⁶ In so doing, the Court had to deal with the strict license that accompanied sales of the patented seed. It may be that courts have a higher tolerance for restrictive licenses over technologies amenable to multiple uses and easy replication.

122. *Bowman*, 133 S. Ct. 1761.

123. *Id.* Monsanto protects its patented seeds through a licensing agreement that allows a grower to plant the seeds in a single season. The resulting crop may be harvested and sold, and is often sold to a grain elevator, which consolidates crops from multiple farmers and sells the seeds for human or animal consumption. Monsanto's licensing agreement forbids the grower from saving harvested soybeans to replant or resell for planting. Bowman did not save harvested seeds to plant, but rather bought seeds from the grain elevator that were meant for human or animal consumption (and which therefore did not require a license from purchasers), planted them, sprayed them with Roundup, and then harvested and replanted the resulting seeds in subsequent years. *Id.* at 1764–65.

124. *Id.* at 1765.

125. *Id.* at 1766–67. The Court explained that planting the seeds and growing a crop from them was likely always infringement, but that the license granted by Monsanto (allowing farmers to plant the seeds in one season only) rendered that use noninfringing. *Id.* at 1767 n.3. Thus, although the purpose of the patented inventions was to create seeds that grow well, the initial sale of seeds did not confer the right to plant them without a license. The Court did note that, in the instance of the sale by Monsanto or its authorized seed sellers, the right to plant the seeds once might also be inferred if there had not been a license agreement, presumably because that was what the seeds were created for and because the characteristic that warranted the patent could only be realized through replication. *Id.*

126. *Id.* at 1768.

Behind the *Bowman* opinion was also recognition of another area of potentially self-replicating technology that may try the exhaustion doctrine—domestically and internationally—namely, software. Software provides an interesting example because it can be protected by both copyright and patent, and because strict definitions of copying or making under the respective acts do not neatly apply to software.¹²⁷ Thus, the Copyright Act contains a provision limiting the exclusive reproduction right by allowing the owner of a copy of a computer program to make a copy of the software in order to use it and allowing the transfer of such copies (when coupled with the transfer of related rights).¹²⁸ A provision that would expand this limitation and create a first sale doctrine for digital material was proposed but has not been adopted.¹²⁹ Recently, in *Capitol Records, LLC v. ReDigi Inc.*, a court found there was no such right under the current statute.¹³⁰ Software is also of interest because it has gravitated toward a model of complex licensing as opposed to sale. This can be seen as a direct result of its place on the spectrum from single-use to self-replicating technology. Single-use technologies may be easier to rule with an exhaustion regime because an item may be sold and resold, but once it is used it will not be used again. As a result, when the rights holder exhausts her rights in the patent by selling an article embodying it, she need not track its whereabouts or worry about infringement. In contrast, self-replicating technologies and digital technologies that allow for the creation of exact copies are particularly susceptible to infringement. Thus, for single-use articles, limiting a rights holder to a single reward does not put in jeopardy her ability to reap subsequent rewards from other sales of a good, whereas other technologies lend themselves to infringement, thus replacing some of the demand for the product with infringing copies and threatening

127. The eligibility of software for multiple types of intellectual property protection is not unique to the technology. It does, however, point to the desirability of theoretical and doctrinal consistency between the areas in regards to international exhaustion, inter alia.

128. 17 U.S.C. § 117 (2012). This provision allows those who buy software to install it on their computer hard drives and make backup copies—both of which constitute copying but are central to the industry. For example, copyright owners fully expect—and desire—their customers to install software on their computers, much as Monsanto fully expects farmers to plant their seeds, though such planting results in making a copy of protected seeds.

129. Proponents of this exception suggested that making a copy of material should not be considered an infringement if that material was simultaneously deleted from the machine on which it was lawfully placed. NAT'L TELECOMM. & INFO. ADMIN., U.S. DEP'T OF COMMERCE, REPORT TO CONGRESS: STUDY EXAMINING 17 U.S.C. SECTIONS 109 AND 117 PURSUANT TO SECTION 104 OF THE DIGITAL MILLENNIUM COPYRIGHT ACT (2001), available at <http://www.ntia.doc.gov/report/2001/report-congress-study-examining-17-usc-sections-109-and-117-pursuant-section-104-digital>.

130. *Capitol Records, LLC v. ReDigi Inc.*, 934 F. Supp. 2d 640 (S.D.N.Y. 2013).

the rights holder's ability to reap rewards from other sales. All of these factors result in greater interest in licensing for easily replicable and self-replicating technologies.

Alas, complex licensing schemes may also be used by rights holders to complicate and restrict future sales of a product, even when such sales are not attempts to engage in replication or infringement. The exhaustion doctrine in domestic law must balance allowing patent holders to protect their patented goods through reasonable licensing practices with limiting restrictions on downstream use that the patent holder should have no reasonable expectation of curtailing and that may be beneficial to society at large, even if undesirable to the patent holder. This is not an easy balance. However, it is one undertaken and constantly refined by the courts in their application of the exhaustion doctrine in the domestic context. National exhaustion laws are applied in ways that allow greater licensing restrictions for technologies susceptible to self-replication or easy and exact replication by others. Nonetheless, overaggressive use of such licensing may backfire and result in findings that what the parties took to be a license was actually a sale.¹³¹ These same types of consideration apply equally in the international context and will merit more scrutiny if international exhaustion is adopted.

B. A DIFFERENT RULE FOR INTERNATIONAL PATENT EXHAUSTION

The Supreme Court has not recently weighed in on the question of international exhaustion of patents, declining opportunities in 2002 and 2013 to hear cases that presented the issue.¹³² Older case law indicates that there

131. Shubha Ghosh explains:

Sales trigger exhaustion while licenses or leases do not. Through these mechanisms, the parties can structure the transaction to suit their particular needs, and the rights holder can price accordingly. The difficulty is deriving workable criteria to distinguish between a sale and a lease. Such criteria can be difficult given the complexities of actual transactions that will contain myriad terms dealing with the allocation of various risks under different contingencies. Nonetheless, in principle, the exhaustion doctrine can deal with consumer heterogeneity through threshold rules of applicability based on the transaction.

SHUBHA GHOSH, INT'L CTR. FOR TRADE & SUSTAINABLE DEV. 8 (2013), available at <http://ictsd.org/i/publications/181092>; see also Brian W. Carver, *Why License Agreements Do Not Control Copy Ownership: First Sales and Essential Copies*, 25 BERKELEY TECH. L. J. 1887 (2010) (in the copyright context); Timothy D. Greene, "All Substantial Rights": *Toward Sensible Patent Licensee Standing*, 22 FED. CIR. B.J. 1 (2012) (in the context of standing).

132. *Jazz Photo Corp. v. Int'l Trade Comm'n*, 536 U.S. 950 (2002), *denying cert. to* 264 F.3d 1094 (Fed. Cir. 2001); *Ninestar Tech. Co. v. Int'l Trade Comm'n*, 133 S. Ct. 1656 (2013), *denying cert. to* 667 F.3d 1373 (Fed. Cir. 2012). This does not necessarily mean that the Supreme Court will not take a case on the issue in the future; these particular cases may have

was a limited rule of exhaustion when the owner of patents in multiple countries sold a patented product without restriction. In 1890, the Supreme Court ruled in *Boesch v. Graff* that U.S. patent rights were not exhausted by lawful manufacture and sale in Germany.¹³³ Although the sale was indeed lawful, it was not authorized by the patent holders, who held patents in both the United States and Germany.¹³⁴ Rather, the manufacturer was entitled to manufacture and sell the products under a type of prior user right in the German patent law, which allowed those who were preparing to produce a patented article at the time the patent was filed to do so without authorization.¹³⁵

Following *Boesch*, the potential for patent exhaustion through a first, authorized sale abroad appeared to depend on whether the entity that authorized the foreign sale was the entity trying to enforce the U.S. patent. In *Dickerson v. Matheson*, the Second Circuit Court of Appeals explained that if a foreign purchase was from the owner (or licensee) of *both* the foreign and U.S. patents, then U.S. patent rights were exhausted, but held that a purchase from a licensee of *only* the foreign patent did not exhaust U.S. patent rights.¹³⁶

been poor vehicles for the issue. However, it appears likely that the Court was considering whether the exhaustion question must be answered for both the patent and copyright law simultaneously as it declined review of *Ninestar* the same day that it granted, vacated, and remanded two copyright cases in light of *Kirtsaeng*.

133. *Boesch v. Graff*, 133 U.S. 697, 703 (1890). The *Boesch* Court determined:

The right which Hecht had to make and sell the burners in Germany was allowed him under the laws of that country, and purchasers from him could not be thereby authorized to sell the articles in the United States in defiance of the rights or patentees under a United States patent. . . . The sale of articles in the United States under a United States patent cannot be controlled by foreign laws.

Id.

134. *Id.*

135. *Id.* at 701. It is an open question whether the Court would have come to the same conclusion had the manufacturer operated with authorization from the holder of the patents (both U.S. and German).

136. *Dickerson v. Matheson*, 57 F. 524, 527 (2d Cir. 1893). The court explained:

A purchaser in a foreign country, of an article patented in that country and also in the United States, from the owner of each patent, or from a licensee under each patent, who purchases without any restrictions upon the extent of his use or power of sale, acquires an unrestricted ownership in the article, and can use or sell it in this country.

Id. This is consistent with the pre-*Boesch* case of *Holiday v. Mattheson*, in which a U.S. patent holder sold patented goods in England with no restrictions or conditions. *Holiday v. Mattheson*, 24 F. 185, 185 (C.C.S.D.N.Y. 1885). The court refused to enjoin a downstream purchaser from reselling the goods in the United States. *Id.* (“[w]hen the owner sells an article without any reservation respecting its use, or the title which is to pass, the purchaser acquires the whole right of the vendor in the thing sold”). *Cf.* *Featherstone v. Ormonde*

The 1909 case *Daimler Manufacturing, Co. v. Conklin* also granted an injunction to an exclusive licensee of a U.S. patent against someone who purchased a car—with patented components—while in Germany, from the company authorized to sell the patented goods there, and later imported it to the United States for personal use.¹³⁷ Soon after, the court in *Curtiss Aeroplane & Motor Corp. v. United Aircraft Engineering Corp.* found international exhaustion and distinguished *Daimler*, basing its decision on the patent holder's ownership of all relevant rights.¹³⁸ The court found that the holder of patents in both the United States and Canada exhausted its rights under both patents through its wartime sale of airplanes and manufacturing licenses granted to the British government, although those licenses only referred to the Canadian patents, finding the patent holder had not placed any restrictions on the sale or licenses.¹³⁹ Thus, there was no infringement by the company that purchased the airplanes from the British government following the war and made offers to sell them in the United States.¹⁴⁰ Ultimately, the impression given by *Boesch* and the cases decided soon after it is that the owner of patents in multiple countries exhausts rights in them all through his first, unrestricted sale.¹⁴¹ The cases rely on the agency of the patent owner in

Cycle Co., 53 F. 110, 111–12 (C.C.S.D.N.Y. 1892) (granting to an assignee of U.S. patent rights an injunction against licensees of British patent who had rights to use the patented tires in Britain but subsequently tried to sell them in the U.S., with the court explaining that “the purchaser does not acquire any right greater than those possessed by the owner of the patent”).

137. *Daimler Mfg. Co. v. Conklin*, 170 F. 70, 72 (2d Cir. 1909) (explaining that “[t]he sale by a German patentee of a patented article may take it out of the monopoly of the German patent,” then asking “but how can it take it out of the monopoly of the American patentee who has not sold?”); see also *Daimler Mfg. Co. v. Conklin*, 160 F. 679, 681 (C.C.S.D.N.Y. 1908) (detailing terms of exclusive license for import and sale of cars with patented components).

138. *Curtiss Aeroplane & Motor Corp. v. United Aircraft Eng'g Corp.*, 266 F. 71 (2d Cir. 1920).

139. *Id.* at 79 (“It is admitted that, if the aeroplanes which are alleged to infringe had been built in Canada under a limited license, or under a Canadian patent, and then brought into the United States, infringement would have been made out. But that is not this case.”).

140. *Id.*

141. See *id.* at 79. The court approvingly cites a British judge's recitation of the rule, the cited case found no exhaustion:

When an article is sold without any restriction on the buyer, whether it is manufactured under either one or the other patent, that, in my opinion, as against the vendor gives the purchaser an absolute right to deal with that which he so buys in any way he thinks fit, and of course that includes selling in any country where there is a patent in the possession of and owned by the vendor.

Id.

deciding to sell the patented product and on the reward he is due to collect for it—but only once.¹⁴²

In *Sanofi, S.A. v. Med-Tech Veterinarian Prods, Inc.*, a district court reached different conclusions on exhaustion for patent holder Sanofi and its licensee American Home Products, which had exclusive U.S. rights to sale.¹⁴³ Because Sanofi's subsidiary had sold veterinary drugs in France—without written restrictions on future United States sales—the court found that Sanofi had exhausted its rights in the patent and could not obtain an injunction against later importation and sale.¹⁴⁴ However, the court looked to the terms of American Home Products' exclusive license to determine what rights Sanofi had maintained. The court concluded that Sanofi could not sell (in France) what it did not have (the right to sell in the United States), and therefore allowed American Home Products to obtain an injunction.¹⁴⁵

The Court of Appeals for the Federal Circuit (“Federal Circuit”)¹⁴⁶ did not wrestle with these interpretations of *Boesch* in its 2001 decision, *Jazz Photo Corp. v. International Trade Commission (Jazz Photo I)*. Instead, it held more broadly that there was no rule of international exhaustion of patents,¹⁴⁷ and in later cases strengthened the rule in contradiction to the early interpretations offered by the Second Circuit. In *Jazz Photo I*, the Federal Circuit reviewed a proceeding at the International Trade Commission that

142. Ultimately, limiting international exhaustion to cases of multiple patent ownership has the potential to cause much mischief. Ignoring the incentive for companies to set up complicated subsidiary and affiliated entity-structures (and the difficulties for courts of unraveling those that already exist), an inventor who sells all her rights to the patent in a foreign country presumably is being “rewarded” for all future sales under the patent. The value she puts on this is embodied in the sale price and will depend on whether there is international exhaustion or not. For that reason, an international exhaustion regime should be based on authorization from the patent holder, but authorization to sell in a particular market should be sufficient; there is no reason to require that the patent holder place the particular good on the market herself.

143. *Sanofi, S.A. v. Med-Tech Veterinarian Products, Inc.*, 565 F. Supp. 931 (D.N.J. 1983).

144. *Id.* at 938.

145. *Id.* at 939–40 (holding that patent rights are only exhausted “where the sale is one which the seller had the authority to make in this country”).

146. The Court of Appeals for the Federal Circuit has jurisdiction over appeals in cases involving patents, including cases brought at the International Trade Commission under 19 U.S.C. § 337. The Federal Circuit also has jurisdiction over other trade-related cases appealed from the United States Court of International Trade, however the § 337 cases have provided the vehicle for rulings on international patent exhaustion. *See* 28 U.S.C. § 1295(a)(5)–(6) (2012).

147. *Jazz Photo Corp. v. Int'l Trade Comm'n (Jazz Photo I)*, 264 F.3d 1094, 1105 (Fed. Cir. 2001) (“United States patent rights are not exhausted by products of foreign provenance. To invoke the protection of the first sale doctrine, the authorized first sale must have occurred under the United States patent.” (citing *Boesch v. Graff*, 133 U.S. 697, 701–03 (1890))).

resulted in an exclusion order on disposable cameras covered by patents held by Fuji Photo Film Co.¹⁴⁸ A number of firms, primarily in China, bought used disposable camera cartridges from film developers in many countries and reloaded them. Fuji Photo Film brought the case against importers who purchased and imported the reloaded cameras for sale in the United States.¹⁴⁹ The opinion from the ITC focused on whether reloading the cameras constituted noninfringing “repair” of a patented product or infringing “reconstruction.”¹⁵⁰ Repair of a patented article is considered “use,” which cannot be controlled following an authorized sale, whereas reconstruction, which “requires a more extensive rebuilding of the patented entity,” is considered “making” a new, patented article.¹⁵¹ The Federal Circuit reversed the ITC’s holding that reloading the cameras was reconstruction, and found instead that it constituted repair.¹⁵² Because the initial camera sales had been authorized, that might have been the end of it. However, the court then went on to hold that because many of the initial, authorized sales had been in foreign countries, they did not exhaust rights in the U.S. patents; as a result, the repaired cameras were excludable and only cameras that had been the subject of an authorized first sale in the United States were noninfringing.¹⁵³ The *Jazz Photo I* case has been criticized for imposing an inefficient “default” rule on sales of patented products,¹⁵⁴ for its potential to seriously restrict traditional forms of commerce and behavior,¹⁵⁵ and for deciding the issue without briefing, *sua sponte*.¹⁵⁶ There was soon an opportunity for fully

148. *Id.* at 1099.

149. It is interesting that this case, like *Adams* and *Mallinckrodt*, involved sales of items intended for single use. The court distinguished *Mallinckrodt* with the finding that the statements on each camera cautioning consumers not to remove film and to return the camera to the photoprocessor did not constitute a limiting license on their use. *Id.* at 1107.

150. *Id.* at 1101.

151. *Id.* at 1104.

152. *Id.* at 1107.

153. *Id.* at 1105.

154. See Chiappetta, *supra* note 43, at 1122.

155. Petition for a Writ of Certiorari at 11–12, *Jazz Photo v. Int’l Trade Comm’n*, 536 U.S. 950 (2002) (No. 01-1158), 2002 WL 32134396 (suggesting that, among other problems, “the owner of a patented property item purchased abroad (such as a camera, watch, or car) can no longer use it in the United States without infringing the patent. No firm may repair that item to prolong the owner’s use without risk of liability for contributory infringement.”).

156. *Id.*; see also Adam Mossoff, *Commercializing Property Rights in Inventions: Lessons for Modern Patent Theory from Classic Patent Doctrine*, in *COMPETITION POLICY AND PATENT LAW UNDER UNCERTAINTY: REGULATING INNOVATION* 348–49 (Geoffrey A. Manne & Joshua D. Wright eds., 2011).

briefing international exhaustion, when Jazz Photo appealed a district court judgment against it.¹⁵⁷

In *Fuji Photo Film Co., v. Jazz Photo Corp. (Jazz Photo II)*, the Federal Circuit again refused to apply exhaustion to authorized foreign sales, holding that “[t]he patentee’s authorization of an international first sale does not affect exhaustion of that patentee’s right in the United States.”¹⁵⁸ The court’s reasoning was that the foreign sales did not occur “under” a U.S. patent and that a contrary ruling would contravene the rule against the extraterritorial application of U.S. law.¹⁵⁹ After the Supreme Court’s decision in *Quanta*, one district court held that *Jazz Photo I & II* were no longer good law, as its theory was undercut by the Supreme Court’s ruling that blocked a patent holder from authorizing a sale but suing a downstream purchaser for infringement.¹⁶⁰ Of course, the *Quanta* Court had merely voiced the same concerns that are present in all domestic exhaustion cases; restating it did not answer the question of its applicability to foreign transactions. Another district court case that attempted to cabin *Jazz Photo I & II* held that where the parties had negotiated a worldwide license, exhaustion might occur even if the first sale was made in a foreign country.¹⁶¹ However, the strong rule against exhaustion from *Jazz Photo I & II* has mostly held, although in complex technology areas with multiple assembly steps the question of whether a sale is “under” a U.S. patent is not entirely straightforward.¹⁶² This

157. *Fuji Photo Film Co., Ltd. v. Jazz Photo Corp. (Jazz Photo II)*, 394 F.3d 1368, 1370 (Fed. Cir. 2005) (beginning description of the litigation history by noting that “Fuji and Jazz are no strangers to this court”).

158. *Id.* at 1376.

159. *Id.*; see also John A. Rothchild, *Exhausting Extraterritoriality*, 51 SANTA CLARA L. REV. 1187, 1211–12 (2011) (arguing that an international exhaustion rule would not constitute extraterritorial application of U.S. law). This contrasts with the requirement discussed in *Kirtsaeng* that a work be made “under this title” to qualify for exhaustion. *Kirtsaeng v. John Wiley & Sons, Inc.*, 133 S. Ct. 1351, 1355 (2013). Under current patent law, an authorized U.S. sale of a patented good made abroad would exhaust further rights.

160. *LG Electronics, Inc. v. Hitachi, Ltd.*, 655 F. Supp. 2d 1036, 1046–47 (N.D. Cal. 2009).

161. *STMicroelectronics, Inc. v. Sandisk Corp.*, No. 4:05CV45, 2007 WL 951655, at *3 (E.D. Tex. Mar. 26, 2007). The court stated:

STM gave Toshiba a license in all types of patents with respect to the licensed products in all countries of the world. All the countries of the world includes the United States of America. Therefore, Toshiba (or its subsidiaries) had the right to sale any of the licensed products under the United States Patents ’626 and ’184 in the United States or anywhere in the world.

Id. at *3.

162. See, e.g., *Cornell Research Found., Inc. v. Hewlett-Packard Co.*, No. 5:01-CV-1974 (NAM/DEP), 2007 WL 4349135, *50–52 (N.D.N.Y. Jan. 31, 2007) (denying summary

complexity highlights the potential savings for companies engaged in complex technologies that would come from a default rule of international exhaustion. In *Fujifilm Corp. v. Benun*, the Federal Circuit held that *Quanta*, which did not involve foreign sales, did not impact the rule against international exhaustion.¹⁶³ And although the Supreme Court had the opportunity to address international patent exhaustion in an appeal from *Ninestar* recently, it declined.¹⁶⁴

C. THE UNITED STATES POSITION IN INTERNATIONAL NEGOTIATIONS

Despite arguments that the Federal Circuit rule is overly restrictive, its approach appears to be consistent with the United States' policy in its trade discussions. These policies have been consistently expressed in negotiations for patent law harmonization across various platforms. However, international exhaustion is a rare example of an area of intellectual property law specifically and consistently left out of the extensive multilateral treaties that treat minimum requirements of patent protection.¹⁶⁵ The TRIPS Agreement represents an enormous step toward harmonized patent law.¹⁶⁶ It built upon previous agreements that primarily implemented procedural harmonization, adding substantive harmonization through requirements of minimum levels of protection.¹⁶⁷ In addition to substantive measures, the TRIPS Agreement has enforcement mechanisms that previous treaties did not. Disputes among member countries over TRIPS violations are resolved

judgment on the issue of where the sales occurred for purposes of an exhaustion determination, following an exhaustive discussion of the evidence); *see also* *Laserdynamics, Inc. v. Quanta Storage America, Inc.*, No. 2:06-CV-348-TJW-CE, 2009 WL 3763444, at *1 (E.D. Tex. June 29, 2009); *Minebea Co., Ltd. v. Papst*, 444 F. Supp. 2d 68, 140–41 (D.D.C. 2006); *Minebea Co., Ltd. v. Papst*, 374 F. Supp. 2d 202, 215–16 (D.D.C. 2005).

163. *Fujifilm Corp. v. Benun*, 605 F.3d 1366, 1371 (Fed. Cir. 2010).

164. *Ninestar Tech. Co. v. Int'l Trade Comm'n*, 133 S. Ct. 1656 (2013), *denying cert. to* 667 F.3d 1373 (Fed. Cir. 2012). The case was the result of an enforcement action brought against the wholly owned subsidiaries of a Chinese producer of ink printer cartridges that had continued to import and sell cartridges subject to exclusion and cease and desist orders in an earlier proceeding. *Ninestar*, 667 F.3d 1373. The Federal Circuit did not take the opportunity to revisit its international exhaustion jurisprudence, likely because the case was an appeal of penalties assessed for “deliberately and in bad faith” violating an earlier exclusion order. *Id.* at 1378–79. For procedural and prudential reasons, then, this may not have presented an attractive case for the Supreme Court to use in addressing the question of international patent exhaustion.

165. *See* TRIPS, *supra* note 53, art. 6.

166. Margaret Chon, *Intellectual Property and the Development Divide*, 27 CARDOZO L. REV. 2816 (1999) (describing the TRIPS Agreement as effecting a “tectonic shift in the landscape of intellectual property law”).

167. Requirements address patent-eligible subject matter, standards of patentability, and the duration and scope of rights. Rajec, *supra* note 29, at 16–17.

by the Dispute Settlement Body of the WTO.¹⁶⁸ Where violations are found, the offending member country may find itself facing serious trade sanctions.¹⁶⁹

Although TRIPS has resulted in significant movement toward harmonized global patent law, the agreement has some flexibility for countries to craft their own laws. And, because patent law is territorial, there are also de facto variations in how it is applied. One subject countries could not come to an agreement about was exhaustion of intellectual property rights. Despite reaching agreements on many hotly debated topics, countries were unwilling to compromise.¹⁷⁰ As a result, TRIPS explicitly states that “nothing in this Agreement shall be used to address the issue of the exhaustion of intellectual property rights.”¹⁷¹

As further rounds of multilateral trade agreements have faltered, progress in trade agreements has been made through bilateral or regional trade agreements. The United States has pushed for and often included “TRIPS-plus” measures in such agreements—patent protection measures that go beyond the minimum requirements laid out in the TRIPS Agreement. Some of these measures address exhaustion. Thus, for example, the U.S.-Morocco free trade agreement requires that the exclusive rights to prevent importation “shall not be limited by the sale or distribution of that product outside its territory,”¹⁷² thus requiring members not to implement international

168. Understanding on Rules and Procedures Governing the Settlement of Disputes, Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 2, 1869 U.N.T.S. 401.

169. The area in which the sanction is imposed need not be related to the violation. *Id.* art. 22.3.

170. The explicit dodge of the international exhaustion issue reflects the disagreement among countries on this issue. Australia, for example, was in favor of an international exhaustion regime—at least for copyrights—arguing that domestic consumers would benefit from it. DANIEL GERVAIS, *THE TRIPS AGREEMENT: DRAFTING HISTORY AND ANALYSIS* 62–63 (1998) (citing Memorandum of the WIPO Bureau for the Committee of Experts on a Possible Protocol to the Berne Convention, WIPO Doc. BCP/CE/IV/2 (Mar. 15, 1994)).

171. TRIPS, *supra* note 53, art. 6. This exclusion is only subject to the articles requiring national treatment and most-favored-nation treatment. *Id.* arts. 3–4. National treatment is the requirement of treating nationals of other member countries as well as one’s own members, while most-favored nation treatment requires treating nationals of any other member country as well as nationals of other member countries. Thus, while member states may maintain their rules on exhaustion, those rules must not be applied in a manner that is discriminatory to nationals of other member states.

172. United States-Morocco Free Trade Agreement, U.S.-Morocco, art 15.9(4), June 15, 2004, <http://www.ustr.gov/trade-agreements/free-trade-agreements/morocco-fta/final-text>. The U.S.-Australia Free Trade Agreement similarly precludes a regime of international exhaustion, “at least where the patentee has placed restrictions on importation by contract or other means.” United States-Australia Free Trade Agreement, U.S.-Austl., art. 17.9(4), Jan. 1,

exhaustion. Thus, it appears that the understanding of the executive branch has been that there is currently no international exhaustion in patent or copyright law.¹⁷³ In addition, the United States has been in negotiations for an Asia-Pacific trade agreement, known as the Trans-Pacific Partnership Agreement (“TPP”).¹⁷⁴ Although negotiations have primarily been conducted in private, leaked draft versions indicate that the United States has opposed a rule of international exhaustion.¹⁷⁵

V. IMPLEMENTATION AND CRITIQUES

An international exhaustion rule for patents might have seemed highly unlikely in the years since *Jazz Photo I & II* were decided—and particularly in the context of the United States’ position in trade negotiations. However, the Supreme Court’s recent decision in *Kirtsaeng* signals a willingness to reconsider exhaustion in the copyright context, supported by policy considerations that apply *mutatis mutandis* to patent law.¹⁷⁶ Indeed, most of the reasoning is consistent with the justification for the rule of national patent exhaustion¹⁷⁷ and, given the global nature of commerce and consumption, their application to a global market provides a natural next step. However, practical considerations about implementation remain. In addition, international patent exhaustion may present particular concerns for the pharmaceutical industry and make more salient concerns already raised by national rules of exhaustion, such as the appropriate treatment of restrictive licensing and the need—or potential—for differential treatment for single-use versus self-replicating technologies.

2005, available at http://www.ustr.gov/sites/default/files/uploads/agreements/fta/australia/asset_upload_file148_5168.pdf.

173. Justice Ginsburg mentions this in her *Kirtsaeng* dissent. *Kirtsaeng v. John Wiley & Sons, Inc.*, 133 S. Ct. 1351, 1373 (2013) (Ginsburg, J., dissenting) (“The Court’s bold departure from Congress’ design is all the more stunning, for it places the United States at the vanguard of the movement for ‘international exhaustion’ of copyrights—a movement the United States has steadfastly resisted on the world stage.”); see also *infra* Sections V.A–V.B.

174. Sean M. Flynn et al., *The U.S. Proposal for an Intellectual Property Chapter in the Trans-Pacific Partnership Agreement*, 28 AM. U. INT’L L. REV. 105 (2012).

175. See Trans-Pacific Partnership art. QQ.A.12 (draft Aug. 30, 2013), available at <http://wikileaks.org/tpp> (noting that the United States, Australia, Japan, and Mexico oppose language suggesting that “[t]he Parties are encouraged to establish international exhaustion of rights.”); see also Flynn et al., *supra* note 174, at 130–31 (2012) (discussing the proposed provision).

176. Although the Court’s statutory construction is critiqued below, it is not applicable to the patent law question. See *infra* note 189 and accompanying text.

177. See *supra* Section IV.A.

A. *KIR TSAENG* AS A MODEL: COPYRIGHT'S FIRST SALE DOCTRINE GOES GLOBAL

The U.S. position against international exhaustion for patents is called into question by the Supreme Court's recent holding in *Kirtsaeng v. John Wiley & Sons, Inc.* that the first sale provision of the Copyright Act has no geographical limitations—in other words, U.S. copyright is governed by international exhaustion.¹⁷⁸ Although the separate statutory and common law development of patent and copyright law would allow for different rules, the theory underlying arguments for and against international exhaustion is the same for both fields.¹⁷⁹ In addition, many goods are covered by multiple types of intellectual property rights, so that absent adoption of international exhaustion for patents, the purposes of the copyright rule would be thwarted when applied to products also covered by patents. For these reasons, if international exhaustion in copyright law is defensible, it should be considered in patent law, too. The *Kirtsaeng* decision is a good place to start.

In *Kirtsaeng*, the Court ruled that importation and sale of books purchased from a Thai subsidiary of a U.S. publisher did not constitute copyright infringement because the original purchase exhausted the U.S. copyright holder's rights to exclude future sales.¹⁸⁰ Section 109 of the Copyright Act sets forth the rule on exhaustion, also known as the “first sale” doctrine, as an exception to the exclusive distribution rights of copyright owners, and provides that “the owner of a particular copy . . . lawfully made under this title . . . is entitled, without the authority of the copyright owner, to sell or otherwise dispose of . . . that copy.”¹⁸¹ Section 109 thereby codifies the first

178. See *Kirtsaeng*, 133 S. Ct. at 1371.

179. The story is different in trademark law, which has different theoretical and statutory underpinnings. Trademark law is generally understood to follow a rule of international exhaustion, with a widely applied exception for when “genuine, but unauthorized, imports differ materially from authentic goods authorized for sale . . . because a difference in products bearing the same name confuses consumers and impinges on the local trademark holder's goodwill.” *Societe des Produits Nestle v. Casa Helvetia*, 982 F.2d 633, 635 (1st Cir. 1992). Courts have generally emphasized the differences between imported trademarked goods and authorized goods, thus allowing for de facto geographic price discrimination through trademark law. Thus, without changes to that area of law, consistent with *Kirtsaeng* and potential changes in patent law doctrine, a regime of international exhaustion in intellectual property could be undermined. See generally Charles E. Colman, *Post-Kirtsaeng, 'Material Differences' Between Copyright and Trademark Law's Treatment of Gray Goods Persist* (New York University School of Law Public Law Research, Paper No. 13-40, 2013), available at http://ssrn.com/abstract_id=2281562.

180. *Kirtsaeng*, 133 S. Ct. at 1355–56.

181. 17 U.S.C. § 109(a) (2012) (emphasis added).

sale doctrine that had previously emerged in common law.¹⁸² A separate provision, § 602, explains that importation of copies acquired abroad “without the authority of the owner of a copyright under this title . . . is an infringement of the exclusive right to distribute copies . . . under [§] 106.”¹⁸³ Because the first sale provision is an exception to the exclusive right referenced in the importation provision, the Court has held that the first sale doctrine also limits findings of infringement through importation.¹⁸⁴ In *Quality King Distributors v. L’anza Research Int’l*, the Court held that importation of an authorized copy made in the United States, sent abroad, and sold before reimportation did not violate the importation provision.¹⁸⁵ That ruling did not address the issue of copies made abroad.¹⁸⁶ In particular, the first sale doctrine’s requirement that a copy be “lawfully made under this title” was clearly satisfied by the authorized copy made in the United States. The *Kirtsaeng* Court had to decide whether authorized copies made abroad were “lawfully made under this title,” and thus subject to the first sale doctrine.¹⁸⁷ The Court framed the question as whether there was a geographical component to the “lawfully made” requirement, and determined there was not.¹⁸⁸

The decision can be understood in part as choosing between two statutory interpretations, neither of which was likely contemplated by the drafters.¹⁸⁹ Either the first sale doctrine would apply to copies made abroad,

182. *See* *Bobbs-Merrill Co. v. Straus*, 210 U.S. 339, 350 (1908) (applying the first sale doctrine to copyright law, for the first time, in the case of a publisher who attached a notice setting a floor on resale prices for the book, and holding that copyright does not allow impositions on future sellers “to future purchasers, with whom there is no privity of contract”).

183. 17 U.S.C. § 602(a)(1) (2012); *see also* § 602(a)(2) (deeming it infringement to import copies “the making of which either constituted an infringement of copyright, or which would have constituted an infringement of copyright if this title had been applicable”). The separate treatment of unauthorized copies in § 602(a)(2) might suggest that § 602(a)(1) was aimed at copies that were authorized, but the Court did not address this distinction in *Kirtsaeng*.

184. *Quality King Distrib., Inc. v. L’anza Research Int’l, Inc.*, 523 U.S. 135, 145 (1998).

185. *Id.*

186. *Kirtsaeng v. John Wiley & Sons, Inc.*, 133 S. Ct. 1351, 1355 (2013).

187. *Id.*

188. *Id.* at 1357–60.

189. The Court discusses the legislative history of the importation provision and the Copyright Office’s explanation of the current version, which states that importation without permission “would violate the exclusive rights of the U.S. copyright owner . . . where the copyright owner had authorized the making of copies in a foreign country for distribution only in that country.” *Id.* at 1369 (citing COPYRIGHT LAW REVISION, PT. 6, PRELIMINARY DRAFT FOR REVISED U.S. COPYRIGHT LAW AND DISCUSSIONS AND COMMENTS, 88TH CONG., 2D SESS., 150 (Comm. Print 1964)). Although that quote contemplates that copyright

thus diminishing the reach of the importation ban significantly,¹⁹⁰ or it would only apply to copies made in the United States, with the result that rights in copies made abroad would never be exhausted, even if the copies were imported and sold by the copyright owner.¹⁹¹ This second interpretation would allow publishers to control all downstream sales of books initially published abroad, creating incentives for publishers to move operations abroad and allowing for restraints on future sales that are at odds with a functioning market.¹⁹² Although the *Kirtsaeng* opinion avoids an undesirable

owners would be able to authorize publication for sale in particular markets and then block importation of works made for that market—precisely the type of market segmentation that was disallowed domestically by the first sale provision—the Court concluded that the importation sections were not intended to address the issue of first sale. *Kirtsaeng*, 133 S. Ct. at 1369. *But see id.* at 1373 (Kagan, J., concurring) (“I think John Wiley may have a point about what 602(a)(1) was designed to do” after summarizing his argument that the rightful purpose of that section was “enabling copyright holders to segment international markets.”). It is also surprising that the Court did not contrast the relevant importation provision for “work[s] that have been acquired outside the United States . . . ,” 17 U.S.C. § 602(a)(1) (2012), with the subsequent clause that addresses importation of copies, “the making of which either constituted an infringement . . . or which would have constituted an infringement of copyright if this title had been applicable,” a section that seems to describe works made without authorization in contrast to the previous section that only discusses where the works were acquired. Instead, when discussing this section, the Court suggests that it proves the American Copyright Act is “applicable to all pirated copies, including those printed overseas.” *Kirtsaeng*, 133 S. Ct. at 1359 (emphasis omitted). Thus, the fact that the drafters distinguished between works made abroad and works made abroad that would have been infringing if the title had been applicable is used by the Court to prove that the Act is applicable everywhere. This reading is strained at best.

190. *See Kirtsaeng*, 133 S. Ct. at 1373 (Kagan, J., concurring) (agreeing that the importation provision is greatly limited by this decision, but suggesting that *Quality King* was the problem). As explained by Justice Kagan:

allowing the copyright owner to restrict imports irrespective of the first-sale doctrine—i.e., reversing *Quality King*—would yield a far more sensible scheme of market segmentation than would adopting . . . Wiley’s argument here. That is because only the former approach turns on the *intended market* for copies; the latter rests instead on their *place of manufacture*.

Id. at 1373 n.2.

191. *Id.* at 1362 (explaining that “a geographical interpretation of the ‘first sale’ clause . . . would grant the holder of an American copyright . . . permanent control over the American distribution chain (sales, resales, gifts, and other distribution) in respect to copies printed abroad but not in respect to copies printed in America”); *id.* at 1365 (explaining the effects of a geographical interpretation on technology companies whose products contain copyrightable software programs, as “[m]any of these items are made abroad with the American copyright holder’s permission and then sold and imported (with that permission) to the United States.”) (citing Brief for Retail Litigation Center, Inc. et al. as Amici Curiae, *Kirtsaeng*, 133 S. Ct. 1351 (No. 11-697), at *4).

192. *Id.*

interpretation, the new doctrine of international exhaustion of copyright was not likely contemplated by the law's drafters.

The statutory interpretation that underlies the *Kirtsaeng* decision, while interesting, does not constrain the possibilities for patent law. The patent law doctrine is not bound by statutory language, and the common law gives room for doctrinal evolution over time. Nonetheless, the policy arguments in *Kirtsaeng* brought out the same themes discussed in Part II, *supra*, recognizing the interest rights holders have in segmenting markets, but ultimately finding those outweighed by the interests in competition and a robust resale market. In particular, the Court looked at the historical movement away from protectionism and toward competition in addition to considering the effects of the rule on particular institutions and industries. Thus, the Court put its decision in context by noting legislative movement away from protectionism in the copyright law's elimination of a limitation on works manufactured outside the United States.¹⁹³ As previously discussed, a historical view of patent law provisions and their movement away from protectionism shows that the maintenance of national markets can be seen as one of the last relics of protectionism, and one that, alone, does not work.

The Court also explained the purposes of exhaustion in the domestic context through the policies driving its earlier, common law evolution.¹⁹⁴ In particular, the Court referenced the common law's "refusal to permit restraints on the alienation of chattels," which are "against Trade and Traffi[c], and bargaining and contracting."¹⁹⁵ In addition to historical ideas about restraints on alienation, the Court noted that exhaustion is supported by the antitrust law's purpose of "maximiz[ing] consumer welfare by encouraging firms to behave competitively."¹⁹⁶ These same concerns about downstream markets apply in patent law as well.¹⁹⁷ Of interest, the Court

193. The Court pointed to the elimination in 1976 of the "manufacturing clause" that limited importation of copies made outside the United States (or Canada), explaining that the purpose of that change was to "equalize treatment of copies manufactured in America and copies manufactured abroad." *Id.* at 1361 (citing H.R. REP. NO. 94-1476, at 165-66 (1976)). The Court has noted this change before. *Id.* (citing *Golan v. Holder*, 132 S. Ct. 873 (2012)) ("Congress has moved from a copyright regime that, prior to 1891, entirely excluded foreign works from U.S. copyright protection to a regime that now 'ensure[s] that most works, whether foreign or domestic, would be governed by the same legal regime.'").

194. *Kirtsaeng*, 133 S. Ct. at 1363.

195. *Id.* (citing EDWARD COKE, *THE FIRST PART OF THE INSTITUTES OF THE LAWS OF ENGLAND* 223 (1628)).

196. *Id.* at 1363 (quoting 1 PHILLIP E. AREEDA & HERBERT HOVENKAMP, *ANTITRUST LAW: AN ANALYSIS OF ANTITRUST PRINCIPLES AND THEIR APPLICATION* ¶ 100 (3d ed. 2006)).

197. *See supra* Part III.

summarily dismissed the common argument about the benefits of price discrimination, explaining that “no basic principle of copyright law” suggests entitlement to this right.¹⁹⁸ Finally, the Court also discussed the practical and negative effects of a geographical restriction on particular industries, such as the used book industry, libraries, art museums, technology companies whose products contain copyrightable software, and other retailers who sell goods with copyrighted packaging, logos, etc.¹⁹⁹ These businesses rely on their ability to import works made abroad, works which once resold are indistinguishable from works made within the United States, such that a rule allowing continued control of the goods would constitute barriers to commerce. The consequences of such a rule to these industries, the Court suggests, would be “intolerable.”²⁰⁰ Many of the goods to which the Court referred are likely to be covered by patent protection as well as copyright. Copyrighted packaging may well contain patented materials, and products including software are also generally protected by patents as well. To the extent the Court was concerned about the control of importation or resale of these products, *Kirtsaeng* only takes us part of the way.²⁰¹ An analogous rule in patents would free the goods.

B. QUESTIONING THE BENEFITS OF GEOGRAPHIC PRICE DISCRIMINATION

Previous Sections have argued that maintaining different rules for national and international exhaustion is at odds with the current purposes of patent and trade law. However, the economic argument against international exhaustion posits that the geographical price discrimination that is possible under national exhaustion carries benefits that would be lost in a move to international exhaustion. According to this view, the social welfare effects of international exhaustion would result in less innovation and less access for consumers in low-income countries, so that the otherwise outdated distinction between foreign and domestic sales is justified because it is best suited to meet the objectives of the patent system. There are insufficient data for an empirical conclusion either way. However, the traditional argument

198. *Kirtsaeng*, 133 S. Ct. at 1371.

199. *Id.* at 1364–65.

200. *Id.* at 1366.

201. It is true that the parade of horrors envisioned in *Kirtsaeng* would not fully apply in patent law. Remember that the Court was concerned that rights in products made abroad could never be exhausted by an authorized sale, as those goods were not “lawfully made under” the U.S. Copyright Act. For patents, even without a rule of international exhaustion, an authorized U.S. sale or importation of goods made abroad still exhausts rights. *See supra* note 159.

against international exhaustion fails to recognize the costs of geographical price discrimination—costs that are exacerbated by growing income disparity. These include access costs for poorer consumers in otherwise high-income countries, although even with geographical price discrimination poor consumers in low-income countries also have limited access.²⁰² In addition, the models fail to account for substitute price discrimination measures firms would likely undertake to limit the contemplated ill effects. These substitute measures could result in more access as firms find other ways to target broad and diverse markets.

Price discrimination occurs when a seller—particularly a monopolist—charges different prices to different buyers, based on some measure of their willingness to pay.²⁰³ Perfect (or “first-degree”) price discrimination describes the situation of a monopolist who sells to each consumer at the highest price she is willing to pay.²⁰⁴ It is, however, a “never-attained theoretical limit.”²⁰⁵ If such a thing were possible, it would result in the greatest gain to the seller who could make more sales, extracting the highest possible price for each one. It would also theoretically result in greater consumer access to goods, because everyone willing to pay more than the marginal price of production of a good would be able to obtain it.²⁰⁶ However, there would be no consumer surplus—that is, no one would be able to buy the good for less than the highest price they were willing to pay. Instead, the consumer surplus that would have existed without discriminatory pricing would all accrue to the monopolist.²⁰⁷

In reality, companies find many ways to engage in price discrimination, sometimes through volume discounts or “versioning” methods that differentiate consumers according to their willingness to pay—both types of second-degree price discrimination.²⁰⁸ One example of versioning is the

202. See *infra* note 222 and accompanying text.

203. See ROBERT H. FRANK, MICROECONOMICS AND BEHAVIOR 389–95 (8th ed. 2010).

204. *Id.* at 393.

205. *Id.* at 394 (explaining that imperfect knowledge of consumer preferences make first-degree price discrimination impossible).

206. *Id.* at 394.

207. *Id.*

208. *Id.* at 395–96. Volume discounts are one type of second-degree price discrimination, in which the seller induces the buyer to reveal her preferences. One example of a volume discount is the pricing structure utilities companies use, charging less per kilowatt-hour after a certain limit has been reached. Companies can also try to differentiate consumers who are willing to pay more from those willing to pay less by setting “hurdles,” such as mail-in rebates, that only some customers will undertake the nuisance of completing. “Versioning” refers to selling slightly different products, possibly introduced at slightly different times, such as hardcover, paperback, and electronic books. See *id.*; William W.

different amounts of memory or processing power that come with tablet computers and the regular introduction of newer models.²⁰⁹ Third-degree price discrimination occurs when sellers “separate [buyers] into groups that correspond roughly to their wealth or eagerness.”²¹⁰ The classic example is using demographic generalizations to grant discounts to certain groups, such as student or senior discounts in movie theaters.²¹¹ All of these methods are imperfect, but allow sellers to reach consumers they might otherwise not reach while maintaining higher prices for a large portion of the market. The success of such methods from the seller’s viewpoint depends in part on how well the division differentiates markets.²¹² For example, versioning is successful if high-income buyers do not see a cheaper version of a product as a sufficient substitute for the more expensive one. It also requires that arbitrage be limited, so that low-cost buyers are unable to resell goods to high-cost buyers.²¹³

The description and requirements of third-degree price discrimination apply to patents and a rule of national exhaustion.²¹⁴ A rule of national exhaustion allows patent holders to engage in geographical price discrimination, offering goods at lower prices in lower-income markets while preserving their ability to sell at higher prices in higher-income markets. This theoretically results in higher returns to the patent holder,²¹⁵ higher costs to consumers in high-income markets, and lower costs (and therefore greater access to goods) in lower-income markets. It follows that elimination of geographical price discrimination would result in lower returns to patent

Fisher III, *When Should We Permit Differential Pricing of Information?*, 55 UCLA L. REV. 1, 3–4 (2007).

209. This differentiates consumers willing to pay more for greater computing capacity and those willing to pay more for the newest version of electronics.

210. Fisher, *supra* note 208, at 4.

211. *See id.*

212. *Id.* at 4 (“the firm must be able to differentiate among its customers on the basis of the values they place on the firm’s product”).

213. David A. Malueg & Marius Schwartz, *Parallel Imports, Demand Dispersion, and International Price Discrimination*, 37 J. INT’L ECON. 167, 170–71 (1994).

214. The welfare effects of third-degree price discrimination are generally considered to be ambiguous. Hal R. Varian, *Price Discrimination and Social Welfare*, 75 AM. ECON. REV. 870 (1985) (generalizing results that price discrimination only increases welfare when it results in increased output).

215. Alan O. Sykes, *TRIPS, Pharmaceuticals, Developing Countries, and the Doha “Solution,”* 3 CHI. J. INT’L L. 47, 64 (2002) (“Parallel importation invariably reduces the rents that are earned by pharmaceutical patent holders. To the degree that those rents are important to inducing worthwhile R&D investments, as suggested above, this effect is unfortunate.”). *But see* Peter Yu, *The International Enclosure Movement*, 82 IND. L.J. 827, 844–45 (2007) (suggesting that Sykes “overstate[s] the practical impact of [parallel] importation.”).

holders, lower prices in high-income markets, and less access for those in lower-income countries. This is because the threat of competition from goods bought abroad and imported for sale—parallel imports—would cause patent holders either to raise prices abroad or to decline to sell in low-income markets.²¹⁶ David Malueg and Marius Schwartz suggest, in this vein, that when there are great income disparities between countries, international exhaustion (and the uniform pricing that resulted) would lead to lower welfare than a system of national exhaustion.²¹⁷ Mattias Ganslandt and Keith Maskus also critique international exhaustion, disagreeing that it necessarily results in lower prices in high-income locations because of changes in distributional structure that would result.²¹⁸ Kamal Saggi discusses the interests and motivations of different countries and companies, suggesting that the combination of intellectual property rights protection now mandated by TRIPS with an international exhaustion policy by high-income countries would result in welfare gains to companies and consumers in those countries at the expense of consumers in low-income countries.²¹⁹ This argument conflicts with the previous two with respect to patent holders, but the conclusion that national exhaustion allows for greater welfare is the same.

The economic arguments in favor of geographic price discrimination are not without caveats or critics. The caveats are that these theoretical models, while useful, make assumptions that are not necessarily borne out in reality

216. Malueg & Schwartz, *supra* note 213, at 171; *see also* Pinelopi Koujianou Goldberg, *Intellectual Property Rights Protection in Developing Countries: The Case of Pharmaceuticals*, 8 J. EUR. ECON. ASS'N. 326, 329–30 (2010) (arguing that pharmaceutical companies might not serve low-income countries or may raise prices there if there is parallel importing).

217. *Id.* If patent holders continue to place goods on separate markets at vastly different prices, then it is true that consumers in high-income markets benefit from parallel trade. However, because the patent holder controls market entry of the patented goods worldwide, we can expect that her behavior *ex ante* will change. One way it might change is that she stops selling goods at different prices and introduces a worldwide price (with some variation to account for transportation and other distribution cost differences among regions). Another option is for the patent holder to choose not to make goods available in some low-income markets in order to preserve high returns in the high-income market.

218. Mattias Ganslandt & Keith E. Maskus, *Vertical Distribution, Parallel Trade, and Price Divergence in Integrated Markets*, 51 EUROPEAN ECON. REV. 943, 944 (2007) (suggesting that the conclusion that “permitting [parallel imports] unambiguously brings down retail prices in expensive locations is misleading”). Ganslandt and Maskus argue that in response to an international exhaustion regime, intellectual property rights holders may consolidate distributors and change wholesale pricing in ways that would obviate perceived benefits to consumers. *Id.* at 945.

219. Kamal Saggi, *Market Power in the Global Economy: The Exhaustion and Protection of Intellectual Property*, 123 ECON. J. 131, 135 (2013). However, these results would change if strong intellectual property rights were necessary to induce importation of technology, for industries where there is a quality gap between innovator companies and imitators. *Id.*

or fail to account for reactions other than those modeled.²²⁰ Gene Grossman and Edwin Lai suggest that international exhaustion may provide more support for innovation than national exhaustion by encouraging countries that use price controls to raise their prices, thus providing greater remuneration to patent holders.²²¹ Peter Yu raises a question about the extent to which firms currently engage in price discrimination that permits access to low-income markets.²²² In particular, Yu suggests that concerns about parallel imports in the pharmaceutical industry are overblown, both because many pharmaceutical companies have chosen not to enter lower-income markets even with a rule of national exhaustion and because the vast wealth disparities *within* some countries leads companies to target only the high-income market instead of selling at lower prices.²²³ If the opportunity for geographical price discrimination is not resulting in greater access, the argument for keeping it gets weaker. Although Yu discusses the pharmaceutical market, this critique also questions the usefulness of geographic markets as demand indicators in general. As discussed above, price discrimination works best when it successfully differentiates markets and arbitrage is limited. A rule of national exhaustion satisfies the second condition, but its application to the first may be questioned. For example, even developed countries have increasingly large levels of wealth disparity,²²⁴

220. See, e.g., Abbott, *supra* note 51, at 11 (noting Maskus's reminder that current static game theory models were incomplete and pointing to later work that shows how the reduction of trade barriers will result in increasing benefits from parallel trade).

221. Gene M. Grossman & Edwin L.-C. Lai, *Parallel Imports and Price Controls*, 39 RAND J. ECON. 378, 380 (2008) (arguing that worldwide international exhaustion leads to more innovation than national exhaustion for industries with price controls because countries face the possibility that innovator companies will choose not to sell to them). Grossman and Lai base their argument on the idea that governments with price controls will tend to raise their price caps under a scheme of international exhaustion to ensure that producers will continue to serve their market. However, in the drug industry, many countries with price caps also require companies to fulfill demand and are able to threaten compulsory licensing when the demand is not met.

222. Yu, *supra* note 215, at 844–45.

223. *Id.*; see also Keith E. Maskus, *Ensuring Access to Essential Medicines: Some Economic Considerations*, 20 WIS. INT'L L.J. 563, 566 (2002) (explaining that sometimes “pharmaceutical firms and their distributors in poor countries may find it more profitable to sell drugs in low volumes and high prices to wealthier patients with price-inelastic demand rather than in high volumes at low prices to poorer patients”).

224. See, e.g., ORGANIZATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT, *An Overview of Growing Income Inequalities in OECD Countries: Main Findings*, in DIVIDED WE STAND: WHY INEQUALITY KEEPS RISING 21, 22 (2011), available at <http://www.oecd.org/els/soc/49499779.pdf>. In America, the GINI coefficient, a measure of income inequality that is 0 under conditions of perfect equality and 1 under complete inequality, has steadily risen from 0.399 in 1967 to 0.466 in 2001, according to information from the U.S. Census

and therefore increasingly diverse levels of demand. The social welfare argument for geographical price discrimination becomes weaker when it does not result in greater access for low-income countries and simultaneously results in high prices for poorer members of developed countries. With regards to limitation of arbitrage: one reason that geographical price discrimination is so attractive to patent holders is that enforcement costs are relatively low. However, this is a benefit that only accrues to the patent holders. Borders are relatively easy to patrol for infringing goods,²²⁵ and a hefty portion of the cost is borne by the government through its deployment of customs officials rather than the patent holder. This makes a national exhaustion rule more attractive to rights holders, even when national markets are not an ideal basis for distinguishing among variable levels of demand.

Another critique is that geographical price discrimination should be compared with a regime in which sellers engage in other forms of price discrimination, rather than a world with uniform pricing. Patent holders in an international exhaustion regime will be unable to sell to large portions of foreign markets if they engage in uniform pricing (or choose not to sell abroad at all).²²⁶ If their only choices are whether to sell and how to set the price, the arguments suggesting there will be a worldwide, uniform price or abandonment of foreign markets may be correct. However, patent holders may well choose to offer more versions of patented products and engage in second-degree price discrimination mechanisms to capture more of the market. This reaction would mitigate access concerns for consumers in low-income countries. In fact, if companies faced additional pressure to develop multiple versions of a good, we could expect increased access in both low- and high-income countries (where income disparity may already omit a number of people from the market).

In sum, geographic price discrimination likely results in higher returns to patent holders. However, some of these higher returns are due to enforcement burdens taken on by customs officials. In addition, while geographic price discrimination allows for greater access by residents of low-income countries, in practice these populations are often underserved even in

Bureau. See *Historical Income Tables-Income Equality*, <http://web.archive.org/web/20070208142023/http://www.census.gov/hhes/www/income/histinc/ie6.html>.

225. Based on laws that require importers to declare goods and have them inspected, as opposed to domestic market transactions that may be conducted entirely privately and may therefore be difficult for patent holders to detect. 19 U.S.C. § 1484 (2012) (requiring that importers use reasonable care in making entries and classifying the imported merchandise).

226. *But see* Ganslandt & Maskus, *supra* note 218, at 4 (“It is conceivable that wholesale prices may be set in a way that offsets or even counteracts the anticipated impacts of an open [parallel importation] regime.”).

our current regime. Last, proponents of geographic price discrimination fail to account for the likely move of firms to other forms of price discrimination that might better segment and identify groups with differing demand curves. A rule of international exhaustion would likely encourage *better* price discrimination. The appropriate scope of that price discrimination is taken up in the next Section.

C. IMPLICATIONS FOR OTHER FORMS OF PRICE DISCRIMINATION

This Article has suggested that patent holders will engage in other forms of price discrimination in response to an international exhaustion regime. This and other strategic moves patent holders make in response to international exhaustion merit more analysis. For example, price discrimination through versioning may be overall beneficial because it will result in greater access and the customers who pay more will in fact receive something more for the higher price. However, other potential consequences of a move to international patent exhaustion are increased use of licenses as a means for patent holders to maintain control over their goods and increased use of technological measures to maintain such control.

Restrictive licenses circumvent limitations on restraints on alienation and could redo by contract what I have suggested undoing by international treaty. In the world of electronics and software, goods are increasingly licensed rather than sold. These licenses—and technological measures that restrict their violation—may frustrate resale, but they also allow for a form of price discrimination that may be more tailored than geographic methods. Thus, one’s position on licensing need not be dictated by one’s support for international exhaustion. Nor should the potential for more restrictive licenses in and of itself conclusively argue against international exhaustion. Many of the same questions about the benefits of price discrimination versus those of a robust resale market and reduced transaction costs apply to the licensing debate. Indeed, the doctrinal development of the exhaustion doctrine in the United States has been a story about balancing the ability of parties to contract for limitations on patent licenses with the transaction costs associated with goods having complex limitations on all future transactions.²²⁷ Geographic limitations are but one possible type.

Another related consideration is the extent to which common ownership of the relevant intellectual property rights should matter to a determination that an “authorized” first sale has taken place and exhausted a patent holder’s

227. See Mossoff, *supra* note 156, at 12 (describing the ability of nineteenth century patent holders to impose a “litany of restrictions on the use of the property interest they conveyed to a licensee”).

rights. This question has been presented in patent,²²⁸ copyright,²²⁹ and trademark²³⁰ cases in the national and international contexts. The early patent cases ruled that exhaustion only occurs for unconditional sales made by owners in multiple jurisdictions, whereas granting exclusive, geographic licenses to different entities allows each to use the patent laws to enforce their entitlements, thereby presenting a type of default interpretation on sales that a patent holder could overcome through explicit licensing and restrictions.²³¹ These decisions, while perhaps right as applied among the various licensees, may need to be recalibrated to the extent they allow restrictions to travel with the goods, affecting unwitting downstream consumers. Just as the scope of permissible licensing presents questions, the potential for licensing to separate entities to avoid exhaustion will require further scrutiny and doctrinal development.

The proper scope of the exhaustion doctrine as applied to non-geographic restrictions and to particular forms of technology is a topic that merits further inquiry—particularly if there is widespread adoption of an international exhaustion regime. This move would bring into focus the issue of the allowable scope of private restrictions on the movement of goods. It does not, however, argue against bringing international patent law into conformity with domestic law, or patent law into conformity with copyright law.

D. IMPLEMENTATION

There are many ways that a rule of international patent exhaustion could be implemented. The simplest is that it could be unilaterally adopted by the Supreme Court, which could distinguish *Boesch* on the basis that the sale in *Boesch* did not involve authorization from the patent holder. In doing so, the Court would bring together patent and copyright doctrine by finding exhaustion following an authorized first sale, worldwide. However, this would diminish the possibility of benefitting from the greater gains that

228. See *supra* Section IV.B.

229. For a discussion of how licensing can be used to avoid exhaustion for copyrighted works, see Clark D. Asay, Kirtsaeng and the *First-Sale Doctrine's Digital Problem*, 66 STAN. L. REV. ONLINE 17 (2013); Carver, *supra* note 131.

230. In *Établissement Consten*, Grundig had rights to a trademark and licensed to Consten the right to register the trademark in France in Consten's name, thereby planning to enjoin imports of the trademarked goods in Germany, where Grundig held the trademark. The European Court of Justice found this violated the competition law of the European Economic Community ("EEC") Treaty by attempting to artificially maintain separate markets. Joined cases 56 & 58/64, *Établissement Consten S.A.R.L. v. Comm'n*, 1966 E.C.R. 299.

231. See *supra* Section IV.B.

would come from a harmonized world rule of international exhaustion. In particular, transaction costs would only be slightly lower with one more country participating in a regime of international exhaustion, whereas the ability to engage in cross-border manufacture without concerns about crisscrossing licenses would eliminate an entire class of transaction costs. Short of a worldwide exhaustion regime, it might be possible to implement various multilateral exhaustion regions (such as the European Union already has) or to engage in a reciprocal recognition of exhaustion. A worldwide exhaustion regime aligns better with the purposes of TRIPS, and a patent holder's decision to license or sell rights in another territory ought not to remove a patent from the potential for exhaustion.

From a patent law perspective, the harmonization TRIPS brought to procedural and substantive laws governing patents provides a number of benefits. One benefit is certainty to inventors and investors that their inventions will receive protection worldwide, thus inspiring advancement in new technology areas and technology transfer to new markets.²³² Harmonization also lowers costs—both direct costs (e.g., by allowing central filing for multiple countries) and the indirect costs of understanding and analyzing various sets of laws and their implications.²³³ From a trade perspective, inadequate (or differential) intellectual property protection can constitute a non-tariff barrier to trade.²³⁴ Thus, in a country with strong patent rights, patent holders are likely to commercialize and market their goods; however, those same patent holders will be wary of exporting and making the goods available in a country without patent protection because others may copy the innovation and compete with the patent holder.²³⁵ In

232. See Rajec, *supra* note 29, at 41–42 (discussing the certainty justification for harmonization of global patent law); see also Frederick M. Abbott, *The Enduring Enigma of TRIPS: A Challenge for the World Trading System*, 1 J. INT'L ECON. L. 497, 499 (1998) (noting that TRIPS provides “the enhancement of [industrialized country-based enterprises] legal security in a wider portion of the world market”).

233. See Rajec, *supra* note 29, at 46.

234. 1 THE GATT URUGUAY ROUND: A NEGOTIATING HISTORY (1986–1992), at 707–08 (Terence P. Stewart ed., Kluwer Law 1993); see also TRIPS, *supra* note 53, pmbl. (stating that the agreement was intended “to reduce distortions and impediments to international trade, and tak[e] into account the need to promote effective and adequate protection of intellectual property rights . . .”).

235. The potential for such imitations to be exported back to the strong-patent-rights country may also lessen incentives to invest. This problem is addressed through bans on infringing imports and by increased harmonization on laws governing counterfeits. In fact, concerns about trade in counterfeit goods provided some of the strongest motivation to include intellectual property rights in the Uruguay Round negotiations. TRIPS, pmbl. (“[r]ecognizing the need for a multilateral framework of principles, rules and disciplines dealing with international trade in counterfeit goods”).

this way, the minimum standards of protection set by the TRIPS Agreement were seen as reducing a barrier to trade.

A harmonized rule on exhaustion would have further reduced such barriers.²³⁶ Instead, there is a patchwork of rules. The European Union, for example, practices regional exhaustion for goods that are placed on the market within the European Union.²³⁷ Other countries practice international exhaustion.²³⁸ The United States has continued to adhere only to national exhaustion. It would be possible and permitted under the WTO to unilaterally adopt an international exhaustion regime for patents (as the United States has now done for copyright), but if international exhaustion in fact makes sense (as I argue it does), it does so in a world with harmonized international exhaustion. The gains to manufacturing efficiency and the certainty of freedom to use and resell goods is much greater if manufacturers, downstream retailers, and users do not have to keep in mind the multiple different treatments of goods that occur depending on which countries' versions of a patent apply to particular goods or parts of goods. In addition, using the WTO framework to bind all member countries eliminates the potential for strategic decisions by countries to tailor their exhaustion stance in deference to current constituencies that seek short term gains.²³⁹ For that reason, any movement toward international exhaustion from the United States should be a move toward a harmonized regime of international exhaustion.

236. During negotiation of the TRIPS Agreement, A.A. Yusuf and A. Moncayo von Hase suggested that the decision of whether to implement a regime of international exhaustion "has profound implications for the free movement of goods and services across national boundaries, and thus for international trade in general." Yusuf & Moncayo von Hase, *supra* note 45, at 116 (advocating for an international exhaustion regime).

237. This rule was first introduced in decisions of the European Court of Justice, Case 78/70, *Deutsche Grammophon, GmbH v. Metro-SB-Großmärket, GmbH*, 1971 E.C.R. 487; Case 15/74 *Centrafarm BV v. Sterling Drug Inc.*, 1974 E.C.R. 1147, and later adopted under the Treaty of Rome. *See* Consolidated Version of the Treaty on the Functioning of the European Union arts. 28, 30, May 9, 2008, 2008 O.J. (C 115) 59–60. Switzerland has also adopted a rule of exhaustion for goods from the European Union since July 2009. Press Release, Secrétariat Général, Département Fédéral de Justice et Police, Epuisement Régional en Droit des Brevets [Regional Exhaustion in Patent Law] (May 29, 2009), available at <http://www.ejpd.admin.ch/content/ejpd/fr/home/dokumentation/mi/2009/2009-05-29.html>.

238. Some countries that have adopted international exhaustion by statute include Egypt, South Africa, Argentina, Costa Rica, India, Malaysia, and China.

239. *See* Vincent Chiappetta, *The Desirability of Agreeing to Disagree: The WTO, TRIPS, International IPR Exhaustion and a Few Other Things*, 21 MICH. J. INT'L L. 333, 348 (2000) (explaining the various exhaustion regimes by suggesting that "[n]ations (and regions) are not coming out differently on the same global calculation; they are performing independent, self-interested valuations").

A worldwide rule of exhaustion would represent a significant change in current policy. The United States was stalwart in its refusal to implement international exhaustion during TRIPS negotiations.²⁴⁰ A shift in position might therefore have some worth in future multilateral negotiations relating to intellectual property. In other words, moving to an international exhaustion regime is both desirable in theory and of potential negotiating use as a practical matter.

Other possibilities are a regional or development-based multilateral exhaustion regime. Under such a regime, markets with roughly similar characteristics might create zones of exhaustion. The benefits would be that patent holders could still engage in some degree of price discrimination, assured that goods placed on the market in other “zones” would not be imported and compete with goods in high-income locations. At the same time, manufacturers could avoid transaction costs associated with cross-border manufacture by producing goods within a given zone. And consumers could still expect some level of competition between the various intrazone markets. Nonetheless, this idea is deeply problematic because of its potential to entrench countries within a particular zone, as the costs of breaking into a new one would become barriers to development. If a country were part of a lower-income zone and also a manufacturing zone, for example, the costs of trying to move into a higher-income zone would include consumer loss as prices went up and the loss of manufacturing jobs. Such a situation would be inconsistent with the purposes of the WTO agreement, if not with its substantive rules.²⁴¹

E. ADDRESSING CRITIQUES: THE PHARMACEUTICAL INDUSTRY

The pharmaceutical industry may warrant special treatment when it comes to price discrimination because of the non-market nature of the heavily regulated industry and because of the importance access to healthcare plays in global notions of human rights. Concerns about the availability of patented drugs in low-income countries are not merely academic.²⁴² The

240. See also GERVAIS, *supra* note 170, at 60–63.

241. A regional exhaustion regime might violate most-favored nation requirements by treating imports from different countries differently, although not necessarily resting on nationality of patent holders. See TRIPS, *supra* note 53, art. 4 (requiring that “any advantage, favour, privilege or immunity granted by a Member to the nationals of any other country shall be accorded . . . to the nationals of all other Members”).

242. See Ellen t’Hoen, *TRIPS, Pharmaceutical Patents, and Access to Essential Medicines: A Long Way from Seattle to Doha*, 3 CHI. J. INT’L L. 27, 27 (2002) (describing that ninety percent of those killed by infectious diseases each year are in the developing world and suggesting that “[t]he reasons for the lack of access to essential medicines are manifold, but in many cases the high prices of drugs are a barrier to needed treatments”).

importance of access to medicines has spurred concerns with the requirements of minimum levels of patent protection throughout the history of the TRIPS Agreement.²⁴³ One of the main points of contention between the global north and the global south during negotiations was the treatment of patents for pharmaceutical products. Many developing and least developed countries did not allow them, and there was great concern that implementing such regimes would lead to a crisis in access to medicine for poor countries.²⁴⁴ Whereas nongeographic forms of price discrimination may be effective for many consumer goods,²⁴⁵ these methods do not lend themselves easily to use in the pharmaceutical industry. For example, providing less effective versions of drugs for lower prices is conceptually and ethically problematic. As a result, one of the strongest counterarguments to a regime of international exhaustion focuses on the effects such a regime would have on patient populations in poor countries. The argument is that major pharmaceutical companies will refuse to sell in such low-income markets because the potential for parallel imports to erode the very large profits they glean in high-income markets would make it unprofitable.²⁴⁶ The other side of the same argument against international exhaustion centers on the high cost of research and development that goes into drug development and the relative ease with which drugs can be reverse engineered.²⁴⁷ Under this argument, the losses to pharmaceutical companies under an international exhaustion regime would lower incentives to innovate significantly. From either perspective, drugs are special. Access is of greater importance in the area of health, and profits derived from patents are valued more by innovators in this area.

The strong control of market entry exercised by the Food and Drug Administration (“FDA”) (and equivalent agencies in other developed countries) could be used to exempt drugs sold to least developed countries from international exhaustion.²⁴⁸ Drugs must go through an approval process

243. See, e.g., Amy Kapczynski, *Harmonization and Its Discontents: A Case Study of TRIPS Implementation in India's Pharmaceutical Sector*, 97 CALIF. L. REV. 1571, 1571–72 (2009).

244. See CYNTHIA M. HO, ACCESS TO MEDICINE IN THE GLOBAL ECONOMY: INT'L AGREEMENTS ON PATENTS AND RELATED RIGHTS 91 (2011).

245. See *supra* Part II (discussing price discrimination).

246. Atik & Lidgard, *supra* note 104, at 1045–46 (arguing that price discrimination is important in getting pharmaceutical products to least developed countries but that there has been a strange ambivalence toward the use of price discrimination).

247. See, e.g., Henry Grabowski, *Patents and New Product Development in the Pharmaceutical and Biotechnology Industries*, in THE PROCESS OF NEW DRUG DISCOVERY AND DEVELOPMENT 533, 535 (Charles G. Smith & James T. O'Donnell eds., 2d ed. 2002).

248. A rule against unauthorized reimportation is already part of the FDA's governing statute. See Federal Food, Drug, and Cosmetic Act, 21 U.S.C. § 381(d)(1) (2012) (providing

before they may be marketed. In the United States, the FDA has a complex process for companies wishing to sell drugs—patented or not—to patients that aims to ensure the drugs are both safe and effective.²⁴⁹ The registration of drugs and approval of processes mean that the FDA serves as a gatekeeper for all who wish to sell drugs in the U.S. market, and an expansion in this role to exclude drugs first sold in least developed countries would not exceed the scope of the agency’s current expertise.

While a patent holder could respond to the introduction of international exhaustion by not selling drugs in low-income markets at all, this would be an undesirable outcome because it might result in a lack of access to lifesaving medicines. Alternatively, the decision could raise the possibility of countries engaging in compulsory licensing to produce generic versions of lifesaving drugs.²⁵⁰ This result would still insulate the pioneer drug makers from parallel imports because drugs produced pursuant to a compulsory license would not be interpreted as authorized sales.²⁵¹ However, this result imposes costs (lost sales to the otherwise willing drug company, procedural costs of procuring a license, and—although relatively small—the costs to generic drug companies of reverse engineering). With a small margin for profits in least developed countries to start with, these inefficiencies could be problematic to the access cause. A better policy would encourage patent holders to manufacture and sell drugs to low-income markets and reserve compulsory licenses for situations where patent holders are unwilling to do so. The position of the FDA as a market gatekeeper means that drugs sold to

that “no [prescription] drug . . . which is manufactured in a State and exported may be imported into the United States unless the drug is imported by the manufacturer of the drug.”). Kevin Outterson explains how that law has been used to limit the reimportation of drugs produced in the United States and sent to Canada. Kevin Outterson, *Pharmaceutical Arbitrage: Balancing Access and Innovation in International Prescription Drug Markets*, 5 YALE J. HEALTH POL’Y L. & ETHICS 193, 213–14 (2005) (“The law was ostensibly intended to address safety concerns for the U.S. pharmaceutical supply chain, but its effect is to prevent international pharmaceutical arbitrage or parallel trade.” (citations omitted)).

249. See 21 U.S.C. § 393(b)(2)(B) (establishing the FDA and giving its mission as “protect[ing] the public health by ensuring that . . . drugs are safe and effective”); see also HO, *supra* note 244, at 13–16, 94 (describing similar agencies in other countries).

250. See TRIPS, *supra* note 53, art. 31 (allowing and setting parameters for compulsory licensing).

251. In addition, the compulsory licensing provisions of TRIPS require that goods produced pursuant to such a license be primarily for the domestic market, although manufacturers in a given country can also do so for a particular foreign market that does not have manufacturing capabilities. TRIPS, *supra* note 53, art. 31. Similarly, for countries in which inventors have chosen not to seek patents, manufacture and sales of those products would not be infringing, but they would also not be “authorized,” and thus sale would not exhaust the patent holder’s rights in other countries.

certain countries, or under certain conditions, could be exempted from international exhaustion, thus encouraging drug companies to sell drugs at the cost of production (or below) without concerns about parallel imports.

In addition to access to medicine issues for poor countries, the drug industry may be appropriate for special treatment because it is subject to price controls in so many countries.²⁵² These market conditions mean that in many places, patent holders have little control over the price at which they introduce products to the market, making the single reward justification for international exhaustion less compelling. Under a regime of price control, the autonomy of the patent holder in choosing to place goods on the market at a given price is no longer so clear. While patent holders may retain the choice of *whether* to sell, they no longer decide a price. For developed or developing countries that engage in price controls, patented medicines are bought at prices much lower than in countries (like the United States) that do not engage in such measures. And unlike the case of compulsory licensing, such sales are authorized. A regime of international exhaustion could be devastating to patent holding companies facing competition from imports in countries that engage in such pricing.²⁵³ The potential for lower prices of imported goods would not be a consequence of comparative advantage in manufacturing or the benefits of increased competition, but a result of disparate regulatory control.²⁵⁴

One possible solution would be to exempt pharmaceuticals from parallel importation entirely. Such a move would recognize that although similar levels of patent protection exist in all WTO member countries, other market forces intervene to alter the benefits a patent confers. In this sense, it is the unequal protection afforded to pharmaceutical products by patents that

252. John A. Vernon et al., *The Economics of Pharmaceutical Price Regulation and Importation: Refocusing the Debate*, 32 AM. J.L. & MED. 175, 176 (2006).

253. Europe has seen an increase in parallel trade in pharmaceutical products because the European Union practices regional exhaustion. The combination of regional exhaustion with strong price controls has proved problematic, as parallel traders engage in arbitrage that does not bring down the cost of medicines in countries that pay more for them, but serves only to appropriate profits that would otherwise go to patent holding pharmaceutical companies. As a result, courts have become sympathetic to companies that limit their supply in accordance with the demand of a given market. *See, e.g.*, Case C-53/03, *Synetairismos Farmakopoion Aitolias & Akarnanias (Syfait) v. GlaxoSmithKline AEEVE*, 2005 E.C.R. 4609, 4637 (opining that GlaxoSmithKline AEEVE was justified in refusing to meet in full orders it received from Greek pharmaceutical wholesalers in order to limit parallel trade “where the price differential giving rise to the parallel trade is a result of State intervention in the Member State of export to fix the price there at a level lower than that which prevails elsewhere in the Community . . .”).

254. Vernon et al., *supra* note 252, at 182–83.

creates barriers to trade in patented goods. However, as with any rule targeting a particular technology area, this could result in line-drawing problems. The scope of the exemption from international exhaustion could extend to all pharmaceutical products or methods of treating diseases using chemical compounds, but it could also cover treatment with biosimilars. Implementing legislation would have to describe a category that itself is growing due to innovation.

While implementation of a wide-scale exemption could be delegated to the FDA, another possibility for treatment of drugs sold subject to price regulations would draw upon trade mechanisms and the expertise of the agencies that implement them. Under this potential scheme, imports of patented pharmaceuticals from countries engaged in price controls could be treated as potentially dumped goods under trade law, sold in a non-market industry (akin to non-market economies in trade).²⁵⁵ Under our trade law, foreign manufacturers and importers cannot sell goods in the United States at less than fair value—that is, they cannot “dump” their goods on the U.S. market, because of the harm that would do to domestic industry.²⁵⁶ If such dumping is found, the Department of Commerce calculates the amount by which the sale is lower than normal value and taxes imports accordingly, raising the prices of the imported goods on the U.S. market so that they are in “fair” competition with domestically produced goods. In the drug industry, drugs imported from single-payer system countries would surely sell for less than domestically produced drugs, but because their U.S. prices would be comparable to those of the home market, they would not usually qualify as dumped. However, there is special treatment of goods that come from a non-market economy, defined as a foreign country that does “not operate on market principles of cost or pricing structures, so that sales of merchandise in such country do not reflect the fair value of the merchandise.”²⁵⁷ Drugs don’t function according to market principles of pricing.²⁵⁸ Therefore, the Department of Commerce would be free to compare their prices in the United States with a “constructed fair market value,” which would likely be the market value in the United States. The

255. Dumping refers to selling goods in a foreign market at lower than “fair value.” Most often, this is manifested in selling goods for a lower price in a foreign market than in the producer’s home market. Luke P. Bellocchi, *The Effects of and Trends in Executive Policy and Court of International Trade (CIT) Decisions Concerning Antidumping and the Non-Market Economy (NME) of the People’s Republic of China*, 10 N.Y. INT’L L. REV. 177, 179–80 (1997).

256. JOHN H. JACKSON, *Dumping in International Trade: Its Meaning and Context*, in ANTIDUMPING LAW AND PRACTICE 4–5, 11 (1990).

257. 19 U.S.C. § 1677(18)(A) (2012).

258. See Vernon et al., *supra* note 252, at 176.

treatment of imports of drugs from single-payer systems as dumped merchandise is one possibility for controlling the potential downsides of a system of international exhaustion.

VI. CONCLUSION

The United States should adopt a rule of international exhaustion in patent law. This would bring the law in line with copyright law and vindicate the practical goals of the *Kirtsaeng* opinion. But more importantly, it would apply theory that was once only considered in the national context to international sales and movements of goods in a way that increases competition and lowers barriers to trade. Modern trade law operates under a recognition that greater global welfare comes from increased competition and freedom for downstream innovators, retailers, and consumers. Although patent law has adopted some of the formalities of modern trade theory, it has so far clung to the protection of national markets for patent holders. This change would involve increased costs to patent holders, but it is unlikely that those increases will be as drastic as some argue. In addition, the change may encourage other forms of price discrimination that better track differences in consumer preferences. An increase in other forms of price discrimination brings into relief questions—already important in domestic law—about the appropriate level of control patent holders should have over downstream sales. These are undoubtedly important questions. However, the answers should not depend on geographical borders. A move to international exhaustion would bring patent law in line with trade theory and allow for free trade in patented goods.