

# AVOIDING PATENT EXHAUSTION AT HOME AND ABROAD: *IMPRESSION PRODUCTS V. LEXMARK INTERNATIONAL*

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## I. INTRODUCTION

In *Impression Products v. Lexmark International, Inc.*,<sup>1</sup> the Supreme Court faced two issues regarding patent exhaustion. First, whether a use restriction imposed by a “conditional sale” of a patented article is enforceable under patent law or is instead unenforceable because the relevant patent rights are exhausted by the sale.<sup>2</sup> Second, whether a foreign sale of a patented article exhausts the U.S. patent rights or only a sale made in the U.S. exhausts the U.S. patent.<sup>3</sup> The Supreme Court reversed the Federal Circuit and held against patent owners on both of these questions by holding that restrictions on conditional sales by a patentee are unenforceable and that U.S. patent rights are exhausted by sales abroad.<sup>4</sup> The dissent disagreed on only the second issue: that foreign sales should not exhaust the U.S. patent rights.<sup>5</sup>

Before *Lexmark*, the two opinions addressing conditional sales and international exhaustion were *Quanta Computer, Inc. v. LG Electronics, Inc.*<sup>6</sup> and *Kirtsaeng v. John Wiley & Sons, Inc.*<sup>7</sup> clarified some unsettled issues of exhaustion,<sup>8</sup> but did not rule on the permissibility of conditional sales, as the Court simply held there was no restriction on the sale.<sup>9</sup> In *Kirtsaeng*, the Court

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1. 137 S. Ct. 1523 (2017).

2. *Id.* at 1529.

3. *Id.*

4. *Id.* at 1538.

5. *Id.* at 1539.

6. 553 U.S. 617 (2008).

7. 568 U.S. 519 (2013).

8. *Quanta*, 553 U.S. at 625–30 (reaffirming the concept of patent exhaustion and rejecting the argument that method claims are categorically never exhaustible).

9. *Id.* at 636 (holding that the license agreement between Intel and LGE does not restrict Intel’s right to sell its products to purchasers who intend to combine them with non-Intel parts).

applied international exhaustion in the copyright context,<sup>10</sup> but was unclear whether that holding applied to patent exhaustion.<sup>11</sup> With regard to these unsettled issues, the Federal Circuit had strongly favored patent owners on both conditional sale and international exhaustion issues for decades. In *Lexmark*, the Supreme Court put an end to the Federal Circuit's patentee-empowering rules and made a new simple exhaustion rule—exhaustion occurs regardless of restrictions and location.<sup>12</sup> The Court rooted its decision on the common law principle against restraints on alienation of chattels<sup>13</sup> and emphasized the importance of free flow of commerce.<sup>14</sup> It is too early to know the consequences of the new exhaustion rule, but this Note argues that negative effects to patent owners may eventually hurt purchasers' interests and that unintended consequences may outweigh the value of free commerce. This Note also suggests an alternative framework for exhaustion that vindicates patent owners' interests and protects purchasers' interests.

Patent exhaustion has common law origins<sup>15</sup> and statutory complications. Exhaustion also often implicates the doctrines of patent misuse and antitrust<sup>16</sup> and can also be interpreted as creating implied licenses that render patent law irrelevant. Existing cases are not always clear about the doctrinal basis for their holdings, making it difficult to determine where patent exhaustion ends, and these other doctrines begin or overlap.

In addition, some decisions, including *Lexmark*, raise the possibility that restrictions that cannot be enforced via patent law can nonetheless be enforced via contract.<sup>17</sup> Although it is impossible to address patent exhaustion in total

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10. *Kirtsaeng*, 568 U.S. at 554 (holding that the first sale doctrine applies non-geographically).

11. Patent exhaustion is a purely common law doctrine, but copyright exhaustion is governed by a statutory provision, 17 U.S.C. § 109(a) (2012). For judicial development of patent exhaustion doctrine, see *Quanta*, 553 U.S. at 625–28.

12. *Impression Prods. v. Lexmark Int'l, Inc.*, 137 S. Ct. 1523, 1538 (2017).

13. *Id.* at 1527 (“Patent exhaustion, too, has its roots in the antipathy toward restraints on alienation.”).

14. *Id.* at 1532 (“That smooth flow of commerce would sputter if companies that make the thousands of parts that go into a vehicle could keep their patent rights after the first sale.”).

15. See *Kirtsaeng*, 568 U.S. at 538 (“The ‘first sale’ doctrine is a common-law doctrine with an impeccable historic pedigree.”).

16. For example, tying a patented article to a non-patented article can be a patent misuse. Price-fixing and vertical restraints may violate antitrust law. For more discussion regarding the application of patent exhaustion, antitrust and patent misuse on restrictions imposed on a sale of a product, see Herbert Hovenkamp, *Post-Sale Restraints and Competitive Harm: The First Sale Doctrine in Perspective*, 66 N.Y.U. ANN. SURV. AM. L. 487, 487–92 (2011).

17. See *Impression Prods.*, 137 S. Ct. at 1533 (“[W]hatever rights Lexmark retained are a matter of the contracts with its purchasers, not the patent law.”). In *Quanta*, the Court mentioned the possibility of an implied license defense and contractual remedies if those issues

isolation from these related doctrines and causes of action—the primary focus of this Note will be on the patent exhaustion doctrine. This Note disagrees with the *Lexmark* holding that all restrictions are unenforceable and cannot be imposed via a conditional sale of an article embodying a patented invention.<sup>18</sup> This Note suggests that Congress should consider an alternative framework for exhaustion: restrictions are permissible if they have a justification grounded in patent law and consumers have actual knowledge of the restriction. This Note attempts to carefully limit the scope and condition of permissible restrictions so that the exhaustion rule can properly balance patentees’ rights and purchasers’ rights.

Permissible restrictions could include geographic restrictions that apply to articles first sold abroad. Therefore, this Note agrees with the *Lexmark* holding that unconditional foreign sales always exhaust U.S. patents.<sup>19</sup> However, this Note suggests that some limited restrictions should be allowed for international sales.

Part II of this Note will introduce the concept of patent exhaustion and briefly recount the judicial development of the doctrine. Part III describes *Lexmark*’s technology and summarizes the district court decision, the Federal Circuit decision, and the Supreme Court holding in the *Lexmark* case. Part IV argues that the Court’s new exhaustion rule may not achieve its goal of free commerce due to developments in business and technology. It suggests an alternative framework for exhaustion that attempts to better serve patentees’ rights and consumer rights without unduly sacrificing the importance of free commerce. This Note suggests that restrictions imposed via a conditional sale of an article embodying a patented invention<sup>20</sup> should be permissible if a purchaser has actual knowledge of the restriction and if the restriction has one of three justifications: (1) it is related to the subject matter of the patent, (2) it promotes patent policy, or (3) it remedies an inadequate reward from the market. Part IV also applies the framework to international exhaustion context and suggests that price discrimination is a justification for geographical restrictions on sales made abroad. Finally, Part V concludes that setting appropriate limits on the scope of permissible restrictions can balance the

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were brought up during trial. *Quanta Comput., Inc. v. LG Elecs, Inc.*, 553 U.S. 617, 637 (2008) (“But the question whether third parties received implied licenses is irrelevant because Quanta asserts its right to practice the patents based not on implied license but on exhaustion.”).

18. *Id.* at 1535.

19. *Id.* at 1538.

20. Throughout this Note, “restrictions on sale” or “restrictions imposed via a conditional sale” refers to the restrictions on use of articles embodying patented inventions that are imposed via a conditional sale.

patentees' rights and the purchasers' rights in a way that is consistent with the spirit of the patent exhaustion doctrine.

## II. LEGAL BACKGROUND

This Part discusses the patent exhaustion doctrine, the Federal Circuit decisions regarding conditional sales and the international exhaustion before *Lexmark*, and the Supreme Court decisions in *Quanta* and *Kirtsaeng*, to explore the landscape of exhaustion doctrine before the Supreme Court decision in *Lexmark*.

### A. PATENT EXHAUSTION

The Patent Act gives a patentee the right to exclude others from making, selling, using, or importing into the United States a patented invention.<sup>21</sup> But the Supreme Court has applied the doctrine of patent exhaustion to cut off some of the exclusive rights with regard to an article that was sold by or with the authorization of the patentee.<sup>22</sup> Under patent exhaustion, the buyer and subsequent buyers of the article embodying a patent can freely use or sell that same article, but they cannot make a new article embodying the patent.<sup>23</sup> Patent exhaustion thus limits the patent holder's exclusive rights, protects the consumer's right to use the purchased product, and promotes the free and predictable flow of commerce.<sup>24</sup> However, limiting the patent holder's rights too much could reduce incentives in a way that threatens the progress of science and useful arts.<sup>25</sup> Patent exhaustion should therefore be applied carefully to balance the interests of patent holders, consumers, and the public.

#### 1. *Licenses May Be Enforceable, Even Where There Are No Enforceable Patent-Based Restrictions*

Patentees have tried various methods to reserve their rights and avoid patent exhaustion by setting conditions on the sale of a patented article. The patent exhaustion doctrine has evolved by dictating whether those conditions

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21. 35 U.S.C. § 271(a) (2012).

22. *See Quanta Comput., Inc. v. LG Elecs., Inc.*, 553 U.S. 617, 625 (2008) (“[T]he initial authorized sale of a patented item terminates all patent rights to that item.”).

23. *See Bowman v. Monsanto Co.*, 133 S. Ct. 1761, 1764 (2013) (“Such a sale, however, does not allow the purchaser to make new copies of the patented invention.”).

24. *See Quanta*, 553 U.S. at 630 (“[A]ny downstream purchasers of the system could nonetheless be liable for patent infringement. Such a result would violate the longstanding principle that, when a patented item is ‘once lawfully made and sold, there is no restriction on [its] use to be implied for the benefit of the patentee.’”).

25. The Constitutional objective of patent law is “to promote the progress of science and useful arts.” U.S. CONST. art. I, § 8, cl. 8.

or restrictions set by the patentee are enforceable under the patent law. In most cases, the restrictions on sale imposed by patentee were void.<sup>26</sup> For example, in *Adams v. Burke*,<sup>27</sup> one of the earliest Supreme Court cases considering patent exhaustion, the patentee divided his patent right territorially by assigning multiple assignees the right to make, use, and vend the coffin lids within their individual territories.<sup>28</sup> The defendant purchased the coffin lid from an assignee in one territory, but used the lid in the territory of another assignee.<sup>29</sup> The patentee alleged patent infringement for violating the territorial restriction.<sup>30</sup> The Court held that the restriction could not be applied to the purchaser who paid the full consideration for the use of the article.<sup>31</sup> Similarly, in *Motion Picture Patents*, the patentee restricted the use of the patented machine only with the motion picture films leased by the patentee.<sup>32</sup> The Supreme Court held that the restriction was invalid because the films were irrelevant to the machine patent used in the infringement suit.<sup>33</sup>

In contrast to these cases refusing to enforce restrictions on the use of patented articles by purchasers from the patentee, the Supreme Court enforced a restriction imposed on an article manufactured and sold by a licensee in *General Talking Pictures*.<sup>34</sup> The patentee in *General Talking Pictures* imposed upon its licensee a restriction that the patented product should only be used for non-commercial, private use.<sup>35</sup> A purchaser violated the restriction by using the product commercially and both the purchaser and the licensee had actual knowledge of the restriction.<sup>36</sup> The Supreme Court held that patentees may restrict their licensees to certain uses of licensed technology as long as the restrictions do not extend the scope of the monopoly.<sup>37</sup> The non-commercial use restriction to the licensee was enforceable because it did not extend the

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26. See, e.g., *Bobbs-Merrill Co. v. Straus*, 210 U.S. 339 (1908) (a price restriction on reselling the copyrighted book was void); *Keeler v. Standard Folding-Bed Co.*, 157 U.S. 659 (1895) (a geographical restriction to use and sell the product only in Massachusetts was void).

27. 84 U.S. 453 (1873).

28. *Id.* at 457.

29. *Id.* at 454.

30. *Id.*

31. *Id.* at 456 (“[H]e receives the consideration for its use and he parts with the right to restrict that use.”).

32. *Motion Picture Patents Co. v. Universal Film Mfg.*, 243 U.S. 502, 506–07 (1917).

33. *Id.* at 512.

34. *Gen. Talking Pictures Corp. v. Western Elec. Co.* 304 U.S. 175, 181 (1938), *aff’d on reh’g*, 305 U.S. 124 (1939).

35. *Id.* at 179.

36. *Id.* at 180 (“Nevertheless, [the licensee] knowingly did sell the amplifiers in controversy to petitioner for that use . . . . The petitioner, when purchasing from [the licensee] had actual knowledge that the latter had no license to make such a sale.”).

37. *Id.* at 181.

scope of patent monopoly and the purchaser knew about the restriction.<sup>38</sup> Put differently, the licensee's sale for commercial use was outside of the scope of the license, and thus infringed the patent.<sup>39</sup>

2. *There Was No Universal Rule on the Exhaustion of a U.S. Patent by International Sales*

While some courts decided that sales made abroad by a U.S. patentee exhausts the U.S. patent right,<sup>40</sup> the Supreme Court had, prior to *Lexmark*, not ruled on the exact issue whether sales made abroad by U.S. patentee exhaust U.S. patent rights, nor on the issue of whether the restrictions imposed on a conditional sale made abroad by the U.S. patentee are enforceable.<sup>41</sup> The only Supreme Court decision directly addressing the effect of a foreign sale on U.S. patent rights was *Boesch v. Graff*.<sup>42</sup>

In *Boesch*, the patented article was purchased in Germany from a person having the right to sell them under German law, not from the U.S. patentee or the licensee authorized by the U.S. patentee.<sup>43</sup> The Supreme Court held that the sale of articles in the United States cannot be controlled by foreign laws, therefore the purchase in Germany could not exhaust the U.S. patent.<sup>44</sup> However, *Boesch* did not involve the U.S. patentee's sale. Therefore, it was unclear whether the U.S. patentee's sales abroad exhausted the U.S. patent

38. *Id.* (“There is here no attempt on the part of the patent owner to extend the scope of the monopoly beyond that contemplated by the patent statute.”).

39. *Id.* at 181–82, states:

There is no warrant for treating the sales of amplifiers to [the purchaser] as if made under the patents or the authority of their owner . . . . By knowingly making the sales to [the purchaser] outside the scope of its license, [the licensee] infringed the patents embodied in the amplifiers.

40. *See, e.g.,* *Curtiss Aeroplane & Motor Corp. v. United Aircraft Eng'g Corp.*, 266 F. 71 (2d Cir. 1920) (holding that the buyer who purchased the airplanes in Canada from a licensee of the U.S. patent with no restriction, then brought them back to the U.S., is not liable for infringement); *Holiday v. Mattheson*, 24 F. 185, 185 (C.C.S.D.N.Y. 1885) (holding that the U.S. patentee did not retain any patent right in the article after its foreign sale, when a patented article was sold in England without restriction).

41. In the copyright context, the Supreme Court held the importation banning restriction imposed on the sale of textbooks made abroad by the U.S. patentee was not enforceable. *See infra* Section III.C.2.

42. *Lexmark Int'l, Inc. v. Impression Prods., Inc.*, 816 F.3d 721, 762 (Fed. Cir. 2016); *Boesch v. Graff*, 133 U.S. 697 (1890).

43. *Boesch*, 133 U.S. at 699–701 (finding that the seller in Germany was not a licensee under the German patent but had the right to sell them under German law because he had already commenced using the invention in Germany before the patentee's application).

44. *Id.* at 702–03.

rights and whether the U.S. patentee could impose a restriction on sales abroad to avoid the exhaustion of U.S. patent rights.

Patent exhaustion doctrine had developed for more than 150 years, yet there remained uncertainty of its scope for both domestic sales and foreign sales. In recent decades, the Federal Circuit repeatedly grappled with these questions, with occasional intervention by the Supreme Court.<sup>45</sup> However, this judicial conversation only raised more questions until *Lexmark*.

## B. THE FEDERAL CIRCUIT SIDED WITH PATENTEE IN ENFORCING RESTRICTIONS

The Federal Circuit long sided with patentees with respect to patent exhaustion issues.<sup>46</sup> This Section discusses how the Federal Circuit ruled on two questions of patent exhaustion: (1) whether a restriction imposed via a conditional sale is enforceable under patent law and (2) whether a foreign sale of a patented article exhausts the U.S. patent. In *Mallinckrodt, Inc. v. Medipart, Inc.*, the Federal Circuit allowed patentees to attach restrictions on their sale of patented articles.<sup>47</sup> In *Jazz Photo Corp. v. ITC*, the Federal Circuit held that U.S. patent rights are not exhausted by a foreign sale.<sup>48</sup> Most recently, in *Lexmark Int'l v. Impression Products, Inc.*, the en banc Federal Circuit reaffirmed *Mallinckrodt* and *Jazz Photo*, rejecting arguments that both had been undermined by the recent Supreme Court decisions in *Quanta* and *Kirtsaeng* on exhaustion and first sale.<sup>49</sup>

### 1. *A Conditional Sale May Avoid Patent Exhaustion*

In *Mallinckrodt*, the patentee sold its patented device, a nebulizer including radioactive therapeutic material, to hospitals with a “single use only” restriction.<sup>50</sup> *Mallinckrodt* provided a lead-shielded container with the

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45. See *infra* Sections III.B.1–III.B.2 for discussions in the Federal Circuit decisions in *Mallinckrodt, Inc. v. Medipart, Inc.*, 976 F.2d 700 (Fed. Cir. 1992) and *Jazz Photo Corp. v. ITC*, 264 F.3d 1094 (Fed. Cir. 2001); see also *infra* Sections III.C.1–III.C.2 for discussions in the Supreme Court decisions in *Quanta* and *Kirtsaeng*.

46. See *infra* Section III.C.1. Since the *Mallinckrodt* decision in 1992 and the *Jazz Photo* decision in 2001, the Federal Circuit favored patentee’s enforcement of restriction under the patent law. These pro-patentee holdings culminated in *Lexmark*; see also Harold C. Wegner, *Post Quanta, Post-Sale Patentee Controls*, 7 J. MARSHALL REV. INTELL. PROP. L. 682, 686–89 (2008) (describing the Federal Circuit’s pro-patentee holdings as “evisceration of patent exhaustion”).

47. *Mallinckrodt*, 976 F.2d 700 (Fed. Cir. 1992).

48. *Jazz Photo*, 264 F.3d 1094 (Fed. Cir. 2001).

49. See *Lexmark Int'l, Inc. v. Impression Prods., Inc.*, 816 F.3d 721, 726–27 (Fed. Cir. 2016).

50. *Mallinckrodt*, 976 F.2d at 701–02.

nebulizer for minimizing exposure to radiation and safe disposal after use.<sup>51</sup> Mallinckrodt also provided instructions to hospitals about the disposal process using radiation-shield containers and the inherent single use limitation.<sup>52</sup> Some hospitals did not follow the restrictions and shipped used nebulizers to Medipart—which processed and reassembled nebulizers and returned them to the hospitals for less than the price of a new nebulizer.<sup>53</sup> The district court applied the patent exhaustion doctrine to hold that a “single use only” restriction could not be enforced by a patent infringement suit.<sup>54</sup> The court reasoned that the interest of purchasers to use purchased products freely is stronger than the interest of patent owners to increase their monopoly.<sup>55</sup> On appeal, the Federal Circuit held that patent exhaustion did not apply and gave overall guidelines for when a conditional sale by a patentee does not exhaust the patent: “if the restriction on reuse was within the scope of the patent grant or otherwise justified, then violation of the restriction may be remedied by action for patent infringement.”<sup>56</sup> However, the court remanded without analyzing whether Mallinckrodt’s single use restriction was valid.<sup>57</sup> The court neither demonstrated nor explained how to determine whether a restriction is within the scope of the patent grant.<sup>58</sup>

## 2. *A U.S. Patent Is Not Exhausted by a Foreign Sale*

In *Jazz Photo*, the Federal Circuit limited the application of the patent exhaustion doctrine to first sales occurring within the U.S.<sup>59</sup> The patentee, Fuji Photo Film Corp., was a manufacturer and seller of disposable single use

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51. *Id.* at 702.

52. *Id.*

53. *Id.*

54. *Mallinckrodt, Inc. v. Medipart, Inc.*, 1990 U.S. Dist. LEXIS 1974 (N.D. Ill. Feb. 15, 1990).

55. *See id.* at \*24–25 (suggesting policy rationales that “people both expect and should be able to use the goods they purchase without restraints from merchants and manufacturers” and “interest in preventing restraints on use is stronger than the opposing interest in permitting a patent owner to use his monopoly to increase sales of his invention”). *But see Mallinckrodt*, 976 F.2d at 708 (criticizing the district court’s policy rationale as based on the price-fixing and tying cases, where “no condition can be placed on the sale of patented goods, for any reason”).

56. *Mallinckrodt*, 976 F.2d at 708.

57. *Id.* at 709.

58. *Id.* After the Federal Circuit’s remand decision, *Mallinckrodt* and Medipart settled. 1992 U.S. Dist. LEXIS 22902 (N.D. Ill., Dec. 1, 1992).

59. *Jazz Photo Corp. v. ITC*, 264 F.3d 1094, 1105 (Fed. Cir. 2001) (“To invoke the protection of the first sale doctrine, the authorized first sale must have occurred under the United States patent.”).



cameras with numerous patents on that technology.<sup>60</sup> Fuji had both domestic sales and foreign sales.<sup>61</sup> Jazz Photo collected used Fuji cameras, refurbished them in various overseas facilities, and then imported them into the United States.<sup>62</sup> Fuji sought an injunction to stop the importation of the refurbished cameras into the United States.<sup>63</sup> The court, citing *Boesch v. Graff*,<sup>64</sup> distinguished foreign sales from domestic sales and ruled that “United States patent rights are not exhausted by products of foreign provenance.”<sup>65</sup> Although *Boesch* was a case where foreign sale of the patented product was not done by or authorized by the U.S. patentee,<sup>66</sup> the Federal Circuit interpreted *Boesch* broadly in that the U.S. patent rights were not exhausted even in a case where the foreign sale *was* authorized by the U.S. patentee.<sup>67</sup>

C. THE SUPREME COURT SHEDS LIGHT ON SOME ASPECTS OF THE EXHAUSTION DOCTRINE BUT STILL LEAVES OPEN QUESTIONS

There were some criticisms and concerns about the Federal Circuit’s application of exhaustion doctrine favoring patentees in cases including *Mallinckrodt* and *Jazz Photo*.<sup>68</sup> Unfortunately, while the Supreme Court had addressed several questions about exhaustion in its recent decisions, it left unanswered two questions at the heart of recent critiques of the Federal Circuit’s approach: whether restrictions imposed via a conditional sale are enforceable and whether a foreign sale exhausts U.S. patent rights.

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60. *Jazz Photo*, 264 F.3d at 1098; *Fuji Photo Film Co. v. Jazz Photo Corp.*, 394 F.3d 1368, 1370 (Fed. Cir. 2005).

61. *Jazz Photo*, 394 F.3d at 1372 (“[R]oughly 9.5%, or 3,809,442, of Jazz’s refurbished [cameras] derived from United States first sales . . .”).

62. *Jazz Photo*, 264 F.3d at 1098.

63. *Id.* (“Section 337 makes unlawful ‘[t]he importation into the United States . . . of articles that . . . infringe a valid and enforceable United States patent . . .’”) (quoting 19 U.S.C. § 1337(a)(1)(B) (2012)).

64. *Boesch v. Graff*, 133 U.S. 697, 701–03 (1890) (holding that the purchase in Germany from a person who had the right to sell the products in Germany but was not the U.S. patentee or authorized by the U.S. patentee, could not exhaust the U.S. patent).

65. *Jazz Photo*, 264 F.3d at 1105.

66. See *supra* Section III.A.2 for more detailed explanation of *Boesch*.

67. *Jazz Photo*, 394 F.3d at 1376 (“The patentee’s authorization of an international first sale does not affect exhaustion of that patentee’s rights in the United States.”).

68. See, e.g., Julie E. Cohen & Mark A. Lemley, *Patent Scope and Innovation in the Software Industry*, 89 CALIF. L. REV. 1, 33–34 (2001) (criticizing *Mallinckrodt* as “expanding the contractual exception to swallow the rule”); J. Erstling & F. Struve, *A Framework for Patent Exhaustion from Foreign Sales*, 25 FORDHAM INTELL. PROP. MEDIA & ENT. L.J. 499, 501–02 (2015) (criticizing *Jazz Photo*’s no-exhaustion rule for foreign sales); Andrew T. Dufresne, *The Exhaustion Doctrine Revived? Assessing the Scope and Possible Effects of The Supreme Court’s Quanta Decision*, 24 BERKELEY TECH. L.J. 11 (2009).

1. *Validity of Conditional Sale Not Decided in Quanta*

In *Quanta*, the patentee, LG Electronics (LGE), had a license agreement with Intel which authorized Intel to make, use, or sell the products which embodied LGE's patents.<sup>69</sup> But there was a separate master agreement which required Intel to provide notice to its customers that the license from LGE did not extend to an Intel product combined with a non-Intel product.<sup>70</sup> Quanta manufactured products by combining Intel products and non-Intel products despite knowledge of the notice restriction.<sup>71</sup> LGE sued Quanta for patent infringement, arguing that the patent exhaustion doctrine did not apply because the sale of Intel's product to Quanta was not authorized by LGE.<sup>72</sup> The Court examined the structure of the license agreement between LGE and Intel and held that the patent was exhausted after the sale from Intel to Quanta because the license agreement did not impose restrictions on the sale by licensee, Intel.<sup>73</sup> Although there was a provision in the master agreement requiring notice to purchasers like Quanta, the Court found that Intel's authority to sell its products was not conditioned on the notice.<sup>74</sup> But, the Court did not decide on the possibility of a breach of contract claim when patent infringement claims are defeated by exhaustion.<sup>75</sup> The Court also did not decide on the validity of restrictions imposed via conditional sales of articles embodying patented inventions.<sup>76</sup>

2. *Kirtsaeng and International Exhaustion Applied to Patents*

Although the Supreme Court has not directly addressed the question on international patent exhaustion, it addressed an analogous question in the copyright context. In the recent *Kirtsaeng* decision, the Supreme Court applied copyright exhaustion (also called the first sale doctrine) to international sales even though there was a clear restriction from the copyright holder banning the importation of the books sold abroad into the United States.<sup>77</sup> Wiley is a

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69. *Quanta Comput., Inc. v. LG Elecs, Inc.*, 553 U.S. 617, 617 (2008).

70. *Id.*

71. *Id.*

72. *Id.* at 636.

73. *Id.* ("Nothing in the License Agreement restricts Intel's right to sell its microprocessors and chipsets to purchasers who intend to combine them with non-Intel parts.").

74. *Id.* at 636–37.

75. *Id.* at 637 n.7 ("LGE's complaint does not include a breach-of-contract claim, and we express no opinion on whether contract damages might be available even though exhaustion operates to eliminate patent damages.").

76. *Id.* at 636–37.

77. *Kirtsaeng v. John Wiley & Sons, Inc.*, 568 U.S. 519, 554 (2013).

publisher of textbooks that published U.S. and international versions of the same text books.<sup>78</sup> The international versions had a restriction that the copy is to be sold only in a particular geographical region outside the United States.<sup>79</sup> However, Kirtsaeng imported the international versions of textbooks into the U.S. from Thailand, and resold them at a profit.<sup>80</sup> The District Court held and the Second Circuit affirmed that the first sale doctrine does not apply to copyrighted works manufactured abroad.<sup>81</sup>

In order to answer the question whether the first sale doctrine applies to copies of a copyrighted work manufactured abroad, the Supreme Court examined both the statutory language of the first sale doctrine in copyright law<sup>82</sup> and the common law history of the doctrine, concluding that a non-geographical interpretation of the statute was a better reading of the statute.<sup>83</sup> The Court also addressed policy reasons for the decision: advantage to consumers when purchasing or reselling a product in a free market without restrictions from the owner of exclusive rights; freeing courts from the administrative burden of tracing goods to enforce restrictions; and freeing libraries, museums, used-book dealers and technology companies from copyright infringement risk, thereby furthering the constitutional copyright objective, “to promote the Progress of Science and useful Arts.”<sup>84</sup>

After *Quanta* and *Kirtsaeng*, some commentators suggested that *Mallinckrodt* and *Jazz Photo* were undermined, if not overruled.<sup>85</sup> Some district courts declined to follow the *Mallinckrodt* and *Jazz Photo* rules on conditional sales and

78. *Id.* at 525–26.

79. *Id.* at 526 (“This book is authorized for sale in Europe, Asia, Africa, and the Middle East only and may be not exported out of these territories.”).

80. *Id.* at 527 (the international version of the textbook was sold at a lower price than U.S. version).

81. *See* John Wiley & Sons, Inc. v. Kirtsaeng, 2009 U.S. Dist. LEXIS 96520 (S.D.N.Y. Oct. 19, 2009); John Wiley & Sons, Inc., v. Kirtsaeng, 654 F.3d 210 (2d Cir. 2011) (awarding statutory damages to plaintiff publisher for copyright infringement).

82. Unlike patent law, where exhaustion doctrine is grounded in judicial precedent, copyright law has codified the exhaustion doctrine in the statute: 17 U.S.C. § 109(a) (2012) (“[T]he owner of a particular copy or phonorecord lawfully made under this title . . . is entitled, without the authority of the copyright owner, to sell or otherwise dispose of the possession of that copy or phonorecord.”).

83. *Kirtsaeng*, 568 U.S. at 530 (“The language of § 109(a) says nothing about geography.”).

84. *Id.* at 539–40; Justice Kagan’s concurring opinion also addressed that “geographical restriction . . . would deprive American consumers of important rights and encourage copyright holders to manufacture abroad.” *Id.* at 554.

85. *See, e.g.*, John F. Duffy & Richard Hynes, *Statutory Domain and the Commercial Law of Intellectual Property*, 102 VA. L. REV. 1, 57 (2016) (viewing the Supreme Court’s *Quanta* decision as overruling *Mallinckrodt*’s conditional sale doctrine.); *see also* Hovenkamp, *supra* note 16, at 528 (describing the *Mallinckrodt* decision overruled by the *Quanta*).

international exhaustion.<sup>86</sup> *Lexmark* gave the Federal Circuit an opportunity to assess whether *Mallinckrodt* and *Jazz Photo* rules were still applicable in light of *Quanta* and *Kirtsaeng*.

### III. LEXMARK CASE SUMMARY

The Federal Circuit sua sponte took the *Lexmark* case en banc.<sup>87</sup> This might have suggested that the court had a dramatic reworking of its own jurisprudence in mind after *Quanta* and *Kirtsaeng*. But, in fact, the Federal Circuit insisted that nothing has changed. It held that the controversial rules in *Mallinckrodt* and *Jazz Photo* remain good law.<sup>88</sup> Ultimately, the Supreme Court reversed the Federal Circuit and made a seismic change to its exhaustion rule.<sup>89</sup>

#### A. FACTUAL BACKGROUND

Lexmark manufactures printing and imaging products including ink cartridges and has numerous patents regarding printing technology.<sup>90</sup> Lexmark's Return Cartridge Program provides discounted cartridges to customers who agree to use the cartridge only once and return it to Lexmark for remanufacturing or recycling.<sup>91</sup> A buyer can choose to purchase a regular cartridge at full price, which is not subject to the single use restriction.<sup>92</sup> Lexmark sold cartridges to both domestic and foreign markets.

Adequacy of notice was undisputed.<sup>93</sup> The purchasers had actual knowledge of the single use restriction because they had to choose which price

86. See, e.g., *LG Elecs., Inc. v. Hitachi, Ltd.*, 655 F. Supp. 2d 1036, 1046–47 (“The Court therefore concludes that *Quanta’s* holding—that exhaustion is triggered by the authorized sale of an article that substantially embodies a patent—applies to authorized foreign sales as well as authorized sales in the United States.”); see also *supra* Section III.B (the district court in *Lexmark* held that *Quanta* overruled *Mallinckrodt*).

87. *Lexmark Int’l Inc. v. Impression Prods, Inc.*, 785 F.3d 565 (Fed. Cir. 2015).

88. *Lexmark Int’l, Inc. v. Impression Prods., Inc.*, 816 F.3d 721, 726–27 (Fed. Cir. 2016).

89. *Impression Prods. v. Lexmark Int’l, Inc.*, 137 S. Ct. 1523, 1529 (2017).

90. The patents Lexmark used in the infringement suit were U.S. Patent No. 5,337,032, U.S. Patent No. 5,634,169, U.S. Patent No. 5,758,231, U.S. Patent No. 5,758,233, U.S. Patent No. 5,768,661, U.S. Patent No. 5,802,432, U.S. Patent No. 5,875,378, U.S. Patent No. 5,995,772, U.S. Patent No. 6,009,291, U.S. Patent No. 6,078,771, U.S. Patent No. 6,397,015, U.S. Patent No. 6,459,876, and U.S. Patent No. 6,487,383. (For the complete patent list, see Complaint at 3–4, *Lexmark Int’l Inc. v. Ink Techs. Printer Supplies, LLC*, 9 F. Supp. 3d 830 (S. D. Oh. 2014) (No. 1:10-CV-564)).

91. *Lexmark Return Cartridges*, LEXMARK RETURN CARTRIDGES, [http://www.lexmark.com/en\\_us/products/supplies-and-accessories/lexmark-return-cartridges.html](http://www.lexmark.com/en_us/products/supplies-and-accessories/lexmark-return-cartridges.html) [https://perma.cc/RXV5-9E4F] (last visited Feb. 20, 2019).

92. *Impression Prods., Inc.*, 816 F.3d at 727 (the discount rate for Return Program Cartridge was approximately 20 percent).

93. *Id.* at 728.

to pay depending on the type of cartridge they buy: a Return Program cartridge or a regular cartridge. Multiple companies, including Impression Products, acquired used Lexmark cartridges, remanufactured them abroad, and then sold the remanufactured cartridges to customers.<sup>94</sup> The remanufactured cartridges included Return Program cartridges.<sup>95</sup> The Return Program cartridges have a microchip inside which enables the cartridges to communicate with a printer to prevent the use of refilled ones.<sup>96</sup> The microchip was replaced to enable reuse, in violation of the single-use restriction.<sup>97</sup>

#### B. DISTRICT COURT OPINION

Lexmark filed two patent infringement suits against multiple defendants, including Impression Products.<sup>98</sup> The first case concerned domestic sales of Return Program cartridges.<sup>99</sup> The second case concerned foreign sales of all cartridges, including both Return Program cartridges and regular cartridges.<sup>100</sup>

In the domestic sale case, the District Court held that Lexmark's single use restriction does not preclude patent exhaustion because the return program cartridges were sold with Lexmark's authorization even though the cartridges had single use restrictions.<sup>101</sup> Insofar as sales with such restriction attached could be described as conditional sales not subject to exhaustion under the rule in *Mallinckrodt*, the court held that rule had been silently overruled by *Quanta*.<sup>102</sup>

In the foreign sale case, Lexmark alleged that defendants who imported the refurbished cartridges into the U.S. and sold them in the U.S. infringed their toner cartridge patents.<sup>103</sup> The refurbished cartridges were originally sold outside of the U.S. by Lexmark, but the defendants collected the used

94. *Id.*

95. *Id.* at 727.

96. *Id.* at 728.

97. *Id.*

98. *Id.* at 729–30 (Impression Products was the only defendant in the appealed case at Federal Circuit because all of the other parties settled with Lexmark).

99. *Lexmark Int'l Inc. v. Ink Techs. Printer Supplies, LLC.*, 2014 WL 1276133 (S.D. Ohio, March 27, 2014). Domestic sales of regular cartridges were not included, because the patent rights on those regular cartridges were unquestionably exhausted.

100. *Lexmark Int'l Inc. v. Ink Techs. Printer Supplies*, 9 F. Supp. 3d 830 (S.D. Ohio, 2014). For sales made abroad, even regular cartridges can be included under *Jazxon Photo*. See *supra* Section III.B.2.

101. *Lexmark*, 2014 WL 1276133, at \*23–24.

102. *Id.* at \*22 (the Federal Circuit in *Mallinckrodt* suggested that some restrictions are enforceable under patent law, but the District Court in *Lexmark* held “post-sale use restrictions do not prevent patent rights from being exhausted given that the initial sales were authorized and unrestricted”).

103. *Lexmark Int'l*, 9 F. Supp. 3d at 831–32.

cartridges and refilled them outside the U.S.<sup>104</sup> In this case, Lexmark not only included the cartridges sold in the Return Cartridge Program, but also regular cartridges because the *Jazz Photo* rule held that the U.S. patent was not exhausted by foreign sales regardless of whether those sales were conditional or unconditional.<sup>105</sup>

The District Court considered whether the Supreme Court's *Kirtsaeng* decision overruled *Jazz Photo*. The court held that first sales made abroad did not exhaust the U.S. patent rights, because patent exhaustion is not identical to the first sale doctrine in copyright and the Supreme Court in *Kirtsaeng* did not explicitly consider the common law principles in patent exhaustion.<sup>106</sup>

### C. FEDERAL CIRCUIT OPINION

The Federal Circuit sua sponte took *Lexmark* en banc to consider whether *Mallinckrodt* and *Jazz Photo* remain good law in light of the Supreme Court's *Quanta* and *Kirtsaeng* decisions.<sup>107</sup> By a 10–2 decision, the Federal Circuit reaffirmed the *Mallinckrodt* and *Jazz Photo* holdings: a patentee's restrictions imposed via a conditional sale are enforceable under patent law and U.S. patent rights are not exhausted by foreign sales.<sup>108</sup>

#### 1. *The Majority Enforces Restrictions and Applies a No-Exhaustion Rule for Foreign Sales*

Regarding the restrictions prohibiting reuse of the Return Program cartridges, the Federal Circuit majority held that a patentee selling a patented article with a post-sale restriction that is lawful and clearly communicated to the purchaser does not, by that sale, give the buyer resale or reuse authority free of that restriction.<sup>109</sup> The court started by analyzing the statutory language defining infringement: “whoever without authority during the term of a patent commits certain acts—makes, uses, offer to sell, or sells any patented invention, within the United States or imports into the United States any patented invention—infringes the patent.”<sup>110</sup> The court interpreted “without authority” to mean without consent or permission of the patentee.<sup>111</sup> So, if a patentee

104. *Id.* at 832.

105. *Id.* at 837 n.4 (“The Federal Circuit had relied upon *Jazz Photo* in holding that United States patent rights are not exhausted by products of foreign provenance.”) (citing *Ninestar Tech. Co. v. ITC*, 667 F.3d 1373, 1378 (Fed. Cir. 2012)).

106. *Id.* at 836–38.

107. *Lexmark Int'l, Inc. v. Impression Prods., Inc.*, 816 F.3d 721, 726–27 (Fed. Cir. 2016).

108. *Id.* at 721.

109. *Id.* at 726.

110. 35 U.S.C. § 271(a) (2012); *Lexmark*, 816 F.3d at 732 (internal quotations omitted).

111. *Lexmark*, 816 F.3d at 732–33.

imposed a single-use or no-resale restriction when selling the patented product, then the patentee did not give permission to the purchaser to reuse or resell the product, and such use can amount to infringement of those rights. The court also considered the potential unfairness to a patentee selling the product itself compared to a patentee licensing sales by a licensee.<sup>112</sup> The Court interpreted *General Talking Pictures* as establishing a general rule that use restrictions imposed on a licensee are enforceable against the licensee and subsequent purchasers.<sup>113</sup> If Lexmark had granted a conditional license to a third party to make and sell Return Program cartridges, then the single use restriction would be enforceable according to the Federal Circuit's reading of *General Talking Pictures*.<sup>114</sup> The court saw no reason to refuse to enforce conditions imposed directly by patentees while enforcing restrictions imposed via manufacturing licensees as in *General Talking Pictures*, which it explained would be an extraordinary doctrinal result<sup>115</sup> and a formalistic distinction without economic consequence.<sup>116</sup>

The majority also noted that Lexmark has a plausible legitimate interest in not having strangers modify its products and introduce them into the market with the quality of modifications not subject to Lexmark's control: lower quality remanufactured cartridges could harm Lexmark's reputation.<sup>117</sup> The court argued that a patentee's interests in quality control are related to the interests protected by patent law because patentees make risky investments to commercialize inventions and the public benefits from the invention.<sup>118</sup>

Regarding the international exhaustion issue, the court held that the foreign sale of a U.S. patented article, made or authorized by the U.S. patentee, does not confer on the buyer authority to import the article into the United States or to use or sell in the United States.<sup>119</sup> The majority considered whether *Kirtsaeng* overruled the *Jazz Photo* rule of no-exhaustion for foreign sales and

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112. *Id.* at 743 (“There is no good reason that a patentee that makes and sells the articles itself should be denied the ability that is guaranteed to a non-practicing-patent entity.”).

113. *Id.* at 744.

114. The majority opinion also raised the concerning issue of favoring non-practicing-entities over practicing-entities if manufacturing patentee cannot impose post-sale restrictions while licensing patentees can. *See id.* at 735.

115. *Id.* at 739.

116. *Id.* at 736.

117. *Id.* at 752.

118. *Id.*; *see also* Glen O. Robinson, *Personal Property Servitudes*, 71 U. CHI. L. REV. 1449, 1480–515 (2004) (discussing policy reasons for validating restrictions on alienability of goods embodying intellectual property).

119. *Lexmark*, 816 F.3d at 755. But, the majority suggested the possibility of an express or implied license as a defense. *See id.* at 756.

concluded that *Jazz Photo* is not undermined by *Kirtsaeng*.<sup>120</sup> The majority emphasized the distinctness of patent and copyright in statutes<sup>121</sup> and common law,<sup>122</sup> and recognized some of the precedents separating patent issues from copyright issues.<sup>123</sup>

The court also considered a patentee's receipt of reward from the market as the basis for the exhaustion doctrine.<sup>124</sup> The majority argued that this rationale for the doctrine does not apply where rewards have only been received for foreign sales, because of the difference in national patent systems and government policies, as well as disparities in wealth between the countries.<sup>125</sup>

## 2. *The Dissent Disagrees on Both Issues*

Judge Dyk presented a dissenting opinion on both issues: (1) no post-sale restrictions allowed for avoiding patent exhaustion and (2) international exhaustion of U.S. patents by foreign sales.<sup>126</sup>

First, the dissent argued that patentees cannot enforce post-sale restrictions on buyers under the patent law.<sup>127</sup> The dissenting opinion interpreted *Quanta* as overruling *Mallinckrodt*,<sup>128</sup> therefore, the patentee's rights are exhausted after the authorized sale of a patented article, regardless of any accompanying restrictions.<sup>129</sup> According to the dissenting opinion, "[p]ost-sale restrictions were enforceable only as a matter of state contract law."<sup>130</sup>

Second, for the foreign sales made by the patentee, the dissent argued that the patent exhaustion doctrine applies unless the U.S. patent rights are

120. *Id.* at 756.

121. *Id.* at 755–57. Unlike patent law, copyright law codified first sales doctrine in the statute, 17 U.S.C. § 109(a) (2012).

122. *Id.* at 756. This is the leading case on exhaustion and foreign sales in the patent area—*Boesch* does not have counterpart in the copyright area.

123. *Id.* at 757 (citing *Bobbs-Merrill Co. v. Straus*, 210 U.S. 339, 345–46 (1908) (“[C]opyright law does not automatically carry over to patent law.”); see *Sony Corp. Am. v. Universal City Studios*, 464 U.S. 417, 439 n.19 (1984) (“The two areas of the law, naturally, are not identical twins, and we exercise the caution which we have expressed in the past in applying doctrine formulated in one area to the other.”); see also *Eldred v. Ashcroft*, 537 U.S. 186, 216 (2003) (“[P]atents and copyrights do not entail the same exchange . . .”).

124. *Lexmark*, 816 F.3d at 761.

125. *Id.* Lastly, the majority suggested the availability of an implied license defense as a solution to the problem of unintended infringement by buyers of goods in foreign countries who bring them into the United States. See *id.* at 771.

126. *Id.* at 774 (Dyk, J., dissenting).

127. *Id.* at 775–76.

128. *Id.* at 774.

129. *Id.* at 776–77.

130. *Id.* at 776.



expressly reserved.<sup>131</sup> The dissent criticized the majority's reliance on *Boesch*—where the sale of a patented article in Germany was not made by or authorized by the U.S. patentee<sup>132</sup>—because in this case the U.S. patentee, Lexmark, made foreign sales.<sup>133</sup> In order to protect foreign buyers from being potential infringers and to accommodate the interests of the U.S. patentee, the dissent suggested that patentees should be required “to provide notice of a reservation of U.S. rights to the purchaser.”<sup>134</sup> Additionally, the dissent criticized the majority's solution to the unsuspecting purchaser problem because an express or implied license places the burden on the purchaser unduly, by requiring the purchaser to obtain a statement from a patentee that the purchaser has permission to import the product into the United States, or to prove in court that the circumstances of a patentee's sale constituted an implied license to import into the United States.<sup>135</sup>

#### D. SUPREME COURT DECISION

The Court held against Lexmark for both domestic sales and foreign sales by aligning patent exhaustion doctrine with an old common law rule—hostility against restraints on alienation.

##### 1. *Settling the Patent Exhaustion Rule: Decision to Sell Triggers Patent Exhaustion*

The Court settled the two issues regarding conditional sales and international exhaustion with a bright line rule: a patentee's decision to sell a product exhausts all of its patent rights, regardless of any restrictions the patentee purports to impose and regardless of the location where the sale was made.<sup>136</sup> The Court simplified the exhaustion rule by uniformly applying the common law principle against restraints on alienation to both domestic and international sales by a patentee.<sup>137</sup> The Court explained that the common law principle against restraints on alienation does not have any geographical distinction.<sup>138</sup> Therefore it was straightforward for the Court to conclude that a foreign sale by a patentee also exhausts all of its patent rights.<sup>139</sup> This resulted

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131. *Id.* at 784.

132. *Boesch v. Graff*, 133 U.S. 697, 701 (1890); *see supra* Section III.A.2.

133. *Lexmark*, 816 F.3d at 784 (Dyk, J., dissenting).

134. *Id.* at 788.

135. *Id.*

136. *Impression Prods. v. Lexmark Int'l, Inc.*, 137 S. Ct. 1523, 1529 (2017).

137. *Id.* at 1526–27.

138. *Id.* at 1536.

139. *Id.*

in the same outcome as for the patent exhaustion and copyright first sale doctrine.<sup>140</sup>

The Court explained the exhaustion doctrine as a limit on the scope of a patentee's exclusionary rights when a sale transfers the ownership of a patented item.<sup>141</sup> The Court made a clear distinction between a purchaser having an ownership and a licensee having an authorized right to use or sell.<sup>142</sup> The Court explained that a license is about exchanging rights and does not involve passing title of product.<sup>143</sup> Unlike a license, a sale involves a transfer of ownership. The Court held that exhaustion is about cutting off the exclusionary power when the ownership of a product transfers to a purchaser.<sup>144</sup>

The Court made two interesting additional points regarding contract and license. First, the Court opened the possibility of enforcing the restrictions against customers under contract law, although the patent owner's power to enforce restriction to a third party who lacks privity would be limited.<sup>145</sup> Second, the Court contrasted this case with *General Talking Pictures* and acknowledged a possibility of enforcing restrictions when a patent owner has a manufacturing licensee.<sup>146</sup> The Court explained that in *General Talking Pictures*, the licensee's sale to a purchaser was made outside the scope of its license because the licensee violated the restriction and the purchaser knowingly participated in that violation.<sup>147</sup> In that case, the Court made it clear that the patent owner can sue both the licensee and the purchaser.<sup>148</sup> There was no patent exhaustion in *General Talking Pictures* because the sale made by the licensee did not come from the patent owner's decision to sell. The Court made a similar point in the international exhaustion context. While citing *Boesch*, the court held that when the U.S. patentee had nothing to do with a foreign sale, the U.S. patent right did not exhaust.<sup>149</sup> However, the Court warned that

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140. *Id.* ("And differentiating the patent exhaustion and copyright first sale doctrines would make little theoretical or practical sense.").

141. *Id.* at 1534.

142. *Id.*

143. *Id.*

144. *Id.*

145. *Id.* at 1531. *But see* *Arizona Cartridge Remanufacturers Ass'n. v. Lexmark Int'l Inc.*, 421 F.3d 981 (9th Cir. 2005) (holding that the privity requirement was met even though there was no written agreement, because the contract was formed between the patent owner and the consumer when the consumer opened the cartridge box with notice of restriction on reuse).

146. *Id.* at 1535.

147. *Id.*

148. *Id.*

149. *Id.* at 1537.

using a license imposed on the purchasers to enforce post-sale restraints is not allowed.<sup>150</sup>

## 2. *Dissent Opinion on International Exhaustion Issue*

Justice Ginsburg concurred with the holding on the conditional sale issue, but dissented on the international exhaustion issue.<sup>151</sup> In the dissent's view, the foreign sale should not limit the protection of the U.S. patent owner in the United States because the U.S. patent cannot provide protection abroad.<sup>152</sup> According to the dissent, a sale in one country should have no effect on patent law in other countries because each country has its own patent law. The dissent criticized the majority for applying the *Kirtsaeng* rule in the patent exhaustion context and argued that the exhaustion rules in patent law and copyright law do not have to be the same.<sup>153</sup>

## IV. DISCUSSION: A NEW STANDARD FOR CONDITIONAL SALES ON PATENT EXHAUSTION

The first Section of this Part considers the impact of the *Lexmark* decision on business strategies for patent owners and argues that the Court's concern regarding the free flow of commerce can hardly be realized. The second Section suggests an alternative exhaustion framework for conditional sales and international sales to better serve patent owners' interests and consumers' interests: a restriction is unenforceable through patent law unless it has a justification grounded in patent law policy. In addition, the second Section suggests three justifications for enforceable restrictions and further argues that the actual knowledge of a restriction must be a prerequisite for enforcement to protect innocent purchasers. Finally, the third Section analyzes the international exhaustion problem under the alternative suggested standard.

### A. IS FREE FLOW OF COMMERCE ACHIEVABLE WITH THE NEW EXHAUSTION RULE?

Considering various strategies that businesses can adopt to control the downstream purchasers under *General Talking Pictures*, the Court's concern with free flow of commerce is not likely to be achieved. Moreover, business

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150. *Id.* at 1535 (“General Talking Pictures involved a fundamentally different situation . . . . This does not mean that patentees can use licenses to impose post-sale restraints on purchasers.”).

151. *Id.* at 1538.

152. *Id.*

153. *Id.* at 1539 (“[I]he two [patent law and copyright law] ‘are not identical twins’ . . . . [C]opyright protections, unlike patent protections, are harmonized across countries.”).

strategies adopted after *Lexmark* might harm consumers with increased price and privacy concerns.

1. *Increase of Licensing May Cloud the Free Flow of Commerce*

The Court's exhaustion rule stemmed from the concern that the free flow of commerce would be clogged by restrictions imposed on sales by patent owners.<sup>154</sup> In particular, the Court raised concerns with products having thousands of parts, as there is no practical way to identify the existence of any restriction in all of the parts.<sup>155</sup> The threat of patent liability raises transaction costs which harms both consumers and the overall economy.<sup>156</sup> The Court's new exhaustion rule clears purchasers' concerns with potential patent infringement liability when they buy a product from a patentee.

However, the Court made an exception to the exhaustion rule for companies with a licensed manufacturer based on *General Talking Pictures*.<sup>157</sup> If a company has a manufacturing licensee and a restriction is imposed upon the licensee, then the company can pursue both purchasers and the licensee when the restriction is violated as long as the licensee and the purchasers have knowledge of the restriction.<sup>158</sup> The Court, in recognizing this problem, warned that licensing does not mean automatic avoidance of exhaustion,<sup>159</sup> and distinguished *General Talking Pictures* as an extraordinary situation.<sup>160</sup> But, the exception to cases similar to *General Talking Pictures* may not be rare, especially if patent owners are strategic. If a patent owner can show that a licensee and a purchaser had knowledge of the restriction, then the patent owner is able to enforce the restriction with a patent infringement suit for the violation of the restriction. This gives a big advantage to companies who operate based on licensing rather than selling the products themselves. Companies with traditional sales business will be incentivized to change their business model to licensing—either by having a manufacturer licensee to sell the patented product or licensing the patented product to consumers instead of selling.

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154. *Id.* at 1532 (“[E]xtending the patent rights beyond the first sale would clog the channels of commerce, with little benefit from the extra control that the patentees retain.”).

155. *Id.* (“That smooth flow of commerce would sputter if companies that make the thousands of parts that go into a vehicle could keep their patent rights after the first sale.”).

156. *Id.* (“[T]he very threat of patent liability would force the shop to invest in efforts to protect itself from hidden lawsuits.”).

157. *Id.* at 1535.

158. *Id.* (“[T]he patentee could use both the licensee and the purchaser—who knew about the breach—for infringement.”).

159. *Id.* (“This does not mean that patentees can use licenses to impose post-sale restraints on purchasers.”).

160. *Id.* (“*General Talking Pictures* involved a fundamentally different situation: There a licensee ‘knowingly ma[de] . . . sales . . . outside the scope of its license.’”).

For example, Lexmark may consider dividing its ink cartridge business into two separate entities: a patent holding entity and a manufacturing entity.<sup>161</sup> Or, Lexmark can transfer the ownership of the relevant patents to a third party and become a manufacturing licensee. Either way, the two parties could then enter into a license agreement with a single-use restriction. However, Lexmark must also take measures to ensure purchasers' knowledge of the single-use restriction. Lexmark could make a notice on the cartridges, such as "This cartridge is manufactured by a licensee of Lexmark patent and subject to single-use restriction. Violating the restriction is an infringement of Lexmark patent." However, as notice itself may not be enough to show the actual knowledge of purchasers, the Lexmark patent holder may require its manufacturing licensee to ask purchasers to sign an agreement that they are subject to the single-use restriction and understand their potential liabilities should they violate the restriction. In this way, Lexmark can create their business strategy similar to *General Talking Pictures*.

Alternatively, Lexmark can license ink cartridges to consumers, instead of selling them. However, Lexmark would have to design the license arrangement carefully because the Court warned that patentees cannot "use licenses to impose post-sale restraints on purchasers."<sup>162</sup> But if the nature of transaction is fundamentally different from a sale, consumers are licensees and not "purchasers." In *UMG Recordings, Inc. v. Augusto*, the Ninth Circuit held that "mere labeling of an arrangement as a license rather than a sale" will not by itself transform a transaction as a license in the copyright context.<sup>163</sup> The Ninth Circuit reasoned that a copyright owner essentially transfers ownership of CDs when they have no bilateral license agreement with the recipient and no meaningful control or knowledge of the status of CDs after shipment.<sup>164</sup> In contrast, if Lexmark secures licensing agreements from customers and requires the customers to return cartridges or tracks the usage of cartridges, then Lexmark's license is not likely to be interpreted as a sale under *UMG*.

Alternatively, Lexmark may adopt a subscription model for distributing its ink cartridges. For example, Lexmark provides a cartridge management service to some of its customers. In this case, the customers are acquiring a service and use license for cartridges rather than purchasing ink cartridges. Lexmark tracks usage of cartridges and requires customers to return used cartridges; the

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161. This assumes that the two entities are not in fact controlled by the same party. Otherwise, it would be a sham transaction.

162. *Id.*

163. *UMG Recordings, Inc v. Augusto*, 628 F.3d 1175, 1180 (9th Cir. 2011) (where there was free distribution of promotional CDs to recipients with notice of licensing restriction, but with no bilateral agreement and no meaningful control of the CDs, the distribution did not constitute a sale, so the first sale doctrine applied).

164. *Id.* at 1180–82.

permanent transfer of ownership is not occurring. Lexmark may create incentives to return used cartridges by providing discounts in price for the customers who return the used cartridges. As there is no sale, a violation of their restrictions can be enforced under patent law. In sum, various business reactions to the new exhaustion rule may lead to unintended consequences that can thwart free commerce and harm consumer interests.

2. *There Is Possible Harm to Consumers by Increased Price and Privacy Concerns*

To consider the impact of the *Lexmark* decision on price, it is helpful to look back into what happened to the price of textbooks after the *Kirtsaeng* decision in 2013. Before 2013, the price of US version textbooks was at least 50% to over 100% higher than that of the international student version textbooks.<sup>165</sup> *Kirtsaeng* changed the business strategy of publishers because importing the international student versions to the United States became lawful. In response, John Wiley & Sons raised the price of some international student version textbooks to match the U.S. price.<sup>166</sup>

Lexmark may follow the footsteps of Wiley. Lexmark has two types of cartridges in the market: Return Program cartridges with 20% discounted price for a single-use restriction and regular cartridges with no restriction. One possible change to Lexmark's future business strategy is to stop selling Return Program cartridges and unify the price of all of cartridges.<sup>167</sup> This will lead to

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165. See, e.g., Christos Cabolis et al., *A textbook example of international price discrimination*, 95 ECON. LETTERS 91 (2007) (suggesting the sources of price differentials of textbooks in the United States and the other foreign countries to strict copyright enforcement, existence of second-hand market, cost of education, and difference in college education culture, etc.).

166. For example, the price of the US edition of *Advanced Engineering Mathematics* by Erwin Kreszig is \$283.95 (hard cover) and the price of international student version of the same book in Asia-Pacific countries is \$276.95 (soft cover). Similarly, the price of the US edition of *Microeconomics*, 5th Edition by David Besanko and Ronald Braeutigam is \$242.95 (paperback) and the price of international student version of the same book in Asia-Pacific countries is \$236.95 (paperback). Prices for the textbooks are available at WILEY, <http://www.wiley.com> [<https://perma.cc/R9MR-6E3C>] (last visited Feb. 20, 2019) (input the title of the textbooks in the search box for the prices and then change to other countries to check the prices of the international student versions).

167. But interestingly, Bob Patton, senior VP and GC of Lexmark, said that Lexmark will continue its discounted Return Program in his interview after the Court decision. See Jess Bravin, *Supreme Court Rules Lexmark Can't Sue Toner-Cartridge Fillers for Patent Infringement*, WALL ST. J. (May 30, 2017, 5:09 PM), <https://www.wsj.com/articles/supreme-court-rules-lexmark-cant-sue-toner-cartridge-fillers-for-patent-infringement-1496178596> [<https://perma.cc/C9BT-L84B>] (“Lexmark customers always have a choice between a full-price unrestricted cartridge or a discounted Return Program cartridge, which can be used once and then returned to Lexmark to support our own environmentally-friendly remanufacturing program.”).

increase of price to loyal customers who usually purchase discounted Return Program cartridges.

Another possible change to Lexmark's business strategy is to rely on technology to self-enforce the restrictions. Digital content providers are already using DRM technologies to protect their products from unauthorized copying.<sup>168</sup> Lexmark printers have a microchip to monitor cartridges and deny functioning when a refilled cartridge is used.<sup>169</sup> The remanufacturing companies, such as Impression Products, designed their chips to circumvent the algorithm of Lexmark's microchip and successfully fooled Lexmark printers to allow refilled cartridges.<sup>170</sup> Lexmark may develop a more sophisticated microchip which is harder for remanufacturers to replicate. However, the development cost of this technology could eventually raise the cost of product. Additionally, these sophisticated chips may follow other technologies in the Internet of Things (IoT) and incorporate networking technology. These technological advances may result in the collection of information beyond the usage of cartridges, but also identifying information for customers, which may raise privacy concerns.<sup>171</sup>

These hypothetical scenarios for Lexmark's future business strategies highlight the problem that the Court was concerned with: clogging free flow of commerce. Moreover, increases in price and privacy concerns are against consumers' interests. In addition, the Court's exhaustion rule decreases the incentives for innovation because patent owners' rights are limited by the new exhaustion rule. To address these issues, Congress should take actions to amend the patent law to adopt a different exhaustion rule. The next Section suggests an alternative framework for exhaustion.

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168. See Aaron Perzanowski & Jason Schultz, *Digital Exhaustion*, 58 UCLA L. REV. 889, 901–07 (2011).

169. *Lexmark Int'l, Inc. v. Impression Prods., Inc.*, 816 F.3d 721, 728 (Fed. Cir. 2016).

170. *Lexmark Int'l, Inc. v. Static Control Components, Inc.*, 387 F.3d 522, 532 (6th Cir. 2004). However, Lexmark's copyright action against a provider of the chip designed to fool the Lexmark printers was unsuccessful because the court held that Lexmark's software program in its microchip was un-copyrightable.

171. See Lesley Fair, *Internet of Things: FTC Staff Report and a New Publication for Businesses*, FTC BUSINESS BLOG (Jan. 27, 2015, 9:12 AM), <https://www.ftc.gov/news-events/blogs/business-blog/2015/01/Internet-things-ftc-staff-report-new-publication-businesses> [<https://perma.cc/FZ43-JGUY>].

B. ALTERNATE FRAMEWORK FOR EXHAUSTION: PERMISSIBLE  
RESTRICTIONS UNDER PATENT LAW WITH ACTUAL KNOWLEDGE OF  
CONSUMERS

To vindicate patent owners' interests, some restrictions should be enforceable under patent law. But the difficult question would be how to determine the boundaries of enforceable restrictions. Although the Federal Circuit has repeatedly ruled that post-sale restrictions are enforceable, it has also suggested that some restrictions are impermissibly outside of the bounds of patent law—without it making clear what those boundaries are.<sup>172</sup> The rule proposed here would only enforce post-sale restrictions that are justified based on one or more of the following: (1) the subject matter of the patent at issue, (2) promotion of patent policy, or (3) incomplete reward from the market. Under this approach, the patent exhausts unless the patentee shows that the restriction is enforceable on one of these grounds and that the alleged infringer had actual knowledge of the restriction.

In contrast to this Note's approach, some scholars have suggested a "default-plus" rule, where a restriction on a sale of a patented product is enforceable unless the restriction violates public policy.<sup>173</sup> Under the default-plus rule, a restriction from an express condition of a sale is deemed enforceable because a purchaser considered the condition when buying a patented product.<sup>174</sup> The burden would be on the purchaser to show that the condition is unenforceable for violating public policy. However, this Note proposes that the purchasers should be protected by putting the burden on the patentee to show that the restrictions are enforceable rather than putting the burden on the purchaser to show that the restrictions are unenforceable.

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172. See, e.g., *LifeScan Scot., Ltd. v. Shasta Techs.*, 734 F.3d 1361, 1365 (Fed. Cir. 2013) (holding that patent exhaustion applies to a freely distributed product with a notice to use the product with patentee's other product). The Federal Circuit in *LifeScan* discounted the validity of restriction by holding that the patentee distributed its product freely "in the expectation and intent that customers will use [its product] with [its other product]." See *id.*

173. See Wentong Zheng, *Exhausting Patents*, 63 UCLA L. REV. 122, 128 (2016) (suggesting a "default-plus" rule which combines a default exhaustion rule—which only applies exhaustion to unconditional sales—and a patent misuse test). Zheng's standard allows patentees to avoid exhaustion through restrictions, while patent misuse test ensures that restriction do not violate public policy. Zheng's approach does not provide what constitutes a valid condition on sale because it is still unclear what kinds of restrictions are permissible under patent law, even after filtering out the restrictions that violates public policy. Interpreting the valid condition as a notice on the product or by an express contract term does not protect the innocent purchasers.

174. *Id.* at 154 ("As long as the patent restriction is an express condition of the sale, the purchaser will take the restriction into account in arriving at the price it will be willing to pay for the patented article.").



Below, the proposed standard of this Note will be applied to the Federal Circuit cases and *Lexmark* to explore the boundaries of enforceable restriction.

1. *Restrictions Are Justified When They Relate to the Patented Subject Matter*

In *Mallinckrodt*, the Federal Circuit noted that restrictions within the scope of the patent grant, or otherwise justified, are valid and the violation of the restriction is patent infringement.<sup>175</sup> If, by contrast, the condition on the sale seeks to expand the monopoly of the patent or it violates antitrust law, then the restriction is unenforceable.<sup>176</sup> In other words, the patentee can have freedom to condition the sale if the condition is within the patent grant.

But the Federal Circuit did not go further to give an explanation about what it meant by restrictions “within the scope of patent grant” or restrictions “relates to the patented subject matter.”<sup>177</sup> It is unclear whether it means the restriction should be related to the invention itself. Alternatively, this can be broadly interpreted as a restriction within the scope of purpose of patent law generally.

The Federal Circuit mentioned *Mallinckrodt*’s patents briefly,<sup>178</sup> but did not assess whether the restriction imposed there was related to the subject matter of the patent. *Mallinckrodt*’s restriction was a single use restriction with specific disposal instructions imposed on the nebulizer with radioactive materials.<sup>179</sup> The claims of *Mallinckrodt*’s patents describe the structural aspect of the device, but are not directed to the purpose or method of disposing the used device.<sup>180</sup> However, *Mallinckrodt* explained the design aspect of the device related to the safe disposal of the nebulizer with radioactive material in the written description of its patents. For example, the ’828 patent describes how to use each part of the device to shield radiation material until it can be

175. *Mallinckrodt, Inc. v. Medipart, Inc.*, 976 F.2d 700, 709 (Fed. Cir. 1992).

176. *Id.* at 703–04.

177. *Id.* at 708 (“Should the restriction be found to be reasonably within the patent grant, i.e., that relates to subject matter within the scope of the patent claims, that ends the inquiry.”).

178. *Id.* at 702 n.2 (*Mallinckrodt* has five U.S. patents: U.S. Patent No. 4,782,828, which covers the overall combination of nebulizer with lead-shielded container; U.S. Patent No. 4,529,003, which covers the structure of the device; and U.S. Patent No. 4,456,170, U.S. Patent No. 4,251,033, and U.S. Patent No. 4,116,387, which cover various aspects of the nebulizer).

179. *Id.* at 702 (“The package . . . states ‘For Single Patient Use Only’ and instructs that the entire contaminated apparatus be disposed of in accordance with procedures for the disposal of biohazardous waste. The hospital is instructed to seal the used apparatus in the radiation-shielded container prior to proper disposal.”).

180. *See, e.g.*, U.S. Patent No. 4,782,828, claim 1 (“An apparatus comprising: a radioaerosol generating source and support means . . . transport means including a passage . . . and an outlet . . . ; and shielding means . . . for reducing the amount of radiation transmitted to the surrounding atmosphere . . .”).

appropriately disposed.<sup>181</sup> The '003 patent describes how to remove the device after use without endangering the operator with radioactive contaminated components.<sup>182</sup> The disposal instructions are in the written description of Mallinckrodt's patent and thus are broadly related to the subject matter of patent because they are explaining how to use the invention. Moreover, the court noted the restrictions that were "related to" the subject matter of patent, which suggests that the restriction does not necessarily have to be within the scope of the patent claim.<sup>183</sup>

In *Jazz Photo*, where the patented device was a single use disposable camera, Fuji also had patents regarding disposable camera technology.<sup>184</sup> Fuji's '087 patent had explicit claim language supporting the single-use restriction: "a light-tight film casing which must be destroyed to open the same."<sup>185</sup> The disposable cameras were intended to be used only once because the film is removed by destroying the external cover. Jazz Photo and other defendants collected discarded cameras and refurbished them by applying a new cover and reassembling it.<sup>186</sup> The single use restriction in *Jazz Photo* was related to the patented subject matter because the single-use feature was directly related to the claim language. If the consumer bought the camera from Fuji or a licensee authorized by Fuji, the patent exhaustion will protect the consumer. On the other hand, purchasing a reassembled camera from a third party, who does not

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181. U.S. Patent No. 4,782,828 col. 4, l. 62–68 & col. 5, l. 1–6 ("In the event it is not appropriate to dispose of the transport means and the nebulizer 82 immediately after use . . . the level of radioactivity has been reduced to a point that the disposal is appropriate.").

182. U.S. Patent No. 4,529,003, col. 4, l. 3–12 ("Thus, in removing that system as a unit from the shielding container, the operator still is protected by cover shield . . . and all of the contaminated components will be disposed of without unduly endangering an operator.").

183. See James B. Kobak, Jr., *Contracting Around Exhaustion: Some Thoughts About the CAFC's Mallinckrodt Decision*, 75 J. PAT & TRADEMARK OFF. SOC'Y 550, 561 (1993) (suggesting that the Federal Circuit's language that defines a restriction as "one which merely 'relates to' . . . the subject matter of the patent" seems broader than the claim scope because restrictions written in the claim would be infringement of the claim even absent a resale condition); see *infra* discussion in Section IV.A.1. In *Motion Picture Patents*, the Court held that restriction is invalid when it is not "any part of the invention" of the patent in suit, rather than limiting the scope of the restriction to the claim language. *Motion Picture Patents Co. v. Universal Film Mfg.*, 243 U.S. 502, 518 (1917).

184. *Jazz Photo Corp. v. ITC*, 264 F.3d 1094, 1098 n.2 (Fed. Cir. 2001). The patents Fuji used in the infringement suit were U.S. Patent No. 4,884,087, U.S. Patent No. 4,954,857, U.S. Patent No. 4,833,495, U.S. Patent No. 4,855,774, U.S. Patent No. 5,235,364, U.S. Patent No. 5,361,111, U.S. Patent No. 5,381,200, U.S. Patent No. 5,408,288, and U.S. Patent No. 5,436,685, covering LFFP (Lens-Fitted Film Package) camera, i.e., single-use disposable camera technology.

185. *Id.* at 1100.

186. *Id.* at 1101.

have a license from Fuji and violates the single-use restriction, does not exhaust Fuji's patent.<sup>187</sup>

However, in *Motion Picture Patents*, the patentee's restriction was unenforceable partly because it was not related to the patented subject matter.<sup>188</sup> The patented device was a motion picture exhibiting machine for feeding a film through the machine with a desired movement.<sup>189</sup> The patentee had a license agreement with a licensee to manufacture and sell the patented machines.<sup>190</sup> By the patentee's restriction, the purchaser of the machine had to use the machine to play the motion picture films leased by the licensee.<sup>191</sup> The court noted that restricting the use of the machine to the specific films "[had] nothing to do with the invention which is invented but relate wholly to the materials to be used with it."<sup>192</sup>

Now turning to the *Lexmark* case, Lexmark had numerous patents regarding toner cartridge technology.<sup>193</sup> The single use restriction for the Return Program cartridge was coupled with a microchip embedded in the cartridge which enabled a printer to determine cartridge information and monitor the toner level of the cartridge.<sup>194</sup> In the written description of the '169 patent, Lexmark explained its technology allowing for the transmission of cartridge information to the printer, including toner levels.<sup>195</sup> The single use restriction can be implemented by monitoring toner levels and identifying information of a cartridge to prevent the use of a refilled cartridge. Therefore, Lexmark's single use restriction was related to the subject matter of one of its patents.

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187. But patent exhaustion can be a defense if the purchaser did not know of the single-use restriction at the time of sale. *See infra* Section IV.A.3.

188. This case can be viewed as the patent misuse case adopted by the Supreme Court. ROBERT P. MERGES, PETER S. MENELL, MARK A. LEMLEY, *INTELLECTUAL PROPERTY IN THE NEW TECHNOLOGY AGE* 241 (2016).

189. *See Motion Picture Patents Co. v. Universal Film Mfg.*, 243 U.S. 502, 505 (1917). The patent of Motion Picture Patents used in the infringement suit was U.S. Patent No. 709,934.

190. *Id.* at 506.

191. *Id.*

192. *Id.* at 512.

193. The patents cover the structure of toner cartridges, encoder for reading information about toner cartridges, etc. For the complete patent list, see Complaint at 3-4, *Lexmark Int'l Inc. v. Ink Techs. Printer Supplies, LLC*, 9 F. Supp. 3d 830 (S. D. Oh. 2014) (No. 1:10-CV-564).

194. *Lexmark Int'l, Inc. v. Impression Prods., Inc.*, 816 F.3d 721, 728 (Fed. Cir. 2016).

195. U.S. Patent No. 5,634,169 col. 15, l. 1-6 ("[T]he present invention provides a simple . . . apparatus for transmitting to a machine of a type employing toner, information concerning the characteristics of an EP cartridge, but also combines with such information continuing data relating to the amount of toner left in the cartridge during machine operation.").

Applying this rule—justifying the use restriction on a sale of a product embodying a patent if the restriction comes from the patent itself—can protect the value of invention. If the restriction is based on one of technological characteristics of the invention described in the patent, then patent law is an appropriate tool for the protection. As patentees are allowed to enforce the restriction based on the description of the invention, this rule can encourage more disclosure of how best to use the invention. It is also consistent with maintaining quality control if the restriction relates to the best mode of the invention which describes the most optimal way to practice the invention.<sup>196</sup> Additionally, this rule is rather easy to apply and is narrow in scope, because permissible restrictions are limited to what is written in the patent claim or written description of the invention.

## 2. *Restrictions Are Justified When They Promote Patent Policy*

Another possible category of permissible restrictions under patent law are those promoting patent policy. More specifically, the restrictions which promote the core objective of patent law can be enforceable under patent law.<sup>197</sup> The Constitution states the objective of patent law is “[t]o promote the Progress of Science and useful Arts.”<sup>198</sup> A restriction on the sale of a patented product may further the purpose of patent law when the restriction preserves the value of invention and protects the expectations of consumers. In a seminal article about the enforceability of post-sale restrictions, Professor Zechariah Chafee suggested commercial purposes for restrictions on sales as to protect both manufacturers and consumers.<sup>199</sup> He also pointed out that disturbing the public with unauthorized products of irregular quality can deter subsequent purchases and thus harm the manufacturer.<sup>200</sup> For example, maintaining the reputation of the product by having a uniform quality in the market can be a justification for the restriction.<sup>201</sup> However, this justification should not be read too broadly to endorse any restriction that increases profits

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196. See *infra* Section IV.B.2 for the importance of quality control for justifying the restrictions on a sale of a product embodying a patent.

197. See Molly Shaffer Van Houweling, *Touching and Concerning Copyright*, 51 SANTA CLARA L. REV. 1063, 1084 (2011) (suggesting a nexus between the restriction and the purpose of the exclusive right as valid restrictions imposed on the sale of chattels).

198. U.S. CONST. art. I, § 8, cl. 8.

199. See Zechariah Chafee, *Equitable Servitudes on Chattels*, 41 HARV. L. REV. 945, 946–48 (1928).

200. *Id.* at 946–47.

201. *Id.* at 949–50. The concept of the protection of consumer and the reputation of a patentee can be also discussed under trademark law. But these concepts can also be related to a policy rationale of the patent law because the protection of consumer and patentee can be achieved by protecting the invention and the patent right.

for the patentee, because the constitutional object of patent law has been held to require balancing of the patentee's rights and the interest of the public.<sup>202</sup>

In *Jazz Photo*, the Federal Circuit noted the concern for the harm to the public by “evidence of imperfections and failures of some refurbished cameras.”<sup>203</sup> Similarly, in *Lexmark*, the Federal Circuit also recognized that the patentee's interest in having control over the quality of products is related to the interests protected by patent law.<sup>204</sup> The cartridges refurbished by unauthorized third parties can have lower quality than Lexmark's original cartridges. This can create uncertainty in the market as the quality of products may vary wildly. This can also harm Lexmark economically due to a reduction in market share and a risk of warranty related suits directed to Lexmark. These economic consequences could negatively affect the development of new products or technology, as inventors might be less motivated to take the risks of developing new technology if they could be undercut by low-quality copies.

In sum, applying this rule—justifying the restriction on a sale of a product embodying a patent if the restriction promotes patent policy—can further the policy goals of patent law by protecting both patentees and the public.

### 3. *Restrictions Are Justified When the Patentee Has Only Received a Partial Reward*

One approach to balance the interests of patent holders, consumers, and the public is to consider the market reward for the sale of a patented product as full consideration for the patentee's invention.<sup>205</sup> After receiving full consideration from the market, the patentee may no longer have any right to the products that downstream purchasers own.<sup>206</sup> In *Adams v. Burke*—where

202. See, e.g., U.S. CONST. art. I, § 8, cl. 8 (limiting the exclusive rights of patent for public interest “[b]y securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries . . .”).

203. *Jazz Photo Corp. v. ITC*, 264 F.3d 1094, 1105 (Fed. Cir. 2001)

204. See *Lexmark Int'l, Inc. v. Impression Prods., Inc.*, 816 F.3d 721, 752 (Fed. Cir. 2016) (“Such interests are hardly unrelated to the interests protected by the patent law—the interests both of those who benefit from inventions and of those who make risky investments to arrive at and commercialize inventions.”).

205. See *Dufresne*, *supra* note 68, at 12–14 (explaining exhaustion question based on full patentee compensation as a way to balance goals of the patent law, encouraging innovation and benefiting the society as a whole); see also *Robinson*, *supra* note 118, at 1496–97 (suggesting that patent owners can structure how to receive market reward unless other antitrust principles prohibit it).

206. The Supreme Court has addressed the basis of patent exhaustion doctrine from the market reward in other cases. See *Bowman v. Monsanto Co.*, 133 S. Ct. 1761, 1766 (2013) (quoting *United States v. Univis Lens Co.*, 316 U.S. 241, 251 (1942) (“We have explained the basis for the doctrine as follows: ‘[T]he purpose of the patent law is fulfilled with respect to any particular article when the patentee has received his reward [. . .] by the sale of the article’”);

the patentee divided the scope of license territorially by imposing a restriction not to sell, use, or make coffin lids outside the assigned region—the Supreme Court held that “the patentee . . . received all the royalty or consideration which he claims for the use of his invention . . . it is open to the use of the purchaser without further restriction on account of the monopoly of the patentees.”<sup>207</sup> Although the rights of the licensee to manufacture and sell were limited territorially, the Court noted that the purchaser paid full consideration for the use of coffin lids to the licensee.<sup>208</sup> Therefore, the territorial restriction was unenforceable to the purchaser.<sup>209</sup> Conversely, if a patentee did not receive a full consideration for the product with a purpose of imposing a use or resell restriction on a sale of the product, then the restriction on sale can be justified and survive patent exhaustion.

In *Lexmark*, the Court held the patentee can have only one reward with “satisfactory compensation.”<sup>210</sup> However, the Court did not consider a case in which a patentee receives one reward which becomes a “satisfactory compensation” only when certain conditions are met. This Note proposes that a partial reward becomes a satisfactory compensation only when the condition is met: a voluntary exchange between a patentee and a purchaser. As the partial reward was a consideration for a purchaser agreeing to be subject to a restriction, it is also a justification for restrictions on sale. For example, Lexmark had a Return Cartridge Program which provided a 20% discount from the regular price for the customers who chose the Program.<sup>211</sup> 20% of consideration was not received by Lexmark in exchange for the single-use restriction on the customers. If the single-use restriction is violated, then a 20% discounted price is not a “satisfactory compensation” to Lexmark. In other

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once that ‘purpose is realized the patent law affords no basis for restraining the use and enjoyment of the thing sold.’”) (citation omitted).

207. *Adams v. Burke*, 84 U.S. 453, 456 (1873).

208. *Id.* (“It would be to engraft a limitation upon the right of use not contemplated by the statute nor within the reason of the contract to say that it could only be used within the ten-miles circle.”). The Court seems to weigh the purchaser’s freedom to use against the patentee’s interest when it is unclear from the fact whether the purchaser knew of the restriction. Even though the purchaser knew about that fact the seller (the licensee) is limited to manufacture and sell in a specific region, the purchaser might have thought that the restriction is only to the licensee and irrelevant to his use. *See id.*

209. *Id.* at 457 (“[W]hen [machines] are once lawfully made and sold, there is no restriction on their *use* to be implied for benefit of the patentee.”).

210. *Impression Prods. v. Lexmark Int’l, Inc.*, 137 S. Ct. 1523, 1537 (2017) (“[T]he patentee receives one reward—of whatever amount the patentee deems to be ‘satisfactory compensation’—for every item that passes outside the scope of the patent monopoly.”).

211. *See Lexmark Int’l, Inc. v. Impression Prods., Inc.*, 816 F.3d 721, 727 (Fed. Cir. 2016)

words, Lexmark’s restriction is valid because there was only a partial reward to the patentee.

Note that the rule proposed here presupposes that the purchaser selected a restricted-use product in a knowing exchange for a lower price. It thus avoids the objection that purchasers should not be burdened with the information costs of investigating whether there is a restriction attached to the use of the product.<sup>212</sup> Furthermore, all of the proposed rules—justifying the restriction if it is related to the patented subject matter or promotes patent policy, or the patentee received incomplete rewards—require consumers to have actual knowledge of the restriction in order for it to be enforceable.<sup>213</sup> However, just having an adequate notice of restrictions on the product is not enough to enforce the restriction through patent law.<sup>214</sup> No matter how conspicuous the notice may be, there is always a possibility that the subsequent purchaser does not carefully read and does not actually know the restrictions.<sup>215</sup>

In *Lexmark*, it was highly likely that the consumers had actual knowledge of the single-use restriction because they had to make a choice between a regular cartridge at a full price and a Return Program cartridge for a discounted price.<sup>216</sup> Actual knowledge of restriction can be presumed if there was adequate

212. Conditioning patent exhaustion on the purchaser’s actual knowledge of restriction by a knowing exchange for a lower price would help provide certainty in transactions that are subject to patent exhaustion. See *LifeScan Scot., Ltd. v. Shasta Techs.*, 734 F.3d 1361, 1377 (Fed. Cir. 2013) (“[C]onditioning patent exhaustion on the adequacy of the patentee’s reward ‘would cast a cloud of uncertainty’ over every transaction and every patented product.”).

213. Other possible solution can be requiring a contractual relationship between the patentee and the purchaser. See *id.* at 1376–77 (“Absent a valid contractual restriction, restraints upon the downstream use or sale of a patented product ‘offend against the ordinary and usual freedom of traffic in chattels’ . . .”). But requiring a contractual relationship in every transaction for commonly traded articles can have negative effects on free economy by increasing the cost of trade.

214. See *Straus v. Victor Talking Machine Co.*, 243 U.S. 490, 501 (1917) (“[I]t must be recognized that not one purchaser in many would read such a notice, and that not one in a much greater number, if he did read it, could understand its involved and intricate phraseology.”).

215. See Russell Korobkin, *Bounded Rationality, Standard Form Contracts, and Unconscionability*, 70 U. CHI. L. REV. 1203, 1233–34 (2003) (explaining the common observation that buyers rarely read the terms, even salient ones).

216. *Impression Prods.*, 816 F.3d at 728 (“There is no dispute about the adequacy of notice to resellers as well as end users.”); see also *Quanta Comput., Inc. v. LG Elects, Inc.*, 553 U.S. 617, 624 (2008) (“Quanta . . . received the notice required by the Master Agreement. Nonetheless, Quanta manufactured computers using Intel parts in combination with non-Intel parts.”).

notice and the purchaser chose the product in exchange for abiding by the restriction or when the purchaser violated the restriction for his own benefit.<sup>217</sup>

Allowing restrictions on distribution of a product may seem to restrict the free flow of commerce more than the Court's new rule. However, the default positions of both frameworks are the same: a patent owner's sale exhausts the patent. But the framework suggested by this Note simply adds a narrow exception: a patent owner's sale presumptively exhausts the patent, unless the restrictions have at least one of the three justifications proposed, and a purchaser has knowledge of the restrictions. These exceptions do not additionally burden the free flow of commerce because the restrictions are void to innocent purchasers. Shutting down the patent enforcement possibility for patentees can result in unintended consequences.<sup>218</sup> By providing a narrow exception to the exhaustion rule, patent owners' interests can be vindicated, and consumers' interests are better served without overly burdening the free flow of commerce.

### C. INTERNATIONAL EXHAUSTION AS A PERMISSIBLE GEOGRAPHICAL RESTRICTION

In *Lexmark*, the Court held that U.S. patents are absolutely exhausted by foreign sales.<sup>219</sup> This Section applies the standard discussed in the Section IIV.B to analyze whether foreign sales exhaust U.S. patents (1) when there is no restriction on foreign sales, and (2) when a patentee imposed a restriction on the foreign sale.

#### 1. *Unconditional Sales Abroad Exhaust U.S. Patent Rights*

Where a sale is made without any express restrictions, enforcing the U.S. patent can interfere with the absolute property right of the customer who bought the product abroad and create uncertainty in downstream commerce. For this reason, the Court held that location is irrelevant to patent exhaustion.<sup>220</sup> The dissent argued that the U.S. patents are enforceable even when no restriction was imposed on sales abroad because the U.S. patent does not provide the same level of protection in other countries.<sup>221</sup> In the dissent's

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217. In *Kirtsaeng v. John Wiley & Sons, Inc.*, Kirtsaeng made profit by violating the geographical restriction because the textbooks were sold at a higher price in the U.S. than in Thailand. See *Kirtsaeng v. John Wiley & Sons, Inc.*, 568 U.S.519, 527 (2013). At trial, the jury found that Kirtsaeng had willfully infringed Wiley's copyrights. See *John Wiley & Sons, Inc. v. Kirtsaeng*, 654 F.3d 210, 215 (2d Cir. 2011).

218. See *supra* Section IV.A.

219. *Impression Prods. v. Lexmark Int'l, Inc.*, 137 S. Ct. 1523, 1535 (2017).

220. *Id.* at 1538.

221. *Id.* at 1538–39.



view, the cartridges refurbished from cartridges sold abroad (without single-use restrictions) infringed the U.S. patent when they were imported into the United States.<sup>222</sup>

A rule without international exhaustion creates two problems. First, it creates an innocent infringer problem, which creates uncertainty for purchasers who buy a U.S. patentee's product abroad.<sup>223</sup> Even if a foreign purchaser moves into the U.S. with a product purchased abroad from the U.S. patentee, it may infringe the U.S. patent because the foreign sale does not exhaust the U.S. patent rights. This problem clashes with the property right of the purchaser. While it is highly unlikely that a U.S. patentee will sue a foreign customer for infringement in the United States,<sup>224</sup> it still leaves a doctrinal hole to this problem and exposes potential infringement issues to the innocent purchasers.<sup>225</sup>

Second, it results in double compensation for the products without restrictions because the patentee already received a full reward from the foreign market, yet the patentee is allowed to also claim patent infringement in the United States. Moreover, determining patent exhaustion depending on whether the sale was made at home or abroad can result in a complex factual dispute on the location of the transaction.<sup>226</sup>

Applying the standard discussed in the Section IV.B, foreign sales should exhaust the U.S. patent rights unless the patentee imposed a justifiable restriction and the actual knowledge of purchasers is proven. This can solve the innocent infringer problem and protect the property rights of foreign purchasers. This also does not unduly limit the patent right because the patentee already received his or her reward for that particular product from the foreign market.

222. *Id.*

223. The Federal Circuit discounts the innocent infringer problem, for there were no practical problems. *Lexmark Int'l, Inc. v. Impression Prods., Inc.*, 816 F.3d 721, 771 (Fed. Cir. 2016) (“[W]e simply have no reliable evidence that the possibility of unintended infringement in that scenario is actually a significant issue in practice.”).

224. Going after each individual user is a highly unlikely enforcement strategy for the manufacturers. But, if a foreign purchaser is actively reselling foreign purchased products in the U.S. for arbitrage purpose, then it is not an innocent infringer problem anymore. See *infra* Section IV.C.2 for more discussion on international exhaustion in arbitrage cases.

225. See *Lexmark*, 816 F.3d at 788 (Dyk, J., dissenting) (arguing that implied license defense does not adequately protect the innocent purchasers).

226. See, e.g., *Core Wireless Licensing S.A.R.L. v. LG Elec. Inc.*, 2016 U.S. Dist. LEXIS 119472 (E.D. Tex. Sept. 3, 2016) (recognizing the ambiguity as to the nature of the transaction between Qualcomm and LG entities depending on the specific facts, such as which LG entities (foreign or domestic) involved in the transaction, where the agreements were negotiated or executed, or where LG took possession of the Qualcomm products).

2. *Price Discrimination as a Justification for a Geographical Restriction with Actual Knowledge of Purchasers*

In *Lexmark*, the Court applied the *Kirtsaeng* rule for international exhaustion—which allowed importation of products that originally contained a restriction on importation from foreign countries in exchange for a lower price. The Court acknowledged the price difference in the U.S. market and foreign market but held that a particular price cannot be guaranteed under patent law.<sup>227</sup> However, this Section suggests that price discrimination has benefits to both patentees and consumers and it can be a justification for restrictions on sales abroad.

Products sold abroad may have a restriction banning importation into the United States or using or reselling the foreign purchased products in the United States.<sup>228</sup> These restrictions separate the global market into geographical segments. Patentees often want to practice price discrimination with geographical restrictions to maximize profit by dividing up the markets with different consuming powers.<sup>229</sup> If price discrimination is not allowed, then some patentees might withdraw from sales in markets with low consuming powers.<sup>230</sup> Price discrimination can promote consumer welfare by increasing the availability of products for consumers in underdeveloped countries.<sup>231</sup>

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227. *Impression Prods. v. Lexmark Int'l, Inc.*, 137 S. Ct. 1523, 1537 (2017) (“The patentee may not be able to command the same amount for its products abroad as it does in the United States. But the Patent Act does not guarantee a particular price, much less the price from selling to American consumers.”).

228. *See, e.g., Kirtsaeng v. John Wiley & Sons, Inc.*, 568 U.S. 519, 526 (2013).

229. *See* Ariel Katz, *The First Sale Doctrine and the Economics of Post-Sale Restraints*, 2014 BYU L. REV. 55, 77 (2014) (“[P]roducers may charge a higher price where demand (or ability to pay) is higher and a lower price where demand (or ability to pay) is lower.”); *see also* Robinson, *supra* note 118, at 1506 (“[S]ystematic price discrimination can be efficient or inefficient depending on whether it increases total output . . .”).

230. This can be a serious problem if the patented product is a pharmaceutical or a medical product. Price discrimination can also benefit consumers in foreign countries in copyright context. *See Kirtsaeng*, 568 U.S. at 586 n.27 (Ginsburg, J., dissenting) (“It should not be overlooked that the ability to prevent importation of foreign-made copies encourages copyright owners . . . to offer their works at reduced prices to consumers in less developed countries who might otherwise be unable to afford them.”); *see also* Daniel J. Hemel & Lisa Larrimore Ouellette, *Trade and Tradeoffs: The Case of International Patent Exhaustion*, 116 COLUM. L. REV. SIDEBAR 17, 20–27 (2016) (explaining that a shift to mandatory international exhaustion will result in the increase of prices of patented products in the developing world, but a lower profit for patentees).

231. *See* Katz, *supra* note 229, at 77 (“[P]rice discrimination promotes consumer welfare.”); *see also* 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, 357-58 (2000) (“[G]lobal market segmentation can have positive economic effects . . . a non-exhaustion rule encourages

Price discrimination can also provide incentives to patentees to open new markets and encourage development of new technologies.<sup>232</sup>

Applying the standard discussed in the Section IV.B.3, geographical restrictions coupled with price discrimination are justified with a partial reward to the patentee.<sup>233</sup> If a patentee sold the patented product in a foreign country at a lower price than in the United States with a restriction that it can be only used in that foreign country, knowingly violating the restriction would be an infringement of the U.S. patent, as the restriction is justified with a partial reward from the foreign market.

Price discrimination can be a justification for geographical restriction, but it should be applied narrowly only when the purchaser has actual knowledge of the restriction. Actual knowledge can be shown when the lower price was in exchange for the restriction. In other words, an importation-banning restriction can reserve the U.S. patent right when foreign customers know their choice to purchase the product also includes the importation-banning restriction.<sup>234</sup>

By examining the international exhaustion problem as a geographical restriction and analyzing the justifications for the restriction, domestic exhaustion and international exhaustion can be analyzed coherently under the

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entry and participation in developing markets at lower, locally more affordable prices by eliminating them as risky sources of cheaper parallel imports back into premium markets.”); Kenneth A. Bamberger & Orly Lobel, *Platform Market Power*, 32 *BERKELEY TECH. L.J.* 1051 (2017) (suggesting that algorithms that engage in digital price discrimination “could enhance consumer welfare by causing competitive price reductions at a faster rate . . . ”); Sarah R. Wasserman Rajec, *Free Trade in Patented Goods: International Exhaustion for Patents*, 29 *BERKELEY TECH. L.J.* 317 (2014) (suggesting consumers in low-income countries benefit from geographic price discrimination).

232. See generally Jerry A. Hausman & Jeffrey K. MacKie-Mason, *Price Discrimination and Patent Policy*, 19 *RAND J. ECON.* 253, 253–65 (1988) (suggesting that price discrimination may allow the opening of new markets and the achievement of economies of scale, which will increase social welfare).

233. Justifications related to patented subject matter or patent policy are unrealistic for the geographical restrictions. It is hard to imagine that geographical restrictions that are related to the subject matter of patent. Hypothetically, if the patented product has features that can be only used in Europe, not in the U.S. and that feature is claimed in the U.S. patent, then the geographical restriction could be enforceable. But under the global economic environment where manufacturers produce identical products massively, it is unlikely that the geographical restriction coming from patented subject matter is implemented to the product. Similarly, the geographical restriction is not likely to be related to the purpose of patent law because the progress of science is a universal virtue that is not confined only to the United States.

234. Lexmark had Return Program Cartridges at a discounted price and regular cartridges at a full price. Customers choosing Regular Program Cartridges had actual knowledge of the single use restriction.

same standard. Also, by requiring the actual knowledge of purchasers, it is possible to limit the scope of a patent's monopoly while reserving the rights of patentees.<sup>235</sup>

## V. CONCLUSION

The Supreme Court made a simple and straightforward exhaustion rule. The new rule generally favors the public interest by having clear ownership of a purchased item. However, developments in technology and new business strategies may thwart the Court's goal. This Note suggests that the patent exhaustion doctrine should consider the values of patent rights and consumer rights. One possible solution would be to amend the patent statute to allow restrictions on sales by patentee with limited scope. Patent exhaustion should be avoided in narrow, exceptional cases, where two criteria are met. First, the restrictions on sales are permissible with justifications. Second, actual knowledge of purchaser must be coupled with the justifications. By narrowly accepting the possibility for avoiding exhaustion both at home and abroad, patent owners' rights and customers' rights can be vindicated.

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235. This yields a different result from the *Kirtsaeng* decision. In *Kirtsaeng*, although there was a geographical restriction to International version of textbooks and the purchaser had actual knowledge of the restriction, the Supreme Court nevertheless held that the copyright was exhausted. *See Kirtsaeng*, 568 U.S. at 525. This difference can be partly explained by the statutory language in § 109(a) of Copyright Act which states the copyright exhaustion, but patent exhaustion is judicially made. Justice Kagan's concurring opinion in *Kirtsaeng* suggests a desirability of restrictions in a price discrimination case, but recognizing statutory limits, did not apply these restrictions to copyright exhaustion. *See id.* at 554–57.