

PATENT EXHAUSTION FOR THE EXHAUSTED DEFENDANT: SHOULD PARTIES BE ABLE TO CONTRACT AROUND EXHAUSTION IN SETTLING PATENT LITIGATION?

Samuel F. Ernst[†]

Abstract

The first sale doctrine provides that when a patent holder unconditionally authorizes another party to sell a patented item, the patent holder's right to exclude with respect to the patented item is "exhausted." The licensee can then sell the patented item to a third party—a downstream purchaser—and the patent holder will not be able to sue the third party for patent infringement based on the resale or other use of that item. A principal animating policy behind the exhaustion doctrine is to prevent patent holders from receiving overcompensation for their patented inventions by, for example, aggregating royalties along multiple points in the production and distribution chain.

Patent holders settling infringement litigation often seek to draft a license agreement that precludes application of the exhaustion doctrine, so that they may continue to pursue licensed products downstream. Such provisions are likely ineffective if drafted as post-sale restrictions on what downstream purchasers may do with their patented products. However, it is possible to contract around exhaustion by limiting the scope of the authorized sale (a "pre-sale restriction") or through other clever licensing devices that are described in this paper.

But should such provisions be enforceable? The prevailing view in the academic literature argues from a law and economics perspective that it is economically efficient to allow patent holders to license their patents at multiple points along the production chain, and that the free market will curb patent holders' ability to receive double-recovery.

This article counters the law and economics literature to argue that such provisions should not be enforced if they are brokered as part of a litigation

[†] Assistant Professor of Law, Fowler School of Law, Chapman University. I thank my colleagues at the Fowler School of Law, and in particular Deepa Badrinarayana, Kenneth A. Stahl, Rita Barnett-Rose, and David Gibbs, for their comments on this paper. I also thank my colleagues who commented on an abstract of this paper at the Eleventh Annual Works-in-Progress Intellectual Property Colloquium at Santa Clara University School of Law and at the Patent Conference 4 at the University of San Diego School of Law.

settlement. The litigation settlement context distorts the economic efficiencies allegedly created by contracting around exhaustion and can prevent free market checks on double-recovery. The expense and risk of litigation, the threat of injunctions, and the pressure to settle can weigh heavily on the patent infringement defendant. The license fee that is negotiated may not be sufficiently discounted to account for the reservation of downstream rights preserved by the patent holder. This is particularly true in light of research in cognitive psychology indicating that litigants do not engage in economically rational behavior in making settlement decisions. Defendants will likely favor a lower settlement price in exchange for a provision contracting around exhaustion, and take the risk that litigation against downstream customers will be defeated or that indemnification can be avoided.

If there is a clear rule against contracting around exhaustion, the parties will set the license fee at a rate that gives the patent holder full compensation up front, and the defendant can simply pass along this extra cost to downstream purchasers. This efficiently avoids the costs of additional litigation against downstream purchasers.

TABLE OF CONTENTS

I.	Introduction.....	447
II.	Legal Overview.....	451
	A. The Birth, Death, and Rebirth of the Post-Sale Restriction.....	451
	B. Under Current Law, Post-Sale Restrictions are Likely Ineffective to Prevent Exhaustion.....	455
III.	Contracting Around Exhaustion Post- <i>Quanta</i>	459
	A. Pre-Sale Restrictions	460
	1. Pre-Sale Restriction on the Identity of Downstream Purchasers	460
	2. License Only Use or Manufacture, Not Sale.....	460
	3. Placing Pre-Grant Restrictions on the Field of Use Subject to the Authorized Sale	461
	4. Restricting Authorized Sales to Sales Overseas May No Longer Be Effective to Avoid Exhaustion.....	461
	B. Additional Potential Solutions.....	462
	1. The Unpracticed Patents Clause.....	462
	2. Reciting Alternative, Non-Infringing Uses for the Product is Unlikely an Effective Solution.....	463
	3. Divided Royalties and Monitoring	465
IV.	Why Parties Should Not Be Permitted to Contract Around Exhaustion in Settlement Licenses.....	465
	A. Allowing Parties to Contract Around Exhaustion to Settle Litigation Will Result in Over-compensation for the Patent Holder.....	465
	B. Public Policy Against Restraints on Alienation Counsel Against Allowing Parties to Contract Around Exhaustion.....	473
	C. A Prohibition on Contracting Around Exhaustion is	

	Judicially Efficient.....	475
D.	Does Strengthening the Exhaustion Doctrine Deter Innovation?	477
V.	Conclusion	479

I. INTRODUCTION

The exhaustion doctrine generally provides that when a patent holder authorizes another party to sell a patented item, either through a license or a covenant not to sue, the patent holder’s right to exclude with respect to the patented item is exhausted.¹ The licensee can then sell the patented item to a third party—such as a distributor or manufacturer—and the patent holder will not be able to sue the third party for patent infringement based on the resale or other use of that item.²

This Article addresses a situation that arises frequently when parties agree to settle a hard-fought, expensive patent litigation lawsuit. The parties agree on the biggest issue standing in the way of a settlement, the amount of money the accused infringer must pay the patent holder. In exchange for this sum, the plaintiff agrees to license its patents to the defendant, or to give defendant a covenant not to sue on the patents.³ But as the settlement papers are being drafted, the plaintiff is afflicted with a growing concern. What if plaintiff wants to enforce its patents against defendant’s downstream customers, such as manufacturers who distribute the licensed feature in a larger product? The courts will likely view the settlement license as exhausting plaintiff’s patent rights in the accused products, preventing such further enforcement of the patents. To attempt to avoid such an outcome, the plaintiff might demand that the settlement license include a provision that somehow avoids exhaustion of the plaintiff’s patent rights in the accused products, and makes clear that the plaintiff retains the right to enforce its patents downstream. The defendant may readily agree to such a provision for various reasons, including the need finally to staunch the blood flow of litigation expenses, to remove the cloud of uncertainty over defendant’s business caused by the litigation, and to ensure that the settlement amount does not increase due to the lack of such a provision.

Can such a provision be drafted? Under current law, it is unlikely that a “post-sale restriction” will be effective to avoid exhaustion. In other words, once there has been an authorized first sale, a clause purporting to restrict downstream purchasers’ rights in the product will not preserve an infringement remedy for the patent holder.

This is the somewhat ambiguous holding of *Quanta Computer, Inc. v. LG*

1. See TIMOTHY B. DYK & SAMUEL F. ERNST, BUSINESS AND COMMERCIAL LITIGATION IN FEDERAL COURTS § 86:57 (Robert L. Haig ed., 3d ed. 2011) (explaining the elements of patent exhaustion).

2. *Id.* See also *Bloomer v. McQuewan*, 55 U.S. (1 How.) 539, 549 (1852) (noting that exhaustion also occurs in the simpler situation where the patent holder itself unconditionally sells its patented product).

3. For convenience I will occasionally call the patent holder “the plaintiff” and the accused infringer “the defendant,” although in a declaratory judgment suit these roles would obviously be reversed.

*Electronics, Inc.*⁴ In that case, LGE granted Intel a license to its patents, unconditionally authorizing Intel to make, use, or sell microprocessors that, when used, would practice LGE's method claims.⁵ Intel made the microprocessors and then sold them to Quanta, who manufactured computers using the Intel parts in combination with other parts.⁶ The Supreme Court held that LGE could not sue Quanta for patent infringement because when it authorized Intel to sell the patented microprocessors, its patent rights with respect to those particular microprocessors were exhausted.⁷

The Court made this holding despite the fact that the LGE-Intel agreement specifically provided that no license was granted to any third party to practice LGE's patents by combining them with non-Intel parts.⁸ Nor was exhaustion precluded by the fact that the parties had a separate agreement requiring Intel to notify customers that LGE had not licensed Intel's customers to practice its patents.⁹ Because the license agreement unconditionally granted Intel a right to sell the microprocessors, LGE's patent rights in the microprocessors were exhausted, and Quanta did not need a license from LGE to use the microprocessors.¹⁰

Commentators and courts have noted that the scope of the Court's holding on this issue is technically ambiguous.¹¹ On the one hand, the holding may be very narrow; that the particular contract language at issue was insufficient to contract around exhaustion, but that, if properly drafted, the patent holder could impose a post-sale restriction on downstream purchasers. On the other hand, the Court may have made a holding dismissing the effectiveness of post-sale restrictions altogether, overruling Federal Circuit precedent that post-sale restrictions can defeat patent exhaustion. Under this reading, once there is an authorized first sale, the patent holder has no power to impose any sort of restriction whatsoever on downstream purchasers' use of the product. But in the years since the *Quanta* decision, the lower courts have generally adopted the broader reading of *Quanta*.¹² As one district court has phrased it, "[t]he Supreme Court's broad statement of the law of patent exhaustion simply cannot be squared with the position that the *Quanta* holding

4. *Quanta Computer, Inc. v. LG Electronics, Inc.*, 553 U.S. 617, 636–37 (2008).

5. *Id.* at 624.

6. *Id.* at 624.

7. *Id.* at 638.

8. *Id.* at 623, 637.

9. *Id.* at 636.

10. *Id.* at 636–37. The Court made two other major holdings in *Quanta* to strengthen the defense of patent exhaustion that are not the primary focus of this Article:

First, the Court reversed Federal Circuit precedent by holding that method claims can be exhausted by the sale of an apparatus that, when used as intended, practices the method claims. *Id.* at 628.

Second, the Court held that patent exhaustion applies to a product that "substantially embodies" the method claims, even though it does not embody each and every limitation of the patent claim. The microprocessors would only infringe if they were attached to standard memory components and a bus, but because this was the only "reasonable and intended use" of the microprocessors, they substantially embodied the patented invention to trigger exhaustion. *Id.* at 631–33.

11. *See infra* Section II.B.

12. *See infra* Section II.B.

is limited to its specific facts.”¹³

In any event, a defendant settling a lawsuit must assume that the Supreme Court’s holding broadly does away with effective post-sale restrictions because that is what the plaintiff will assume. Many patent holders are reluctant to grant a settlement license that could preclude them from pursuing infringement litigation against downstream purchasers of patented products (particularly non-practicing entities, who make a business out of licensing and suing on their patents). Such patent holders will not take the risk that the Supreme Court’s holding only encompasses the particular language of the post-sale restriction at issue in *Quanta*. They may not settle the litigation unless there is a way to draft a contract provision unequivocally preserving their right to sue downstream purchasers. Defendants who hope to settle litigation are therefore often tasked with inventing a licensing provision that the plaintiff will not view as a post-sale restriction; a licensing provision that the defendant can persuasively convince the plaintiff will not later be deemed by a court as ineffective to prevent exhaustion of the patent rights.

This Article catalogues potential licensing solutions that would preserve the ability of the patent holder to sue downstream purchasers and that are not post-sale restrictions, and assesses the likelihood that each solution would be effective under a broad ban on post-sale restrictions. In particular, I assess to what extent the solutions would be acceptable to both the plaintiff and the defendant.¹⁴

But all of this begs the question: should parties be entitled to contract around exhaustion in settling patent litigation? This Article argues that such clauses should not be enforceable, and that courts should resolve the ambiguity inherent in the *Quanta* opinion in favor of a hard rule preventing parties from contracting around exhaustion, whether framed as post-sale or pre-sale restrictions.

The primary, animating policy behind the exhaustion doctrine is to prevent patent holders from obtaining overcompensation (often called “double-recovery”) for their patented inventions. Once a patent holder has received full compensation for the use of its patented invention in a particular product, it should not be able to recover additional royalties from downstream purchasers.

Some commentators have argued that market forces naturally check patent holders from achieving overcompensation by aggregating royalties along multiple levels of the production chain.¹⁵ But these market forces are often absent in the context of a litigation settlement. And research in cognitive psychology suggests that defendants do not act rationally in settling litigation.¹⁶ The result in this context is that accused infringers may not

13. *Static Control Components, Inc. v. Lexmark Int’l, Inc.*, 615 F. Supp. 2d 575, 585–86 (E.D. Ky. 2009).

14. See *infra* Section II.B.

15. See, e.g., Anne Layne-Farrar, *An Economic Defense of Flexibility in IPR Licensing: Contracting Around ‘First Sale’ in Multilevel Production Settings*, 51 SANTA CLARA L. REV. 1149, 1157–67 (2011) (discussing how market forces may check overcompensation).

16. Jeffrey J. Rachlinski, *Gains, Losses, and the Psychology of Litigation*, 70 S. CAL. L. REV. 113, 114–120 (1996).

demand that any settlement price be sufficiently lowered to account for the patent holder's reservation of rights against downstream purchasers.¹⁷

A categorical rule preventing parties from contracting around exhaustion allows the parties to set the settlement license fee at a rate that gives the patent holder full compensation up front, efficiently avoiding the costs of additional litigation against downstream purchasers.

Such a rule also finds support in the public policy against restraints on alienation.¹⁸ When a patent holder releases its claim against a product and licenses its sale, allowing the patent holder to continue to pursue the product downstream offends downstream purchasers' reasonable expectations in the ownership of their private property.

Such a rule is further supported by judicial efficiency.¹⁹ Although the refusal to recognize provisions purporting to contract around exhaustion may frustrate the settlement of particular lawsuits and require those cases to go to trial, allowing parties to contract around exhaustion multiplies litigation. This is evidenced by the rise in recent years of "customer suits," where patent holders pursue countless resellers or even end users of accused products, rather than or in addition to the manufacturers of the accused products.²⁰ These customer lawsuits result in numerous judicial inefficiencies. Because the accused infringers did not make the accused technology, such cases are characterized by extensive third party discovery, confidentiality disputes, motions practice, and other burdens.

Finally, one must consider the effect of the exhaustion doctrine on innovation.²¹ Although some commentators have made the assertion that a strong exhaustion doctrine weakens patents, and therefore deters the incentive to innovate,²² there has been no empirical analysis to prove this hypothesis. Furthermore, patent policy encourages innovation not only through the direct encouragement of innovation. Under the contract theory of patent policy, the law also grants an exclusionary right to encourage disclosure of technical information and thereby facilitate the development of further advances by the public. The exclusionary right must be carefully calibrated, however: sufficiently vigorous to encourage disclosure but not so vigorous as to inhibit the further advances patent policy also seeks to facilitate. Before allowing parties to contract around exhaustion, we must consider the extent to which the exhaustion doctrine allows breathing room for such downstream innovation by imposing a hard rule against running servitudes.

17. See *infra* Section III.A.

18. See *infra* Section III.B.

19. See *infra* Section III.C.

20. See Brian J. Love & James C. Yoon, *Expanding Patent Law's Customer Suit Exception*, 93 B.U. L. REV. 1605, 1606–15 (2013) (discussing the rise of "customer suits" brought by non-practicing patent assertion entities, which result in outcomes reflecting the cost of defense, rather than the value of the patents).

21. *Infra* Section III.D.

22. *Infra* Section III.D.

II. LEGAL OVERVIEW

A. *The Birth, Death, and Rebirth of the Post-Sale Restriction*

The Patent Act provides that “[e]very patent shall contain . . . a grant to the patentee . . . of the right to exclude others from making, using, offering for sale, or selling the invention throughout the United States”²³ This is a critical right granted to the patentee, defining “the fundamental nature of patents as property rights granting the owner the right to exclude.”²⁴

And yet, through the development of over 160 years of common law, the courts have established that the right to exclude can be relinquished—or exhausted—when a patent holder sells or authorizes the sale of a patented item. In the foundational case of *Bloomer v. McQuewan*, the Supreme Court declared that when a patent holder sells its patented machine to a purchaser “for the purpose of using it in the ordinary pursuits of life . . . [a]nd when the machine passes to the hands of the purchaser, it is no longer within the limits of the monopoly. It passes outside of it, and is no longer under the protection of the act of Congress.”²⁵ In other words, the patent holder no longer has the right to sue the purchaser for patent infringement.

In subsequent years, the cases recognized that in certain circumstances the patent holder could contract around exhaustion by imposing limitations in the license on the use that the purchaser could make of the patented product.

In *Henry v. A.B. Dick Co.*, the Court recognized the validity of post-sale restrictions.²⁶ The patent holder, A.B. Dick Co., sold its patented mimeograph machine and granted purchasers a license to use the machine.²⁷ However, the license included the following post-sale restriction: “This machine is sold by the A. B. Dick Company with the license restriction that it may be used only with the stencil paper, ink, and other supplies made by A. B. Dick Company, Chicago, U. S. A.”²⁸ The defendant Henry sold his own ink to a purchaser of the machine “with knowledge of the said license agreement, and with the expectation that it would be used in connection with said mimeograph.”²⁹ A.B. Dick contended that it could sue Henry for indirect infringement of its patent because Henry thereby induced the purchaser of the machine to engage in an unauthorized use constituting patent infringement.³⁰

The Court held that A.B. Dick had a remedy against Henry for indirect patent infringement. The Court acknowledged the cases holding that “[a]n absolute and unconditional sale operates to pass the patented thing outside the boundaries of the patent, because such a sale implies that the patentee consents

23. 35 U.S.C. § 154(a) (2012).

24. *Robert Bosch, LLC v. Pylon Mfg. Corp.*, 659 F.3d 1142, 1149 (Fed. Cir. 2011).

25. *Bloomer v. McQuewan*, 55 U.S. (1 How.) 539, 549 (1852).

26. *Henry v. A.B. Dick Co.*, 224 U.S. 1, 11–12 (1912).

27. *Id.*

28. *Id.*

29. *Id.* at 11–12.

30. *Id.* at 16.

that the purchaser may use the machine so long as its identity is preserved.”³¹ However, the Court distinguished those cases on the basis that they did not involve a contractual limitation on the right to use the patented inventions. The Court held that “if the right of use be confined by specific restriction, the use not permitted is necessarily reserved to the patentee. If that reserved control of use of the machine be violated, the patent is thereby invaded.”³² Hence was born the post-sale restriction.

Five years later, the Court overruled *Henry v. A.B. Dick Co.*, holding that post-sale restrictions are ineffective to prevent exhaustion. In *Motion Picture Patents Co. v. Universal Film Mfg. Co.*, Motion Picture Patents Co. held a patent on film projectors and granted a license to a third party to manufacture and sell the patented projectors.³³ The license agreement contained a post-sale restriction very similar to the one at issue in *Henry*, providing that the patented projectors could only be used to display films that were claimed by another of the plaintiff’s patents.³⁴ The machines were to be sold, “under the restriction and condition that such exhibiting or projecting machine shall be used solely for exhibiting or projecting motion pictures containing the inventions of reissued letters patent No. 12,192.”³⁵ When Universal Film supplied to a purchaser of the patented projector films that were not authorized for use on the machine, Motion Picture Patents Co. sued Universal Film for infringement.³⁶

The Court held that the post-sale restriction was invalid and did not prevent the exhaustion of Motion Picture Patents Co.’s rights in the machine—and that there was therefore no cause of action for patent infringement.³⁷ The Court reasoned that patent holders must be checked in their attempts to impose license restrictions on the use of their patented products in order to exclude the use of other products not covered by their patents: “the scope of the grant which may be made to an inventor in a patent, pursuant to the [patent] statute, must be limited to the invention described in the claims of his patent.”³⁸ The Court held that “the right to vend is exhausted by a single, unconditional sale, the article sold being thereby carried outside the monopoly of the patent law and rendered free of every restriction which the vendor may attempt to put upon it.”³⁹

The Court grounded its holding in two critical policy considerations that are at the heart of the exhaustion doctrine.

First, a patent holder should not be overcompensated for a license to its intellectual property above the value of the invention on the free market. Allowing a patent holder to exercise patent rights in products for which it has

31. *Id.* at 23.

32. *Id.* at 24–25.

33. *Motion Picture Patents Co. v. Universal Film Mfg. Co.*, 243 U.S. 502, 505–06 (1917).

34. *Id.* at 506.

35. *Id.*

36. *Id.* at 508.

37. *Id.* at 519.

38. *Id.* at 511.

39. *Id.* at 516.

already received royalties would result in such overcompensation, which is also called “double recovery.” The *Motion Picture Patents* Court reasoned, “the primary purpose of our patent laws is not the creation of private fortunes for the owners of patents, but is ‘to promote the progress of science and the useful arts.’”⁴⁰ A right to exclude that is exhausted once exercised:

is all that the statute provides shall be given to [the inventor] and it is all that he should receive, for it is the fair as well as the statutory measure of his reward for his contribution to the public stock of knowledge. If his discovery is an important one, his reward under such a construction of the law will be large, as experience has abundantly proved; and if it be unimportant, he should not be permitted by legal devices to impose an unjust charge upon the public in return for the use of it.⁴¹

In various decisions throughout the years the Court relied on this policy against double recovery to justify the exhaustion doctrine.⁴²

The exhaustion doctrine is also grounded in the policy against restraints on alienation of chattels. Once a patent holder authorizes the sale of an article, downstream purchasers of the item have a reasonable expectation that they may use the item free of restrictions from previous owners. The *Motion Picture Patents* court explained that the exhaustion doctrine seeks to avoid a situation where a patent holder can:

send its machines forth into the channels of trade of the country subject to conditions as to use or royalty to be paid, to be imposed thereafter at the discretion of such patent owner. The patent law furnishes no warrant for such a practice, and the cost, inconvenience, and annoyance to the public which the opposite conclusion would occasion forbid it.⁴³

The Supreme Court recently relied on this policy against restraints on alienation to justify the copyright exhaustion doctrine.⁴⁴

Grounded in these policy justifications, the *Motion Picture Patents* case established that provisions purporting to place a post-sale restriction on downstream purchasers’ rights in a patented product were ineffective to defeat patent exhaustion.

Despite these policies, in *General Talking Pictures Corp. v. Western Electric Co.*, the Court recognized that a “pre-sale restriction” on the scope of an authorized sale could defeat patent exhaustion.⁴⁵ In that case the plaintiff

40. *Id.* at 511 (quoting U.S. CONST. art. I, § 8).

41. *Id.* at 513.

42. *See, e.g.*, *United States v. Unis Lens Co.*, 316 U.S. 241, 251 (1942) (“Our decisions have uniformly recognized that the purpose of the patent law is fulfilled with respect to any particular article when the patentee has received his reward for the use of his invention by the sale of the article, and that once that purpose is realized the patent law affords no basis for restraining the use and enjoyment of the thing sold.”); *Adams v. Burke*, 84 U.S. 453, 456 (1873) (“But, in the essential nature of things, when the patentee, or the person having his rights, sells a machine or instrument whose sole value is in its use, he receives the consideration for its use and he parts with the right to restrict that use.”).

43. *Motion Picture Patents Co. v. Universal Film Mfg. Co.*, 243 U.S. 502, 518 (1917).

44. *Kirtsaeng v. John Wiley & Sons, Inc.*, 133 S. Ct. 1351, 1363 (2013).

45. *Gen. Talking Pictures Corp. v. W. Elec. Co.*, 304 U.S. 175, 180–181 (1938).

held patents on vacuum tube amplifiers that could be used with amateur radio sets or in motion picture houses.⁴⁶ The plaintiff licensed a third party to make and sell the patented equipment, but the third party's license "was expressly confined to the right to manufacture and sell the patented amplifiers for radio amateur reception, radio experimental reception, and home broadcast. It had no right to sell the amplifiers for use in theaters as a part of talking picture equipment."⁴⁷ Nonetheless, the third party manufactured the equipment and sold it to the defendant for use in movie houses, even though the defendant "had actual knowledge that the latter had no license to make such a sale."⁴⁸

The Court held that the plaintiff could sue for patent infringement based on the defendant's use of the patented amplifiers in movie houses.⁴⁹ The Court reasoned that there was no authorized sale in this case because "[t]he patent owner did not sell to petitioner the amplifiers in question or authorize the Transformer Company to sell them or any amplifiers for use in theaters or any other commercial use."⁵⁰ In other words, the first requirement of patent exhaustion was not met—this was not an "authorized sale—" "[t]he Transformer Company could not convey to petitioner what both knew it was not authorized to sell."⁵¹

Accordingly, the Court in *General Talking Pictures* drew an implicit distinction between (1) a license that attempts to impose post-sale restrictions on the use of patented items after a fully authorized sale; and (2) a license that limits the scope of the authorized sale, authorizing sale for only particular uses (we will call this a "pre-sale restriction"). Post-sale restrictions are ineffective to prevent patent exhaustion because the patented article has already passed out of the patent monopoly. According to *General Talking Pictures*, however, pre-sale restrictions on the scope of authorization can prevent exhaustion because to the extent the sale violates the pre-sale restriction, there is no authorized first sale.⁵² The first element of patent exhaustion is not established.

However, in the case of *Mallinckrodt, Inc. v. Medipart, Inc.*,⁵³ the Federal Circuit disregarded this distinction. The Court expanded the doctrine of *General Talking Pictures* to allow patent holders to place restrictions on the use of sold products without regard to whether the restrictions were structured as post-sale or pre-sale restrictions.⁵⁴

In that case the plaintiff Mallinckrodt sold its patented aerosol mist delivery device to hospitals.⁵⁵ Mallinckrodt had no agreement with the hospitals regarding a license to its patents, save that it stamped on its product the legend "Single Use Only," and included a package insert with its product

46. *Id.* at 176, 179.

47. *Id.* at 179–80.

48. *Id.* at 180.

49. *Id.* at 182–83.

50. *Id.* at 180.

51. *Id.* at 181.

52. *Id.* at 180.

53. *Mallinckrodt, Inc. v. Medipart, Inc.*, 976 F.2d 700, 705 (Fed. Cir. 1992).

54. *Id.* at 702.

55. *Id.* at 701–02.

“instruct[ing] that the entire contaminated apparatus be disposed of in accordance with procedures for the disposal of biohazardous waste.”⁵⁶ The hospitals did not dispose of the devices, however.⁵⁷ Instead, the hospitals sent the devices to the defendant Medipart, who refurbished them, and returned them to the hospitals for additional use.⁵⁸ Mallinckrodt sued Medipart for patent infringement and indirect patent infringement, and on appeal the Federal Circuit held that Mallinckrodt’s patent rights were not exhausted.⁵⁹

The *Mallinckrodt* court did not analyze whether the single use stamp and disposal instructions were a pre-sale restriction or an ineffective post-sale restriction after an authorized sale. The court dismissed as “formalistic lined drawing”⁶⁰ the assertion that “the viability of a restriction should depend on how the transaction is structured.”⁶¹ In fact, there can be little doubt that what Mallinckrodt attempted to achieve with its stamp and product insert was an invalid post-sale restriction after making an unconditional sale of its patented product. Nonetheless, the court asserted—without analyzing the details of the transaction—that Mallinckrodt’s scheme was a valid condition on sale.⁶²

For many years thereafter, parties settling patent litigation could easily contract around patent exhaustion in order to facilitate the settlement. A provision stating that no implied license was granted to third parties would likely suffice. A provision stating that the patent holder’s rights in the product were not exhausted with respect to downstream purchasers would likely suffice. Even a “single use only” stamp on the products would apparently suffice.

B. Under Current Law, Post-Sale Restrictions are Likely Ineffective to Prevent Exhaustion

The Supreme Court’s opinion in *Quanta* likely abrogated the viability of post-sale restrictions to avoid patent exhaustion.⁶³

In the case below, *LG Electronics, Inc. v. Bizcom Electronics, Inc.*, the Federal Circuit considered whether LGE’s patent rights were exhausted in microprocessors that it granted Intel the unconditional right to manufacture and sell.⁶⁴ Intel and LGE’s license agreement unconditionally granted Intel the right to “make, use, [or] sell” LGE’s patented microprocessors.⁶⁵ But it also had a provision disclaiming that it granted a license to downstream purchasers

56. *Id.* at 702.

57. *Id.*

58. *Id.*

59. *Id.* at 709.

60. *Id.* at 705.

61. *Id.* (quoting *Continental T.V., Inc. v. GTE Sylvania, Inc.*, 433 U.S. 36, 57–59 (1977)).

62. *Id.* at 709.

63. See *Quanta Computer, Inc. v. LG Elecs., Inc.*, 553 U.S. 617, 638 (2008) (“The authorized sale of an article that substantially embodies a patent exhausts the patent holder’s rights and prevents the patent holder from invoking patent law to control postsale use of the article.”).

64. *LG Elecs., Inc. v. Bizcom Elecs., Inc.*, 453 F.3d 1364, 1369–70 (Fed. Cir. 2006), *rev’d sub nom.* *Quanta Computer Inc. v. LG Elecs., Inc.*, 553 U.S. 617 (2008).

65. *Quanta*, 553 U.S. at 636.

of the microprocessors allowing them to combine the microprocessors with non-Intel parts and resell them.⁶⁶ And by a separate agreement, Intel was required to notify purchasers that they were not authorized to combine them with non-Intel parts for resale.⁶⁷ Intel made the patented processors and sold them to Quanta, which then practiced LGE's patent claims by inserting the devices into computers (their only intended use) for resale to customers.⁶⁸

The Federal Circuit decided that LGE's patent rights in the microprocessors were not exhausted, such that LGE could sue Quanta for infringement.⁶⁹ The court held that the language in the LGE-Intel license disclaiming an implied license to third parties placed a condition on Quanta's purchase of those products from Intel.⁷⁰ The court buttressed this conclusion with the fact that Intel was required to notify customers that they had no license to combine the products into their computers.⁷¹ "Although Intel was free to sell its microprocessors and chipsets, those sales were conditional, and Intel's customers were expressly prohibited from infringing LGE's combination patents."⁷²

The Supreme Court reversed, holding that LGE unconditionally authorized the sales Intel made, despite the contract's language disclaiming an implied license to downstream purchasers.⁷³ The Court reasoned that although the contract purported to place restrictions on what Intel's customers could do, [n]othing in the License Agreement restricts Intel's right to sell its microprocessors and chip sets to purchasers who intend to combine them with non-Intel parts. It broadly permits Intel to "make, use, [or] sell" products free of LGE's patent claims.⁷⁴

Once this language unconditionally granted Intel the right to sell the products downstream, LGE's patent rights were exhausted, and it did not matter if there was other language in the contract stating that customers did not have an implied license.

The Court dispensed with the language disclaiming the implied license in a peculiar way, leaving open the question of whether the Court's holding broadly did away with the effectiveness of post-sale restrictions, or only turned on the particular language of the contract. The Court held:

LGE points out that the License Agreement specifically disclaimed any license to third parties to practice the patents by combining licensed products with other components. 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. And exhaustion turns only on Intel's own license

66. *LG Elecs.*, 453 F.3d at 1370.

67. *Id.*

68. *Quanta*, 553 U.S. at 624.

69. *LG Elecs.*, 453 F.3d at 1370.

70. *Id.*

71. *Id.*

72. *Id.*

73. *Quanta*, 553 U.S. at 635–37.

74. *Id.* at 636.

to sell products practicing the LGE patents.⁷⁵

This holding is ambiguous in the following way:

(1) It could be that the post-sale restriction was ineffective simply because it was drafted in the language of a disclaimer of implied license to third parties, separate from the unconditional grant to Intel of the right to sell. If that is the case, then exhaustion could be contracted around effectively by redrafting the contract such that a post-sale restriction on use (rather than a disclaimer of implied license) is directly appended to and limits the scope of the authorized sale.

(2) On the other hand, the Court may have broadly held that post sale restrictions are ineffective to prevent patent exhaustion, regardless of how they are drafted.

In the wake of *Quanta*, many scholars pointed out that the holding was ambiguous in this respect.⁷⁶ Some commentators have argued that the holding should be interpreted narrowly to continue to allow for post-sale restrictions.⁷⁷ Others have argued that the decision is better interpreted as a broader decree that post-sale restrictions are ineffective to prevent patent exhaustion.⁷⁸

Judicial opinions from the lower courts, issued in the wake of *Quanta*, suggest that the courts may adopt the broader reading—that *Quanta* eliminated the effectiveness of post-sale restrictions to defeat patent exhaustion.⁷⁹

In *TransCore, LP v. Electronic Transaction Consultants Corp.*, the Federal Circuit addressed the issue tangentially.⁸⁰ In that case, the plaintiff TransCore had entered into a settlement agreement with third party Mark IV

75. *Id.* at 637 (internal citations omitted).

76. See, e.g., Amelia Smith Rinehart, *Contracting Patents: A Modern Patent Exhaustion Doctrine*, 23 HARV. J.L. & TECH. 483, 485–86 (2010) (“Over time, the Supreme Court has addressed these problems obliquely, if at all In *Quanta Computer, Inc. v. LG Electronics, Inc.*, the Supreme Court revisited the exhaustion doctrine Justice Thomas did not address many of the parties’ and amici’s arguments regarding the scope of a patent owner’s right to exclude others The response to the *Quanta* ruling has been mixed. Lower courts, scholars, and owners or users of patented technology have tried to read the tea leaves in *Quanta* to guide them in close case within previously unexplored areas of patent law”); Jason McCammon, *The Validity of Conditional Sales: Competing Views of Patent Exhaustion in Quanta Computer, Inc. v. LG Electronics, Inc.*, 128 S. Ct. 2109 (2008), 32 HARV. J.L. & PUB. POL’Y 785, 790–96 (2009) (“The issue the Court did not address is *Quanta* is what exactly constitutes an authorized sale This is particularly problematic [T]he Court did not explain how it reached a different factual conclusion than the lower court about whether the sale was restricted As a result, the Court’s holding appears consistent with at least two potentially contradictory approaches to patent exhaustion and conditional sales Separate analyses of these competing approaches illustrate the ambiguity that confuses application of *Quanta* to conditional sales.”).

77. See, e.g., Layne-Farrar, *supra* note 15, at 1150 (“My decidedly non-legal reading of the Supreme Court’s decision in *Quanta* asserts that the Court did not rule out such contractual flexibility for patents.”); William LaFuze et al., *The Conditional Sale Doctrine in a Post-Quanta World and its Implications on Modern Licensing Agreements*, 11 J. MARSHALL REV. INTELL. PROP. L. 295, 315–16 (2011) (“[T]he proper interpretation [of *Quanta*] is the one that leaves the scope of the conditional sale doctrine intact [C]onditional sales and restricted licenses were not outlawed by *Quanta*. Both are still viable options”).

78. See, e.g., F. Scott Kieff, *Quanta v. LG Electronics: Frustrating Patent Deals by Taking Contracting Options off the Table?*, 315–16 (Stanford Law School, Working Paper No. 366, 2008) (explaining the different possible readings of the Court’s *Quanta* decision as it relates to patent licensing agreements).

79. *Tessera, Inc. v. Int’l Trade Comm’n*, 646 F.3d 1357 (Fed. Cir. 2011); *Static Control Components, Inc. v. Lexmark Int’l, Inc.*, 615 F. Supp. 2d 575 (E.D. Ky. 2009); *Transcore, LP v. Elec. Transaction Consultants Corp.*, 563 F.3d 1271 (Fed. Cir. 2009).

80. *Transcore, LP v. Elec. Transaction Consultants Corp.*, 563 F.3d 1271 (Fed. Cir. 2009).

that included an unconditional covenant not to sue for future infringement.⁸¹ The holding of the case is that an unconditional covenant not to sue is no different from an affirmative license to practice the patents; both trigger patent exhaustion.⁸² Because there was no provision in the contract attempting to impose a post-sale restriction on the rights of downstream purchasers, the issue of whether such post-sale restrictions are valid was not raised. However, TransCore sought to rely on parol evidence to the contract purportedly showing “the parties’ intent not to provide downstream rights to Mark IV’s customers”⁸³ The Federal Circuit held that “[t]he district court’s decision to exclude TransCore’s parol evidence has not affected any substantial right of TransCore.”⁸⁴ This was because “[t]he only issue relevant to patent exhaustion is whether Mark IV’s sales were authorized, not whether TransCore and Mark IV intended, *expressly or impliedly*, for the covenant to extend to Mark IV’s customers.”⁸⁵ This would appear to indicate that an *express* provision in the contract that the covenant not extend to downstream purchasers would not have prevented exhaustion any more than parol evidence could have.

And in *Static Control Components, Inc. v. Lexmark International, Inc.*, the district court explicitly held that a post-sale restriction of the kind approved in *Mallinckrodt* was ineffective to prevent exhaustion.⁸⁶ In *Static Control*, Lexmark sold its patented printer cartridges with a “single use” restriction like the single use restriction at issue in *Mallinckrodt*.⁸⁷ In selling its printer cartridges to customers, Lexmark printed a notice on its packaging warning customers that the “cartridge is sold at a special price subject to a restriction that it may be used only once.”⁸⁸ Lexmark accused Static Control of infringing on its patents by refurbishing spent cartridges for additional uses, in violation of the single-use restriction.⁸⁹ The court acknowledged that “the Supreme Court did not expressly overrule *Mallinckrodt* in its *Quanta* opinion.”⁹⁰ The court noted that there was a debate in the academic literature as to whether the Supreme Court had broadly rejected post-sale restrictions as sufficient to defeat exhaustion, or if “the *Quanta* holding is limited to the very specific facts, and the very specific license agreement, that confronted the Court.”⁹¹ The court decided “that *Quanta* overruled *Mallinckrodt sub silentio*. The Supreme Court’s broad statement of the law of patent exhaustion simply cannot be squared with the position that the *Quanta* holding is limited to its specific facts.”⁹²

Subsequently, the Federal Circuit held in *Tessera, Inc. v. International*

81. *Id.* at 1276.

82. *Id.* at 1276–77.

83. *Id.* at 1277.

84. *Id.*

85. *Id.* (emphasis added).

86. *Static Control Components, Inc. v. Lexmark Int’l, Inc.*, 615 F. Supp. 2d 575, 585 (E.D. Ky. 2009).

87. *Id.* at 577.

88. *Id.* at 577 n.3.

89. *Id.* at 577.

90. *Id.* at 585.

91. *Id.*

92. *Id.* at 585–86.

Trade Commission that a licensee's sale of a licensed product did not become unauthorized because of the licensee's subsequent failure to pay the agreed royalty to the patent holder.⁹³ In so ruling, the court reasoned, "[t]hat absurd result would cast a cloud of uncertainty over every sale, and every product in the possession of a customer of the licensee, and would be wholly inconsistent with the fundamental purpose of patent exhaustion—to *prohibit post sale restrictions on the use of a patented article.*"⁹⁴

In light of these lower court opinions, the correct interpretation of *Quanta* is likely that post-sale restrictions are *per se* ineffective to avoid patent exhaustion.⁹⁵

III. CONTRACTING AROUND EXHAUSTION POST-*QUANTA*

For the practitioner attempting to broker a patent license agreement to settle a lawsuit, the debate over how to resolve the ambiguity regarding post-sale restrictions in *Quanta* does not matter. Parties settling litigation must assume that post-sale restrictions are invalid, particularly in light of the broad reading of *Quanta* on this point by the lower courts.⁹⁶ Patent holders are often very reluctant to sign settlement agreements granting defendants a license or covenant not to sue if there is a risk that they will forfeit the ability to pursue downstream customers for patent infringement.⁹⁷ Several commentators have observed how an unintended consequence of *Quanta* is that it can frustrate the brokering of patent licenses.⁹⁸

Accordingly, the pertinent question facing practitioners is not how broad the *Quanta* holding was on this issue. The pertinent question is, if one assumes that *Quanta* broadly swept away the effectiveness of post-sale restrictions on the use of a patented product, what types of licensing provisions could effectively prevent exhaustion? In this section, I assess the viability of seven potential licensing solutions that may not be viewed as impermissible post-sale restrictions.

93. *Tessera, Inc. v. Int'l Trade Comm'n*, 646 F.3d 1357, 1370 (Fed. Cir. 2011).

94. *Id.* (emphasis added) (citing *Bloomer v. McQuewan*, 55 U.S. (1 How.) 539, 549 (1852)).

95. The Supreme Court most recently addressed the exhaustion doctrine in *Bowman v. Monsanto Co.*, 133 S.Ct. 1761 (2013), holding that the authorized sale of a patented seed did not exhaust Monsanto's patent rights in replications of the seeds created by the defendant. *Bowman*, 133 S.Ct. at 1766. The *Bowman* case deals specifically with the application of the exhaustion doctrine to self-replicating technology. *Id.* at 1769. The case does not deal with the licensing issues that are the focus of this article and is therefore not treated extensively here.

96. *Tessera, Inc.*, 646 F.3d at 1357; *Static Control Components, Inc. v. Lexmark Int'l, Inc.*, 615 F. Supp. 2d 575 (E.D. Ky. 2009); *Transcore, LP v. Elec. Transaction Consultants Corp.*, 563 F.3d 1271 (Fed. Cir. 2009).

97. *Transcore*, 563 F.3d at 1277.

98. See, e.g., David W. Beehler, *Maximizing Your Patent Strategy in a Changing World*, in *PATENT LAW 2009: TOP LAWYERS ON TRENDS AND KEY STRATEGIES FOR THE UPCOMING YEAR* 39, 39–40 (Aspatore 2008) ("You can imagine the difficulty in trying to convince a component supplier to somehow give up their authority to sell their licensed component downstream."); Kieff, *supra* note 78, at 316 (noting that the opinion "may greatly frustrate the ability of commercial parties to strike deals over patents").

A. *Pre-Sale Restrictions*

1. *Pre-Sale Restriction on the Identity of Downstream Purchasers*

One solution would be to restrict the scope of the licensee's right to sell to particular customers. Rather than unconditionally granting the licensee the right to sell patented components, the license could provide that the "licensee may only sell patented components to parties who first obtain a license to the patents from the license holder." This would preserve the ability of the patent holder to pursue separately particular downstream purchasers with licensing demands or litigation.

A restriction similar to this one was identified by Andrew T. Dufresne in *The Exhaustion Doctrine Revived? Assessing the Scope and Possible Effects of the Supreme Court's Quanta Decision*.⁹⁹ According to Dr. Dufresne, "Qualcomm uses a two-tiered licensing format in which licensed chipmakers receive rights to make and sell chips using licensed technology but may only sell such chips to buyers separately licensed by Qualcomm."¹⁰⁰ The Qualcomm licenses identify a list of authorized chip purchasers, and explicitly limit the grant of the licensee's right to sell licensed chips to this list of authorized buyers.¹⁰¹

A restriction such as this one would likely evade the prohibition on post-sale restrictions. Instead this is a pre-sale limitation on the scope of the right to sell the patented product. If the licensee sells to an unlicensed buyer, then there is no authorized first sale, and patent exhaustion is not triggered.

Such a provision should satisfy the patent holder's desire to license the chipmaker but preserve the right to enforce its patents against particular downstream customers. However, it is likely that this provision would be unacceptable to many licensees. The licensee may have established relationships with particular downstream purchasers. Or the licensee may have potential customers it wants to target who are not authorized to purchase the patented chips. Now the licensee finds that its business is hampered by a licensing provision that shrinks its customer list. Such a licensing provision could disrupt customer relationships, eliminate new business opportunities, and severely hamper the licensee's business.

2. *License Only Use or Manufacture, Not Sale*

The patent holder may elect to license only the accused infringer's *use or manufacture* of the patented products, but grant no right to *sell* the patented products.¹⁰² As one commentator has observed, "[o]f course, if a licensee has been granted the right to use and make, and not the right to sell, then there can

99. 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, 37–38 (2009).

100. *Id.* at 37.

101. *Id.*

102. *Id.* at 38.

be no authorized sale.”¹⁰³ The court in *Transcore* recognized this as an effective option to avoid exhaustion, observing that “TransCore did not, as it could have, limit this authorization to, for example, ‘making’ or ‘using.’”¹⁰⁴

The problem with this solution is that in the vast majority of cases, the licensee will want a license to the patent for the express purpose of selling patented products. Such a company derives no value from a license authorizing it only to use or make the patented product.¹⁰⁵ One real-world situation where such a solution may be satisfactory to the licensee would be where it seeks to use a patented research tool, but does not intend to resell it.¹⁰⁶ Outside of such limited contexts, the solution does not appear particularly viable for most licensees.

3. *Placing Pre-Grant Restrictions on the Field of Use Subject to the Authorized Sale*

Rather than authorizing a sale and then purporting to place restrictions on the rights of downstream purchasers, the patent holder could restrict the scope of the fields of use for which sales are authorized. For example, such a provision might provide that a “licensee is authorized to sell to parties who do not incorporate the licensed products into cellular phones.”¹⁰⁷

This provision would likely defeat the goals of both parties. If the provision is to be acceptable to the defendant, it has to include within the authorization the field of use of its customers. But this is very often the same field of use that the patent holder wants to pursue in future licensing negotiations and in litigation. Only in the potentially rare situation where these two fields of use do not match could this be an acceptable solution.

4. *Restricting Authorized Sales to Sales Overseas May No Longer Be Effective to Avoid Exhaustion*

Under current law, one of the requirements of patent exhaustion is that the first, authorized sale, must occur in the United States.¹⁰⁸ Accordingly, the

103. Tyler Thorp, *Testing the Limits of Patent Exhaustion’s “Authorized Sale” Requirement Using Current High-Tech Licensing Practices*, 50 SANTA CLARA L. REV. 1017, 1036 (2010); see also Rinehart, *supra* note 77, at 495 (“When a licensee receives only the right to use the patented good, restricted or otherwise, the good does not become the property of the licensee and patent exhaustion does not apply.”).

104. *Transcore v. Elec. Transaction Consultants*, 563 F.3d 1271, 1276 (Fed. Cir. 2009).

105. See generally Patrick Hagan, *Reach Through Royalties as a Workaround for Patent Exhaustion*, 2 HASTINGS SCI. & TECH. L.J. 243 (2010) (discussing the use of “reach through royalties” to allow inventors to benefit from later inventions building off their work).

106. *Id.*

107. See, e.g., James W. Beard, *The Limits of Licensing: Quanta v. LGE and the New Doctrine of Simultaneous Exhaustion*, 12 UCLA J.L. & TECH. 1, 29 (2008) (explaining the benefits of a discrete sale in controlling the potential selling power of a licensee); Richard P. Gilly & Mark S. Walker, *Supreme Court’s Quanta Decision Clarifies the Reach of Patent Exhaustion*, 20 No. 9 INTELL. PROP. & TECH. L.J. 1, 4–5 (2008) (detailing potential strategies to restrict sales); Dufresne, *supra* note 99, at 39 (discussing field-of-use restrictions prohibiting licensees from selling patented sound amplification tubes to commercial users).

108. See *Jazz Photo Corp. v. Int’l Trade Comm’n*, 264 F.3d 1094, 1105 (Fed. Cir. 2001) (reconfirming that this is the law and was not overruled by *Quanta in Fujifilm Corp. v. Benun*, 605 F.3d 1366, 1371–72 (Fed. Cir. 2010)).

patent holder could avoid exhaustion by only authorizing the licensee to make sales overseas.

Needless to say, this solution would only be acceptable for licensees who intend to sell products exclusively overseas.

The viability of this solution has now been thrown into doubt by the Supreme Court's recent holding in *Kirtsaeng v. John Wiley & Sons, Inc.* that authorized copies made overseas trigger copyright exhaustion.¹⁰⁹ This holding strictly applies only to copyright exhaustion.¹¹⁰ However, as the Federal Circuit recently noted in *Lifescan Scotland, Ltd. v. Shasta Techs., LLC*, "[t]he Supreme Court has frequently explained that copyright cases inform similar cases under patent law."¹¹¹ The Federal Circuit then relied on *Kirtsaeng's* discussion of the policy against the alienation of chattels to hold that the first authorized gift of a patented article, without compensation, triggers patent exhaustion.¹¹² It would therefore come as no surprise if the Federal Circuit overruled its precedent in light of *Kirtsaeng* to hold that authorized sales overseas of patented items triggers patent exhaustion. Such a ruling would render this particular pre-sale restriction ineffective to avoid patent exhaustion.

Moreover, the parties should take care to ensure that the sales will not be deemed as occurring in the United States. In another context, the Federal Circuit has rejected formalistic mechanisms to establish that sales occurred outside of the United States.¹¹³ In *LiteCubes*, a party argued that products were sold outside of the United States because although they were sold and directly shipped to customers in the United States, they were sold "freight on board" in Canada, such that title to the goods passed in that country.¹¹⁴ The court held that a "sale" can occur at "the location of the seller and the buyer and perhaps the points along the shipment route in between, or . . . [at] the single point at which some legally operative act took place, such as the place where the sales transaction would be deemed to have occurred as a matter of commercial law."¹¹⁵ Accordingly, to invoke the strategy of only authorizing sales outside of the United States, the parties must be willing to ensure that the sale and the purchase and the points along the shipment route truly occur outside of the United States.

B. Additional Potential Solutions

1. The Unpracticed Patents Clause

Often at the conclusion of patent litigation, the plaintiff licenses to the defendant an entire patent portfolio, including many patents that were not asserted in the litigation. In large patent portfolios, there may be dozens or

109. *Kirtsaeng v. John Wiley & Sons, Inc.*, 133 S.Ct. 1351, 1363 (2013).

110. *Id.* at 1355–56.

111. *LifeScan Scotland, Ltd. v. Shasta Technologies, LLC*, 734 F.3d 1361, 1375 n.9 (Fed. Cir. 2013).

112. *Id.* at 1376.

113. *Litecubes, LLC v. Northern Light Prods., Inc.*, 523 F.3d 1353, 1369–70 (Fed. Cir. 2008).

114. *Id.*

115. *Id.*

even hundreds of unasserted patents.¹¹⁶ Accordingly, the plaintiff may be particularly keen to establish that its right to assert the non-asserted patents against downstream purchasers are not exhausted.¹¹⁷

One of the requirements of exhaustion is that the product subject to the authorized sale must practice or substantially embody the patent.¹¹⁸ Accordingly, the parties may attempt to insert a provision into their licensee agreement recognizing that “there are patents covered by this license that the defendant does not practice, and whose licensed products do not substantially embody the claims thereof. Such patents are attached hereto as Appendix A.” The purpose of such a provision would be to attempt to defeat the “substantial embodiment” prong of patent exhaustion rather than the “authorized sale” prong.¹¹⁹

However, such a provision is likely ineffective to defeat patent exhaustion in litigation. If the products do not practice or substantially embody the unasserted patents, then the plaintiff will not be able to prove infringement of those patents by virtue of downstream purchasers’ use of the products. Moreover, a court would not likely accept a lack of substantial embodiment based merely on an assertion in a license agreement—such a finding would be based on the objective technical evidence. At the very least, such a provision breeds uncertainty, and should give the patent holder no comfort that its patent rights will be preserved.

2. *Reciting Alternative, Non-Infringing Uses for the Product is Unlikely an Effective Solution*

In *Quanta*, the Supreme Court held that the microprocessors at issue substantially embodied LG’s method claims, and therefore triggered exhaustion, because the sole reasonable use of the microprocessors was to practice the patented methods.¹²⁰ Although the microprocessors did not infringe until they were connected to a bus and memory as recited in the patent claims, this was their only reasonable and intended use.¹²¹ The Court ruled that “the traditional bar on patent restrictions following the sale of an item applies when the item sufficiently embodies the patent—even if it does not completely practice the patent—such that its only and intended use is to be finished under the terms of the patent.”¹²²

In light of this holding, Professors Richard P. Gilly and Mark S. Walker

116. See Michael Meehan, *Increasing Certainty and Harnessing Private Information in the U.S. Patent System: A Proposal for Reform*, 2010 STAN. TECH. L. REV. 1, ¶ 112 (“[T]he majority of patents will never be asserted.”).

117. See *Quanta Computer, Inc. v. LG Elec. Inc.*, 553 U.S. 617, 630 (2008) (explaining LGE’s theory that although Intel can sell a computer utilizing LGE’s patents, any downstream purchasers of the system could still be liable for patent infringement).

118. *Id.* at 638.

119. See *Quanta*, 564 U.S. at 634–35 (holding that the authorized sale of an item that substantially embodies the patented invention results in patent exhaustion).

120. *Id.* at 630–35.

121. *Id.* at 631.

122. *Id.* at 628.

suggest that “patentees may wish to articulate in their licenses alternative reasonable uses of the articles sold by licensees [T]he language describing other uses would possibly defeat exhaustion and reduce the likelihood of costly litigation”¹²³

In light of recent developments in the Federal Circuit, this solution is likely ineffective in many circumstances. In *Keurig, Inc. v. Sturm Foods, Inc.*, the court clarified that the existence of non-infringing uses for the patent only prevents patent exhaustion in cases where the accused products do not practice, but merely substantially embody, the asserted patents.¹²⁴ In *Quanta*, for example, the authorized first sale was of an unpatented apparatus—a microprocessor—that could not practice the asserted method claims. “The [Supreme] Court thus established that method claims are exhausted by an authorized sale of an item that substantially embodies the method if the item (1) has no reasonable noninfringing use and (2) includes all inventive aspects of the claimed method.”¹²⁵ But in *Keurig* the Federal Circuit held that this test does not apply where the authorized sale is of a product that actually practices the patent.¹²⁶ In such cases, the existence of non-infringing uses does not prevent patent exhaustion.¹²⁷ Accordingly, reciting non-infringing uses for the licensed products in the patent license cannot prevent exhaustion where the products actually practice the asserted patent claims.

Subsequently, the Federal Circuit further clarified the narrow application of the “non-infringing use” exception. In *Lifescan* the court held that even in a case where the accused products are alleged only to substantially embody the patents, the existence of non-infringing uses does not necessarily prevent patent exhaustion.¹²⁸ Rather, “alternative uses are relevant to the exhaustion inquiry under *Quanta* only if they are both ‘reasonable *and intended*’ by the patentee or its authorized licensee.”¹²⁹ Accordingly, the strategy of reciting non-infringing uses does not give the patent holder certainty that exhaustion will not occur, because the court might disagree that the recited uses are genuinely intended uses for the product. As Gilly and Wagner observe, “[i]t may not be possible to describe alternative reasonable uses for certain articles, such as microprocessors.”¹³⁰

Finally, acknowledging that there are non-infringing uses can be an admission that defeats certain claims. For example, in order to prove contributory infringement, the patent holder must show that the accused component or apparatus has no substantial non-infringing use.¹³¹ For this reason, this strategy would likely be unacceptable to the patent holder.

123. Gilly & Walker, *supra* note 107, at 6.

124. *Keurig v. Sturm Foods*, 732 F.3d 1370, 1373 (Fed. Cir. 2013).

125. *Id.*

126. *Id.*

127. *Id.* at 1374.

128. *LifeScan Scot., Ltd. V. Shasta Techs.*, 734 F.3d 1361, 1369 (Fed. Cir. 2013).

129. *Id.* at 1369 (quoting *Quanta Computer, Inc. v. L.G. Elec. Inc.*, 553 U.S. 617, 631 (2008)).

130. Gilly & Walker, *supra* note 107, at 6.

131. See *Fujitsu Ltd. v. Netgear Inc.*, 620 F.3d 1321, 1326 (Fed. Cir. 2010) (noting the elements that need to be proved to establish contributory infringement).

3. *Divided Royalties and Monitoring*

If the patent holder seeks to be compensated for both the sale and subsequent use of the patented product, dividing the royalty payments can be an elegant way of achieving this result. In other words, the royalty payments can simply be restructured so that the patentee is paid first upon the manufacture of the patented product and again at the time of sale.¹³² The licensee can pay both royalties, but pass the charge for the second royalty on to the customer.¹³³

One commentator suggested that this arrangement might not be desirable for certain patent holders because it requires the patent holder to monitor the licensee's sales.¹³⁴ Particularly when settling patent litigation, both parties often want to wind up the dispute with a single payment, and not bother with an ongoing running royalty.

IV. WHY PARTIES SHOULD NOT BE PERMITTED TO CONTRACT AROUND EXHAUSTION IN SETTLEMENT LICENSES

A. *Allowing Parties to Contract Around Exhaustion to Settle Litigation Will Result in Over-compensation for the Patent Holder*

As the above analysis shows, even if *Quanta* resulted in a complete bar on post-sale restrictions, it may be possible to contract around exhaustion in a settlement license. But should parties be allowed to do so? Should the law allow parties settling litigation to draft a provision that permits the patent holder to pursue subsequent patent infringement litigation or licensing demands against downstream purchasers of the accused technology? Or should a categorical rule be applied whereby the granting of a settlement license to conclude litigation completely exhausts the patent holder's patent rights in the accused products, preventing the patent holder from pursuing litigation and licenses against downstream purchasers?

The answer to this question must be grounded in an animating policy that has always justified the exhaustion doctrine: the prevention of overcompensation for patent holders (or "double-recovery"¹³⁵) for the use of their patented technology. As the Court put the matter in *Motion Picture Patents Company*, "this court has consistently held that the primary purpose of our patent laws is not the creation of private fortunes for the owners of patents, but is 'to promote the progress of science and the useful arts.'"¹³⁶ The patent holder should be rewarded for his original contribution to the art with a royalty that is commensurate with the importance of his invention as determined by the free market: "[i]f his discovery is an important one, his reward under such a

132. See Layne-Farrar, *supra* note 15, at 1167 (suggesting such an approach).

133. *Id.* at 1158.

134. Beehler, *supra* note 98, at 4.

135. See *Bowers v. Baystate Techs.*, 320 F.3d 1317, 1327 (Fed. Cir. 2003) (noting that the exhaustion doctrine seeks to prevent double recovery).

136. *Motion Picture Patents Co. v. Universal Film Mfg. Co.*, 243 U.S. 502, 511 (1917).

construction of the law will be large, as experience has abundantly proved; and if it be unimportant, he should not be permitted by legal devices to impose an unjust charge upon the public in return for the use of it.”¹³⁷ Accordingly, the exhaustion doctrine acts as a check to ensure that the patent holder is not over-compensated for his contribution to the art: “[t]he test has been whether or not there has been such a disposition of the article that it may fairly be said that the patentee has received his reward for the use of the article.”¹³⁸

There is, therefore, general agreement that, as Anne Layne-Farrar expresses it, “the license fees (or sales price) received for protected property should be the market determined value.”¹³⁹ If we are to allow patent holders to contract around exhaustion in settling litigation, we must ensure that this does not constitute the use of “legal devices” to recover more for the patented invention than the free market would allow.

There is a persuasive argument that allowing patent holders to license at multiple levels will not result in double recovery. Professor Herbert Hovenkamp refers to the theory developed during the 1950s by “the Chicago School writers” that “in any multi-stage distribution chain there is but a single monopoly profit to be earned.”¹⁴⁰ Professor Hovenkamp employs a hypothetical loosely based on the facts of *Quanta* to illustrate this theory:

[S]uppose the patentee sells a patented microprocessor to Alpha Company, which places the chip on a memory circuit board and then sells the board to Beta Company, which installs the board as a component of a computer. The patentee might be able to collect a \$5 royalty from Alpha and use the license restriction to obtain an additional \$3 royalty from Beta. Alternatively, it could charge the entire \$8 markup to Alpha, who presumably would pass on the \$3 charge in its transaction with Beta. But assuming the profit-maximizing value of the royalties in this distribution chain is \$8 for a single monopolist, the patentee could not profitably charge an \$8 royalty to Alpha plus the \$3 royalty to Beta.¹⁴¹

As Dr. Layne-Farrar expresses the argument, in a frictionless world, the patent holder will not be able to “take advantage of the multiple licensing points to increase the aggregate royalty rate,”¹⁴² because this will raise the price of the licensed products and thereby reduce demand: “[t]hus, if a rights holder has found the optimal royalty earnings in licensing one production level, and then attempts to increase its profits by licensing another level, it will instead find that the decrease in the units sold outweighs the increase in the per-unit margin, and making the new higher ‘price’ less profitable.”¹⁴³ Accordingly, “cost pass-through constrains the aggregate royalty payments the

137. *Id.* at 513.

138. *United States v. Masonite Corp.*, 316 U.S. 265, 278 (1942).

139. Layne-Farrar, *supra* note 15, at 1152.

140. Herbert Hovenkamp, *Post-Sale Restraints and Competitive Harm: The First Sale Doctrine in Perspective*, 66 N.Y.U. ANN. SURV. AM. L. 487, 514–15 (2011).

141. *Id.* at 515.

142. Layne-Farrar, *supra* note 15, at 1158.

143. *Id.* at 1159.

IPR [intellectual property rights] holder receives,”¹⁴⁴ and “patent exhaustion and prohibitions on licensing multiple levels of the production-use chain cannot be motivated by the need for a mechanism to constrain the fees charged by IPR holders”¹⁴⁵

Dr. Layne-Farrar further argues that allowing patent holders to charge licensing fees at multiple levels of production creates certain economic efficiencies.¹⁴⁶ For example, “when royalty base monitoring can be improved by obtaining output reports from multiple production points or when sharing the royalty burden across production levels reduces licensees’ incentives to underreport their relevant sales”¹⁴⁷

There are, however, “market frictions and transaction costs” that prevent total cost pass-through.¹⁴⁸ For example, Dr. Layne-Farrar observes that there may be “technological or institutional constraints [to] prevent wholesale prices from fully adjusting to changes in the royalties[.]”¹⁴⁹ She opines that “realistically, component manufacturers facing pricing frictions will be able to pass some, but not all, cost increases through to their customers.”¹⁵⁰

Dr. Layne-Farrar argues that even if frictions exist that prevent total cost pass-through, there are constraints to prevent the patent holder from overcharging for its intellectual property by charging excessive royalties at multiple levels.¹⁵¹ For example, if the upstream manufacturer were unable to pass excessive royalty burdens down the supply chain, “the patent holder would still need to be mindful of a licensee’s incentives to reduce its supply in the components market.”¹⁵² The patent holder must also be mindful that the component manufacturer may attempt “to work around the patent.”¹⁵³ And even if these constraints are insufficient to prevent the patent holder from “increasing its aggregate royalty income by licensing multiple levels of production levels,” “as long as some pass-through to consumers is possible, the downstream royalty would be set with end consumer demand in mind, just as with single level licensing, because that is how the patent holder maximizes its royalty revenues on the downstream layer of production.”¹⁵⁴ Accordingly, “any additional royalty income above the single level amount is a firm-to-firm transfer of profits from the upstream manufacturer to the patent holder; consumers would not be harmed.”¹⁵⁵

If this theory is correct, then the exhaustion doctrine is unnecessary to prevent the evil of double recovery, because the free market will check the

144. *Id.* at 1166.

145. *Id.* at 1161.

146. *Id.* at 1155.

147. *Id.* at 1185.

148. *Id.* at 1162.

149. *Id.* at 1172.

150. *Id.* at 1172.

151. *Id.* at 1177–78.

152. *Id.* at 1173.

153. *Id.* at 1173.

154. *Id.* at 1173.

155. *Id.* at 1173–74.

patent holder's ability to recover in excess of the "monopoly profit"¹⁵⁶ by charging additional royalties at each stage of the distribution line. Rather, the only thing the exhaustion doctrine achieves is to "require the patentee to obtain the entire \$8 royalty charge from Alpha."¹⁵⁷ This is a cause of concern for Dr. Layne-Farrar, who, as discussed above, points out that allowing patent holders to allocate their royalties along different levels of the production and distribution chain often allows for efficiencies such as ease of monitoring.¹⁵⁸ Does this theory apply in the case of a license agreement brokered as part of a settlement? Where license agreements are brokered to settle patent infringement litigation, there is cause for considerable doubt that market forces and cost pass-through will deter patent holders from imposing an excessive aggregate royalty burden across multiple levels of production.

As an initial matter, when parties settle patent infringement litigation, the settlement price is often intended to compensate the patent owner for *past* alleged infringement, rather than a royalty on future sales.¹⁵⁹ The settlement price is often largely or wholly a royalty on sales of products that have already occurred. Because these sales have already occurred, there is no opportunity for the accused infringer to pass this royalty burden down the supply chain. Because the burden is not passed down the supply chain, it does not raise the price of the downstream products upon which the patent holder will seek to collect additional royalties. There is, accordingly, no decrease in the demand for licensed products to discipline the patent holder from charging an excessive royalty across multiple levels of production—the products have already been sold. The patent holder can obtain a royalty on the accused infringer's past sales that fully (or excessively) compensates it for the use of its intellectual property in the sold items. And, if the patent holder is able to contract around patent exhaustion, there are no market forces to prevent the patent holder from then pursuing downstream users of the accused items to extract additional compensation. The result is double-recovery for the patent holder for the use of its intellectual property.

Second, it is doubtful that a defendant settling patent litigation will always have the incentive to charge an appropriate price for a contract clause that preserves the ability of the patent holder to pursue downstream users. Typically, parties who settle litigation arrive at the contours of a broad agreement in principle before undertaking the work to draft an agreement.¹⁶⁰ At this stage, the key term the parties have agreed upon is the settlement price. Only as the agreement is being drafted will the patent holder raise the issue of patent exhaustion, and demand a clause purporting to frustrate patent exhaustion and preserve the ability of the patent holder to license or litigate

156. *Monopoly Profit Definition*, OXFORD REFERENCE, www.oxfordreference.com/view/10.1093/acref/9780199237043.001.0001/acref-9780199237043-e-2029.

157. Hovenkamp, *supra* note 140, at 515.

158. Layne-Farrar, *supra* note 15, at 1185.

159. Michael J. Chapman, *Using Settlement Licenses in Reasonable Royalty Determinations*, 49 IDEA 313, 316 (2008–2009) ("Retroactive settlement licenses grant the alleged infringer authorization for its past use of the patent-at-issue in exchange for compensation to the patent holder.").

160. Kieff, *supra* note 78, at 319–320.

against downstream users of the licensed products. Theoretically, the demand for such a clause by a patent holder should reduce the settlement price in an amount commensurate with the patent rights the patent holder is retaining in the licensed products. In practice, however, the expense and risk of litigation, the threat of injunctions, and the pressure to settle can weigh heavily on the patent infringement defendant in its consideration of the effects of settlements on downstream purchasers.¹⁶¹ An accused infringer who has expended substantial resources litigating a case over many years and has finally arrived at a settlement figure, often has little incentive to disrupt the settlement by demanding a reduction in the settlement price in response to a demand by the plaintiff for a clause exposing third parties to potential future litigation. As Professor F. Scott Kieff points out, “what is well-known by any attorney involved in patent licensing, settlement negotiations around ongoing or potential patent litigation, or mediation of a patent dispute, is that what the potential infringer often wants is mere peace from future litigation risk (often called ‘freedom to operate’).”¹⁶²

It may be, as Professor Kieff observes, that “the potential infringer has sufficient ties to its customers or input-providers that it wants to buy freedom for them as well.”¹⁶³ In such a case, it may be that when the patent holder demands a settlement clause that purports to contract around exhaustion, the accused infringer will balk, or at least lower the settlement price appropriately to take account of the rights the patent holder is retaining. But in many circumstances, the defendant will not have a direct incentive to disrupt the settlement in this manner. Often “the patentee and the potential infringer elect to strike a contract that buys peace only for that potential infringer, at a much lower price, leaving others to fend for themselves when and how they see fit.”¹⁶⁴ The patent holder can obtain full (or excessive) compensation for its patents as well as a clause that allows it to seek additional recovery against third parties. Unless the courts refuse to allow such contract clauses, the patent holder has the opportunity for double recovery.

But what of the circumstance where the accused infringer does have a close relationship with its downstream purchasers? In a rational world, the accused infringer would recognize that a settlement clause that allows the patent holder to pursue downstream purchasers will result in further, downstream attacks on its products—that it could disrupt the relationship between the defendant and its customers and result in higher prices and less demand for its products. A rational defendant would refuse to agree to such a clause or demand that the settlement price be reduced substantially in exchange for such a clause.

However, the settlement of litigation is not characterized by rationality.¹⁶⁵

161. *Id.* at 319.

162. *Id.* at 320.

163. *Id.*

164. *Id.*

165. See Rachlinski, *supra* note 16, at 114 (“[C]urrent theories of litigation fail to account for the possibility that litigants’ decision making under risk and uncertainty may not comport with rational theories of behavior, and they therefore fail to paint a complete portrait of litigation.”).

As Professor Jeffrey J. Rachlinski has demonstrated, “[c]urrent theories of litigation fail to account for the possibility that litigants’ decision-making under risk and uncertainty may not comport with rational theories of behavior.”¹⁶⁶ Dr. Rachlinski observes that “[a]ll of the economic models of suit and settlement depend on the assumption that litigants make choices designed to provide them with the best outcomes Empirical studies of human decision-making by cognitive psychologists suggest that it is unlikely that the economic model accurately describes the behavior of litigants.”¹⁶⁷

In particular, Dr. Rachlinski argues that the decisions plaintiffs and defendants make in settling litigation is unduly influenced by how those decisions are framed.¹⁶⁸ Behavioral research indicates that “when people choose among gains, they tend to make risk-averse choices, preferring sure gains over larger but riskier gains.”¹⁶⁹ However, defendants settling litigation do not choose among gains. Rather, “defendants choose between accepting a sure loss by settling, and accepting an uncertain but potentially worse outcome by litigating further.”¹⁷⁰

And “when people choose among losses, they tend to make risk-seeking choices, preferring riskier outcomes over sure losses.”¹⁷¹ Dr. Rachlinski’s research explains why defendants will often irrationally spend money continuing to litigate a case beyond the point in time at which it would be cheaper to settle.

But once a settlement figure is reached, and the plaintiff proposes a clause to contract around exhaustion, the defendant faces a similar choice. The defendant can refuse to accept such a clause, in which case it will certainly raise the settlement price. Alternatively, the defendant can accept the clause, and retain the current, agreed-upon settlement price. Accepting the clause involves future risk, because defendants’ customers may be sued. Defendant’s customer may lose that litigation and defendant may be required to indemnify its customers. Other bad consequences risk occurring as well, such as increased prices or disruption to customer relations. But Dr. Rachlinski’s research suggests that a defendant may accept that risk in exchange for the lower certain loss now (the lower settlement price), rather than incur a higher certain loss now (a higher settlement price) in exchange for mitigating the risk.¹⁷² The potential litigation against downstream customers may be risky, but defendant will prefer that risk over a larger certain loss, even if to do so is economically irrational. The result is that even where a defendant has close relationships with downstream purchasers, such that a clause avoiding exhaustion exposes the defendant to risk in the future, the defendant will not necessarily act rationally in resisting that clause or in properly monetizing it in the settlement price. If the courts enforce such a clause, the patent holder can

166. *Id.*

167. *Id.* at 116.

168. *Id.* at 124–25.

169. *Id.* at 119.

170. *Id.* at 118–19.

171. *Id.* at 119.

172. *Id.* at 145.

pursue downstream customers in future litigation, and there is a risk the patent holder will achieve double recovery or overcompensation for its patent rights.

This argument is a working hypothesis. The application of cognitive psychology to litigant behavior is a “relatively new field.”¹⁷³ Behavioral decision theory has been applied to various aspects of legal decision-making, including the award of pain and suffering damages,¹⁷⁴ the assessment of punitive damages,¹⁷⁵ eyewitness investigations,¹⁷⁶ law-firm management,¹⁷⁷ and antitrust law.¹⁷⁸ This is the first article to attempt to apply the theory in the context of litigants drafting a license agreement to settle patent litigation. However, the hypothesis serves the useful purpose of raising questions about the assumption that serves as the premise of the law and economics analysis of the exhaustion doctrine: that parties will act in an economically rational way in licensing patents. Behavioral decision theory suggests that if the license is brokered to settle litigation, that assumption is mistaken.

Moreover, information costs can prevent the market from checking double-recovery. Professor Hovenkamp insightfully observes that post-sale restrictions can result in downstream purchasers paying more than the market justifies for licensed products “in a market in which license terms are difficult to discover.”¹⁷⁹ Professor Hovenkamp posits the following hypothetical:

Suppose that the patentee assesses the post-sale license requirement in its initial transaction with Alpha but that subsequent Betas purchasing from Alpha do not all have notice of the restriction. They may pay Alpha too much because they find out only after the transaction has been consummated that they also owe \$3 to the patentee. The fact that subsequent purchasers did not know about the restriction is generally not a defense in a patent infringement action. As a result, they will take more of the patentee’s chip than they would otherwise have purchased, or they may forego a rival’s chip that would have been a better choice had they known the true cost of this patentee’s chip.¹⁸⁰

Professor Hovenkamp argues that a firm exhaustion doctrine is an excessive way of addressing the problem.¹⁸¹ Rather, “this problem can be addressed by making timely notice a condition of enforcement.”¹⁸² In other words, patent

173. *Id.* at 118 n.16.

174. *See generally* Edward J. McCaffery et al., *Framing the Jury: Cognitive Perspectives on Pain and Suffering Awards*, 81 VA. L. REV. 1341 (1995) (applying behavioral decision theory to juries awarding pain and suffering).

175. *See generally* Cass R. Sunstein et al., *Assessing Punitive Damages (with Notes on Cognition and Valuation in Law)*, 107 YALE L.J. 2071 (1998) (applying behavioral decision theory to juries awarding punitive damages).

176. Daniel L. Schacter et al., *Policy Forum: Studying Eyewitness Investigations in the Field*, 32 LAW & HUM. BEHAV. 3 (2008).

177. Daniel Kahneman & Gary Klein, *Law Firm Leadership Decisions: Can You, Should You, Trust Your Gut?*, 10-9 LAW OFF. MGMT. & ADMIN. REP. 1 (2010).

178. Max Huffman, *Marrying Neo-Chicago with Behavioral Antitrust*, 78 ANTITRUST L.J. 105 (2012).

179. Hovenkamp, *supra* note 140, at 516.

180. *Id.*

181. *Id.* at 519.

182. *Id.* at 517.

holders should be required to give clear notice of the post-sale restrictions that encumber licensed products before enforcing them against downstream purchasers; but they should not have their patent rights completely exhausted.

This raises questions regarding the effectiveness, reliability, and costs of notice. Notice of intellectual property rights has proven to be unreliable and imposes inefficient external costs on parties seeking to put goods into commerce. As Professor Mark R. Patterson has explained, “[n]otice . . . can be false notice, and it is costly, if not impossible, for licensees to determine the validity of the notice they receive.”¹⁸³ Hence, even if the notice is correct, the downstream manufacturer must expend resources to ascertain its validity, an unnecessary tax on commerce. Moreover, as Professor Molly Shaffer Van Houweling points out, in the case of downstream manufacturers receiving notice, the “remoteness between the parties also makes clarification or negotiation of problematic terms unlikely.”¹⁸⁴

Professor Hovenkamp perceives these same issues, observing that “[u]nfortunately, IP rights and IP licenses have nothing approaching the rather effective recordation and notice provision that apply to land title.”¹⁸⁵ Moreover, intellectual property licenses come in such varied, novel, and complex varieties that even the most sophisticated in-house lawyer for a downstream company may not be able to determine with reliability whether or not the license permits her company to enter commerce (assuming she is given access to the license).¹⁸⁶ Finally, effective notice may solve the information costs that prevent a market check on double recovery, but it does not necessarily address other frictions that prevent total cost pass-through.

Given this state of affairs, only a clear prohibition on contracting around exhaustion can alleviate the concern with the patent holder achieving excessive compensation for its patent rights by pursuing litigation at multiple production levels. If there is a clear rule against contracting around exhaustion, parties settling litigation will set the license fee at a rate that gives the patent holder full compensation up front, and the defendant can simply pass along this extra cost to downstream purchasers. This will also tend to result in royalties that more nearly approximate the value of the patented inventions, because with one transaction, as opposed to multiple transactions, there is less of an impact on the market price caused by the friction of negotiation costs and the investigation of license rights. A total exhaustion rule thereby efficiently avoids the costs of additional licensing negotiations or litigation against downstream purchasers.

183. Mark R. Patterson, *Must Licenses be Contracts? Consent and Notice in Intellectual Property*, 40 FLA. ST. U. L. REV. 105, 149 (2012).

184. Molly Shaffer Van Houweling, *The New Servitudes*, 96 GEO. L.J. 885, 935 (2008).

185. Hovenkamp, *supra* note 140, at 541–42.

186. On the evils of the varied and complex structures of intellectual property licensing agreements, see Christina Mulligan, *A Numerous Clausus Principle for Intellectual Property*, 80 TENN. L. REV. 235 (2013).

B. Public Policy Against Restraints on Alienation Counsel Against Allowing Parties to Contract Around Exhaustion

But what if the above analysis is incorrect? What if the free market checked only by the modern, flexible, antitrust regime is sufficient to prevent overcompensation for patent holders who aggregate royalties at multiple levels of the production and distribution chain? Some would conclude that absent demonstrated anticompetitive effects or restraints on innovation, there remains no justification for the exhaustion doctrine; it should be contracted around freely. This was the conclusion of the Federal Circuit in *Mallinckrodt*:

Unless the [post-sale restriction] violates some other law or policy (in the patent field, notably the misuse or antitrust law) private parties retain the freedom to contract concerning conditions of sale. The appropriate criterion is whether Mallinckrodt's restriction is reasonably within the patent grant, or whether the patentee has ventured beyond the patent grant and into behavior having an anticompetitive effect not justifiable under the rule of reason.¹⁸⁷

Similarly, Professor Hovenkamp persuasively argues that post-sale restrictions should only be unenforceable if they are anticompetitive (a concept limited to lowering output or raising prices) or serve to restrain innovation.¹⁸⁸

Preventing anticompetitive effects, as that concept is defined by the antitrust laws, and preventing restraints on innovation, have not been the only justifications for the patent exhaustion doctrine articulated by the courts. As the Supreme Court (in the copyright context) and the Federal Circuit (in the patent context) have recently recognized, the exhaustion doctrine acts as an important check against restraints on alienation.¹⁸⁹ In *Kirtsaeng v. John Wiley & Sons, Inc.*, the Supreme Court observed that “[t]he ‘first sale’ doctrine is a common-law doctrine with an impeccable historic pedigree.”¹⁹⁰ In holding that copyright exhaustion can be triggered by an authorized foreign reproduction, the Court relied in part upon “the common law’s refusal to permit restraints on the alienation of chattels.”¹⁹¹ The Court observed that Lord Coke explained this policy as early as 1628:

[If] a man be possessed of . . . a horse, or of any other chattell . . . and give or sell his whole interest . . . therein upon condition that the Donee or Vendee shall not alien[ate] the same, the [condition] is voi[d], because his whole interest . . . is out of him, so as he hath no

187. *Mallinckrodt, Inc. v. Medipart, Inc.*, 976 F.2d 700, 708 (Fed. Cir. 1992).

188. Hovenkamp, *supra* note 140, at 493 (arguing that the legal policy of exhaustion is incoherent because “all restraints become unenforceable as a matter of IP infringement actions, whether or not they are anticompetitive or serve to restrain innovation”), 506 (criticizing the Supreme Court because it “did not connect a policy limiting restraints on alienation to lower output or higher prices”), 511 (criticizing the rule of *Quanta* that post-sale restrictions are invalid because “the rule applies without any inquiry into either competitive effects or innovative restraints”).

189. *See also* Van Houweling, *supra* note 184, at 923 (“What the court in *Mallinckrodt* failed to acknowledge is that, just as land recording does not solve every problem associated with land servitudes, safeguarding competition through antitrust (and patent misuse) does not eliminate every problem associated with chattel servitudes.”).

190. *Kirtsaeng v. John Wiley & Sons, Inc.*, 133 S.Ct. 1351, 1363 (2013).

191. *Id.*

possibilit[y] of a Reverter, and it is against Trade and Traffi[c], and bargaining and contracting betwee[n] man and man: and it is within the reason of our Author that it should ouster him of all power given to him.¹⁹²

In *Lifescan* the Federal Circuit relied in part upon this same policy against restraints on alienation to expand the patent exhaustion doctrine.¹⁹³ The court held that giving away a patented product in exchange for no consideration can trigger patent exhaustion.¹⁹⁴ In so doing, the court discussed at length the Supreme Court's reliance on the policy against restraints on alienation in the *Kirtsaeng* case.¹⁹⁵ The court concluded that if patent exhaustion is easily evaded, "consumers' reasonable expectations regarding their private property would be significantly eroded."¹⁹⁶

Professor Hovenkamp points out that in the antitrust context, the Supreme Court rejected reliance on the rule against restraints on alienation many years ago, deciding that it reflected "'formalistic line drawing' rather than 'demonstrable economic effect.'"¹⁹⁷ But the policy against servitudes running with property has compelling policy justifications beyond the goals of the antitrust laws as they are now liberally interpreted.

Principally, the rule against restraints on alienation promotes the free flow of goods in commerce. A company that purchases semiconductor chips en masse to install and redistribute in its computers should be able to do so without enduring unnecessary external costs to investigate running servitudes. Just as excessive taxes on the chips inhibit the efficient and inexpensive distribution of the computers to consumers, a private servitude (in the form of reserved patent rights) that runs with the chips exacts the same harmful costs. The running restriction raises the price of chips for the manufacturer and, in turn, raises the price of computers for consumers. This cost may be justified to promote innovation in the first instance. But once the patent holder has licensed the chips or authorized the first sale, it has received its reward, and imposing a running servitude on the goods becomes an unwarranted restriction on commerce.

Indeed, a private servitude that runs with licensed goods is more harmful to society than an excessive tax, because the validity of a government imposed tax is easy to ascertain. A patent restriction that runs with goods down the chain of production and distribution may be invalid or unenforceable. The computer manufacturer must commit resources to discovering and ascertaining the validity of such a restriction. It may be that the computer manufacturer must expend resources on litigation to resist an unwarranted restriction. Now the bulk purchase of semiconductor chips is laden with inefficient external costs.

192. *Id.* (quoting 1 E. Coke, *Institutes of the Laws of England* § 360, p. 223 (1628)).

193. *LifeScan Scotland, LTD v. Shasta Technologies*, 734 F.3d 1361, 1363 (Fed. Cir. 2013).

194. *Id.* at 1376.

195. *Id.*

196. *Id.* at 1377.

197. Hovenkamp, *supra* note 140, at 506.

Professor Van Houweling has articulated compelling arguments as to why intellectual property servitudes that run with personal property are harmful, even in the absence of anticompetitive effects sufficient to result in antitrust violations.¹⁹⁸

First, personal property servitudes result in notice and information costs, as noted above.¹⁹⁹

Second, running servitudes can result in “underuse or inefficient use of the resource subject to the restriction.”²⁰⁰ For example, if the chips at issue in *Quanta* could only be used with Intel computers, as the license agreement in that case required, then any chips in excess of those Intel needs will either never be manufactured or never reach the computer maker who seeks to put them to beneficial use—in this example, LG.

Third, running intellectual property servitudes on personal property can effectively “waive public-regarding limitations built into intellectual property law.”²⁰¹ In the context of patent rights, Congress has struck the balance between rewarding the patent holder for its innovation and allowing the public to benefit from the disclosure and distribution of new technology.²⁰² Once the patent holder has received its market-determined reward by selling or licensing the patented product, allowing patent holders to extract additional rewards downstream through contract devices thwarts this balance and harms the public.

Accordingly, as the Supreme Court and the Federal Circuit now recognize, antitrust concerns are not the only policies animating the exhaustion doctrine. The policy against restraints on alienation likewise counsels in favor of refusing to enforce settlement agreements that purport to contract around the exhaustion doctrine. Once a patent holder releases its claims upon a product and licenses its sale, allowing that patent holder to continue to pursue royalties on the product downstream would “offend against the ordinary and usual freedom of traffic in chattels.”²⁰³

C. A Prohibition on Contracting Around Exhaustion is Judicially Efficient.

In the litigation settlement context, contracting around exhaustion imposes additional costs on society, even where the particular contractual provision cannot be proven to create anti-competitive effects or impede innovation. Allowing parties to settle a hard-fought patent infringement lawsuit by contracting around patent exhaustion results in judicial inefficiency.

At first blush, this may appear counterintuitive. As noted above, commentators have noted that the inability to contract around patent exhaustion “may greatly frustrate the ability of commercial parties to strike

198. Van Houweling, *supra* note 184, at 932–50.

199. *Id.* at 932–39.

200. *Id.* at 939.

201. *Id.* at 946.

202. *Id.* at 939.

203. *LifeScan Scotland, LTD v. Shasta Technologies*, 734 F.3d 1361, 1376 (Fed. Cir. 2013) (quoting *John D. Park & Sons v. Hartman*, 153 F. 24, 39 (6th Cir. 1907)).

deals over patents.”²⁰⁴ This may seem to be an argument against prohibiting parties settling patent litigation from contracting around exhaustion, because it will make it more difficult to settle lawsuits, thereby burdening the courts. However, a lawsuit that is settled by virtue of a license that avoids patent exhaustion creates no judicial efficiencies. Although that particular lawsuit will not go all the way to trial, many more lawsuits against downstream purchasers of the licensed products would be facilitated.

In recent years, there has been a rise in such “customer suits,” in which patent holders “target the numerous resellers and end users of allegedly infringing products rather than the accused products’ original manufacturers.”²⁰⁵ Professor Brian J. Love and James C. Yoon have noted that lawsuits against multiple downstream users of accused products are increasingly brought by non-practicing entities.²⁰⁶ In particular, these lawsuits are brought by “a class of patentees that overwhelmingly acquire old, extremely weak patents and assert them against the numerous unsophisticated purchasers (rather than manufacturers) of allegedly infringing products in suits that typically settle for less than defendants’ anticipated litigation costs.”²⁰⁷ Love and Yoon argue that such “serial nuisance filings against resellers or users quickly become more profitable than litigating on the merits against the original manufacturer.”²⁰⁸ The result is that non-practicing entities (NPEs) are able to make profits from the assertion of low-quality patents. Because downstream purchasers have little incentive to defend against such litigation on the merits, and because the cost of such defense far exceeds the cost of settlement,²⁰⁹ customer lawsuits promote litigation outcomes that reflect only the cost of defense, and fail to reflect the value of the asserted patents.²¹⁰

These customer lawsuits result in tremendous judicial inefficiencies. First, the practice results in more lawsuits involving numerous claims against multiple defendants. “[B]ecause customers will generally find it rational to settle with NPEs holding even incredibly weak patents . . . , NPEs will find it profitable to sue as many judgment-proof customers as possible.”²¹¹ Love and Yoon observe that “NPEs in the business of purchasing patents for assertion sue almost nineteen defendants per patent they litigate.”²¹² This results in a “flood of litigation that taxes the federal court system.”²¹³

These customer lawsuits are moreover highly inefficient to adjudicate. Because the downstream purchasers did not design the accused technology, they do not possess the technical information to effectively defend against the patents. It becomes necessary to conduct extensive third party discovery.

204. Kieff, *supra* note 78, at 316; *see supra* Section II (assessing the viability of seven potential licensing solutions).

205. Love & Yoon, *supra* note 20, at 1605.

206. *Id.*

207. *Id.* at 1609–1610.

208. *Id.* at 1613.

209. *Id.* at 1622–1626.

210. *Id.* at 1615.

211. *Id.* at 1624.

212. *Id.*

213. *Id.*

Because the discovery involves sensitive technical information, party and judicial resources are expended on confidentiality disputes, subpoenas, motions practice, third party depositions, and other expensive burdens. As Love and Yoon point out, it would be far more efficient if the patent holder were to sue the manufacturer of the accused technology, who would have the knowledge, information, and incentive to efficiently defend the lawsuit.²¹⁴

Moreover, requiring courts and litigants to assess post-sale restrictions on a case-by-case basis undertaking a full-blown antitrust rule-of-reason assessment imposes additional costs on the judicial system. Patent suits, which are already complicated and expensive, would now become monstrous hybrids of antitrust litigation in more and more cases. Many defendants would find it more rational to settle than to fully litigate the validity of the post-sale restriction under a rule-of-reason analysis, leaving the potentially anti-competitive restriction unexamined by the courts.

A settlement agreement that purports to contract around exhaustion only serves to facilitate lawsuits against multiple downstream purchasers. By virtue of such settlement agreements, the patent holder seeks to preserve the ability to pursue licenses and litigation down the stream of production. The courts should not sanction a practice that results in the multiplication of litigation and judicial inefficiencies.

D. *Does Strengthening the Exhaustion Doctrine Deter Innovation?*

Even if a post-sale restriction is not anti-competitive in the antitrust sense, refusing to enforce it may be justified on the basis that it serves to restrain innovation, the core evil that the Patent Act addresses.²¹⁵ Professor Hovenkamp's critique of the *Quanta* opinion is that "the [exhaustion] rule applies without any inquiry into either competitive effects *or innovative restraint*."²¹⁶

Several commentators have argued that strengthening the exhaustion doctrine will deter innovation.²¹⁷ For example, LaFuze, Chen, and Burke argue that if the courts fail to recognize "the conditional sale doctrine" (i.e., the ability to contract around exhaustion), "the patent owner will respond to this market condition by cutting back on research and development, thus slowing the introduction of new technology into the industry."²¹⁸ To the extent patents are weakened by the exhaustion doctrine, the argument goes, inventors will decide not to make inventions or will not disclose their inventions to the public through patent applications.²¹⁹

Whether this assertion is true is very difficult to assess. Its adherents have not undertaken the burden of proving with empirical evidence that strengthening the exhaustion doctrine has discouraged inventors from

214. *Id.* at 1631–35.

215. Hovenkamp, *supra* note 140, at 489.

216. *Id.* (emphasis added).

217. *See, e.g.*, LaFuze et al., *supra* note 77, at 314.

218. *Id.* at 314.

219. *Id.*

conducting their work. And it is very difficult to prove the negative – that strengthening the exhaustion doctrine does not impede innovation.

A facile first attempt at proving the negative demonstrates the difficulty. If we accept the proposition that innovation is measured by the number of patent applications that are filed, is there empirical support for the notion that the strengthening of the exhaustion doctrine deters innovation? The PTO maintains data showing that the number of U.S. patent applications has steadily increased from 1840 to the present.²²⁰ Notably, the number of patent applications filed continued to increase even in years when the Supreme Court issued decisions strengthening the exhaustion doctrine.²²¹ For example, in 1854, after the Court established the patent exhaustion doctrine in *Bloomer v. McQuewan*, the number of patent applications rose to 3,328, nearly 25% more applications than the 2,673 that were filed in 1853.²²² In 1917, the Court ruled in *Motion Picture Patents Co.* that post-sale restrictions are ineffective to avoid patent exhaustion.²²³ Despite this ruling, the number of patent applications rose from 67,590 in that year to 76,710 in 1919 and over 87,000 by 1921.²²⁴ And in the years since the Court strengthened the exhaustion doctrine considerably in the 2008 *Quanta* case, the number of patent applications has continued to rise, from 456,321 applications in 2008 to 542,815 applications in 2012.²²⁵

However, this analysis has deep flaws. Most critically, we do not know if the number of patent applications would have risen even higher without the burden of the exhaustion doctrine. Perhaps a carefully constructed survey of inventors would answer the question of whether the Supreme Court's pronouncements on exhaustion have an effect on their willingness to invent. A survey of investors or venture capitalists might be even more probing: "Would you invest less capital in innovation and patent prosecution if the resulting patents could not be licensed at multiple levels of the production and distribution chain?" Until such work is attempted, it is difficult to accept or effectively refute the assertion that strengthening the exhaustion doctrine discourages innovation.

Thus far, the discussion has been focused on the "reward theory" of patent policy—that the Patent Act serves to encourage innovation directly by rewarding inventors with a limited exclusionary right. A complementary policy of the Patent Act is the "contract theory" of patents: that the exclusionary right is granted to encourage the public disclosure of innovative information, which indirectly encourages further innovation by those who modify and improve the patented inventions and combine them with other technology to make new innovations (after the patent in question has

220. See *U.S. Patent Activity Calendar Years 1790 to the Present (2014)*, U.S. PAT. & TRADEMARK OFFICE, http://www.uspto.gov/web/offices/ac/ido/oeip/taf/h_counts.htm (last visited Oct. 29, 2014) (listing data regarding patents since 1790).

221. *Id.*

222. *Id.*

223. *Motion Picture Parents Co. v. Universal Film Mfg. Co.*, 243 U.S. 502, 519 (1917).

224. U.S. PAT. & TRADEMARK OFFICE, *supra* note 220.

225. *Id.*

expired).²²⁶ Critical to this theory is the notion that the scope and length of the exclusionary right must be carefully calibrated such that it is sufficiently robust to encourage disclosure, but not so robust that it has the counterproductive effect of impeding innovation by preventing others from building on the innovative information.²²⁷

One way in which the exclusionary right must be calibrated is through policing the doctrine of equivalents. In theory, the exclusionary right should not be so enlarged through the doctrine of equivalents that it prevents the creation of subject matter that is, in truth, a separate invention. Hence, “[t]he theory of the doctrine of equivalents is that an applicant through the doctrine of equivalents should only be able to protect the scope of his invention, not to expand the protectable scope of the claimed invention to cover a new and unclaimed invention.”²²⁸

Another way in which the exclusionary right is calibrated is through Congress’s determination of patent duration. “The optimal patent duration should strike a balance between the incentive to induce disclosure and the aim of limiting the monopoly distortion induced by patents.”²²⁹

But patent exhaustion may also play a role in preserving room for innovation because it limits the right of exclusion from being passed down the chain of production and distribution. To the extent the right of exclusion spreads through the chain of production to prohibit parties who are remote from the patent holder from using a licensed product, it can inhibit such third parties from innovating by combining the licensed product with their own innovations.

Whether a strong exhaustion bar represents the appropriate balance to indirectly encourage this type of innovation is again a very difficult (if not impossible) empirical question to answer. But allowing patent holders to freely contract around exhaustion without at least considering this question poses a threat that the production of new downstream innovations will be stifled by the very Patent Act that is supposed to encourage innovation. The policies of contemporary antitrust law do not address these concerns. Nor should patent law and policy be reduced to a superfluous shadow of antitrust policy. Until such policies are considered, this author believes it is better to err on the side of imposing a vigorous exhaustion doctrine.

V. CONCLUSION

The settlement of patent litigation often comes after years of expensive litigation that has taxed the resources of the parties and the court. Once the

226. For an excellent analysis of the “contract theory” of patent policy, see Vincenzo Denicolò & Luigi Alberto Franzoni, *The Contract Theory of Patents*, 23 INT’L REV. L. & ECON. 365 (2003).

227. *Id.* at 366.

228. *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 493 F.3d 1368, 1379 (Fed. Cir. 2007) (citations omitted). *But see* *Siemens Medical Solutions, USA, Inc. v. Saint-Gobain Ceramics & Plastics, Inc.*, 637 F.3d 1269, 1278 (Fed. Cir. 2011) (holding that the claimed equivalent need not be an obvious variation of the patented invention).

229. Denicolò & Franzoni, *supra* note 226, at 365.

litigation has concluded in a settlement license and compensation for the patent holder, the exhaustion doctrine provides useful repose from subsequent litigation against downstream purchasers. Allowing parties to contract around patent exhaustion in their settlement license breeds nothing but trouble for the courts and for the purchasers of licensed products. Distributors and end-users of licensed products have a reasonable and justified expectation that they may use their purchased products for their intended purpose free of burdensome litigation. Accordingly, the law should be clarified to establish that a litigation settlement license completely exhausts the patent holder's rights in the licensed products, regardless of whether the parties draft a licensing term that purports to do otherwise. This should be so whether the parties to the litigation frame the licensing term as a post-sale restriction, a pre-sale restriction, or something else entirely.