
Patent Act of 1952 — Patent Exhaustion Doctrine —
Bowman v. Monsanto Co.

Under the doctrine of patent exhaustion, “the initial authorized sale of a patented item terminates all patent rights to that item”¹ and confers on the purchaser “the right to use [or] sell” the item as he pleases,² but not to make identical new items.³ In some tension with this principle is the conditional sales doctrine, which allows the patentee to limit exhaustion of its patent rights through contractual terms.⁴ Last Term, in *Bowman v. Monsanto Co.*,⁵ the Supreme Court held that patent exhaustion doctrine did not allow a farmer who purchased self-replicating, genetically modified seeds to reproduce them through replanting without the patentee’s permission.⁶ The Court reached the correct outcome but via the wrong route. The Court should have applied the conditional sales doctrine — a doctrine better suited to address the unique challenges posed by self-replicating technologies — rather than decide the case on exhaustion grounds and obfuscate the function of the licensing agreement.

Monsanto patented genetically modified soybeans that are resistant to glyphosate, the active ingredient in many herbicides.⁷ Glyphosate resistance is a genetic trait that is “passed on from the planted seed to the harvested soybeans.”⁸ For this reason, Monsanto sells its patented seeds — marketed as Roundup Ready seeds — pursuant to a licensing agreement that allows the purchaser to plant the seeds once but not to “save any of the harvested soybeans for replanting [or] supply them to anyone else for that purpose.”⁹

Vernon Bowman is a farmer in Indiana.¹⁰ Bowman purchased Roundup Ready seeds for his first crop of each yearly season and, in accord with the licensing agreement, sold the harvested soybeans to a grain elevator.¹¹ But Bowman “devised a less orthodox approach” for the riskier second crop of the season: he purchased “commodity soy-

¹ *Quanta Computer, Inc. v. LG Elecs., Inc.*, 553 U.S. 617, 625 (2008).

² *United States v. Univis Lens Co.*, 316 U.S. 241, 249 (1942).

³ *See Mitchell v. Hawley*, 83 U.S. (16 Wall.) 544, 548 (1872).

⁴ *See, e.g., Erin Julia Daida Austin, Note, Reconciling the Patent Exhaustion and Conditional Sale Doctrines in Light of Quanta Computer v. LG Electronics*, 30 *CARDOZO L. REV.* 2947, 2948–49 (2009).

⁵ 133 S. Ct. 1761 (2013).

⁶ *See id.* at 1764.

⁷ *Id.*

⁸ *Id.* at 1764–65.

⁹ *Id.* at 1764.

¹⁰ *Id.* at 1765.

¹¹ *Id.* Grain elevators “purchase grain from farmers and sell it for consumption; under federal and state law, they generally cannot package or market their grain for use as agricultural seed.” *Id.* at 1765 n.1.

beans” intended for consumption from a grain elevator and planted them.¹² After confirming that a significant percentage of these soybeans — mostly the crop of other local farmers who used Roundup Ready seed — were resistant to glyphosate, Bowman saved the harvested soybeans for late-season planting the next year.¹³ Each year, Bowman planted saved seed from the previous year, sprayed his fields with glyphosate, and produced a new crop of Roundup Ready soybeans.¹⁴ After discovering this practice, Monsanto sued for patent infringement.¹⁵ Bowman raised patent exhaustion as a defense, arguing that Monsanto had no right to the soybeans that were the subject of a prior authorized sale from local farmers to the grain elevator.¹⁶

The U.S. District Court for the Southern District of Indiana rejected Bowman’s defense and granted Monsanto’s motion for summary judgment.¹⁷ The court found that “patent law precedent . . . br[oke] in favor of Monsanto.”¹⁸ *Monsanto Co. v. Scruggs*¹⁹ had established that patent exhaustion did not apply to a farmer who purchased Roundup Ready seed from an authorized seller and then saved seed from the crop for purposes of replanting.²⁰ The court explained that purchasing commodity seeds from a grain elevator, rather than from an authorized seller, is not “a distinction that makes a difference”²¹: patent exhaustion does not apply in either case because “the new seeds grown from the original batch had never been sold” by the patentee.²² The court concluded by distinguishing cases in which patent exhaustion doctrine had applied because the patentee “had licensed the article . . . *without sufficient conditions to protect its patent rights.*”²³ Unlike the patentees in those cases, Monsanto had sold its seeds pursuant to a licensing agreement; thus, “[t]he grain elevator[] . . . from whom Bowman bought the soybeans had no right to plant the soybeans and could not confer such a right on Bowman.”²⁴

The U.S. Court of Appeals for the Federal Circuit affirmed.²⁵ Writing for a unanimous court, Judge Linn held that patent exhaustion did not bar Monsanto’s infringement action: “Even if Monsanto’s

¹² *Id.* at 1765.

¹³ *Id.*

¹⁴ *Id.*

¹⁵ *Id.*

¹⁶ *Id.*

¹⁷ *Monsanto Co. v. Bowman*, 686 F. Supp. 2d 834, 840 (S.D. Ind. 2009).

¹⁸ *Id.* at 837.

¹⁹ 459 F.3d 1328 (Fed. Cir. 2006).

²⁰ *Monsanto*, 686 F. Supp. 2d at 838.

²¹ *Id.* at 839.

²² *Id.* (quoting *Monsanto Co. v. McFarling*, 302 F.3d 1291, 1299 (Fed. Cir. 2002)).

²³ *Id.* (emphasis added).

²⁴ *Id.*

²⁵ *Monsanto Co. v. Bowman*, 657 F.3d 1341, 1343 (Fed. Cir. 2011).

patent rights in the commodity seeds [were] exhausted, such a conclusion would be of no consequence because once a grower, like Bowman, plants the commodity seeds containing Monsanto's Roundup Ready technology and the next generation of seed develops, the grower has created a newly infringing article."²⁶ Judge Linn explained that the self-replicating nature of a technology "does not give a purchaser the right to use replicated copies of the technology."²⁷ To hold otherwise would be to "eviscerate the rights of the patent holder."²⁸ The Federal Circuit rejected Bowman's contention that seeds substantially embody later-generation seeds, noting that seeds have "reasonable and intended use[s]" other than replanting, such as use as feed.²⁹

The Supreme Court affirmed.³⁰ Writing for a unanimous Court, Justice Kagan began by acknowledging that, under the patent exhaustion doctrine, a sale of an article confers on the purchaser the right to use or sell the article as he sees fit.³¹ The Court offered a rationale for the doctrine: "[T]he purpose of the patent law is fulfilled with respect to any particular article when the patentee has received his reward . . . by the sale of the article"; once that "purpose is realized the patent law affords no basis for restraining the use and enjoyment of the thing sold."³² Justice Kagan went on to observe that patent exhaustion does not restrict the patentee's right to prevent a buyer from generating new copies of the patented invention, because the buyer "has 'received his reward' only for the actual article sold, and not for subsequent recreations of it."³³ The Court explained that "[u]nfortunately for Bowman, [the no-copy] principle decide[d] this case against him."³⁴ Bowman could resell the patented commodity seeds, consume them, or feed them to his animals, but he could not

²⁶ *Id.* at 1348.

²⁷ *Id.* (quoting *Monsanto Co. v. Scruggs*, 459 F.3d 1328, 1336 (Fed. Cir. 2006)).

²⁸ *Id.* (quoting *Scruggs*, 459 F.3d at 1336) (internal quotation mark omitted).

²⁹ *Id.* (quoting *Quanta Computer, Inc. v. LG Elecs., Inc.*, 533 U.S. 617, 631 (2008)) (internal quotation mark omitted). The Federal Circuit concluded by considering Bowman's argument that "Monsanto cannot recover pre-Complaint damages because it did not provide actual notice and did not mark or require growers to mark second-generation seeds in compliance with 35 U.S.C. § 287(a)." *Id.* The court explained that Bowman did not waive the lack-of-notice argument, *id.* at 1348–49, but found that Monsanto could recover damages because it provided actual notice to Bowman in a June 1999 letter that identified Monsanto's patents and informed Bowman that the "[p]lanting of seed that is covered by a patent would be making the patented invention and using the patented invention." *Id.* at 1349 (quoting Letter from Monsanto to Vernon H. Bowman (June 11, 2009), reprinted in Joint Appendix at 159a, *Bowman*, 133 S. Ct. 1761 (No. 11-796)) (alteration in original) (internal quotation marks omitted).

³⁰ *Bowman*, 133 S. Ct. at 1766.

³¹ *Id.*

³² *Id.* (alteration and omission in original) (quoting *United States v. Univis Lens Co.*, 316 U.S. 241, 251 (1942)).

³³ *Id.* (quoting *Univis*, 316 U.S. at 251).

³⁴ *Id.*

“make *additional* patented soybeans without Monsanto’s permission (either express or implied).”³⁵ In a footnote, Justice Kagan explained that the exhaustion doctrine did not protect replanting whether Bowman purchased seed from a Monsanto-affiliated seed company pursuant to a licensing agreement or from a grain elevator.³⁶ The Court did not “confront a case in which Monsanto . . . sold Roundup Ready to a farmer without an express license agreement,” but Justice Kagan noted that, in such an “unlikely” case, “the farmer might reasonably claim that the sale came with an implied license to plant and harvest one soybean crop.”³⁷

The Court addressed two counterarguments. First, the Court rejected the argument that “in planting Roundup Ready seeds, . . . [Bowman] merely *us[ed]* them in the normal way farmers do.”³⁸ The Court explained that it was Bowman, not Monsanto, who was asking for “an unprecedented exception” to the exhaustion doctrine, because it is well settled that exhaustion does not grant buyers the right to make copies of patented inventions.³⁹ If copying were protected, “a patent would plummet in value after the first sale of the first item containing the invention”⁴⁰ because the “[t]he grower could multiply his initial purchase, and then multiply that new creation, *ad infinitum* — each time profiting from the patented seed without compensating its inventor.”⁴¹ Such destruction of the patent monopoly “would result in less incentive for innovation than Congress wanted.”⁴² Justice Kagan noted that commodity beans had a non-replicating use — consumption — and that this non-replicating use “was not just available, but standard fare.”⁴³

Second, the Court considered the argument that soybeans naturally sprout if not stored in a controlled manner and thus “it was the planted soybean, not Bowman’ himself, that made replicas of Monsanto’s patented invention.”⁴⁴ Justice Kagan squarely rejected this “blame-the-bean defense,” explaining that “Bowman was not a passive observer of his soybeans’ multiplication [He] devised and executed a novel way to harvest crops from Roundup Ready seeds without paying the usual premium.”⁴⁵ The Court concluded by ex-

³⁵ *Id.*

³⁶ *Id.* at 1767 n.3.

³⁷ *Id.*

³⁸ *Id.* at 1768 (emphasis added).

³⁹ *Id.*

⁴⁰ *Id.*

⁴¹ *Id.* at 1767.

⁴² *Id.* at 1768.

⁴³ *Id.*

⁴⁴ *Id.* at 1768–69 (quoting Brief for Petitioner at 42, *Bowman*, 133 S. Ct. 1761 (No. 11-796)).

⁴⁵ *Id.* at 1769.

plaining that its holding was limited to the case at hand, and did not extend to all hypotheticals involving self-replicating products.⁴⁶ Other cases may involve inventions that self-replicate “outside the purchaser’s control” or whose valid use incidentally involves reproduction.⁴⁷ For example, a new copy of a computer program may be “created as an essential step in the utilization of the computer program.”⁴⁸ Such circumstances were not before the Court. The Court explained that its holding also followed from *J.E.M. Ag Supply, Inc. v. Pioneer Hi-Bred International, Inc.*,⁴⁹ which extended patent protection to plants and seeds and explained that “only a patent holder . . . could prohibit ‘[a] farmer who legally purchases and plants’ a protected seed from saving harvested seed ‘for replanting.’”⁵⁰ Justice Kagan observed that Bowman’s argument that a seed sale could cut off the patentee’s right to control the seed’s progeny was flatly inconsistent with the statutory scheme described in *J.E.M.*⁵¹

The Court’s holding left open the question of to what extent conditional sales may limit patent exhaustion. Rather than decide the case on exhaustion grounds in an opinion that obscured the function of the parties’ contract, the Court should have applied the conditional sales doctrine — a doctrine better equipped to address the challenges posed by self-replicating technologies.

The conditional sales doctrine, where recognized, allows patentees to limit patent exhaustion by “restrict[ing] the right of the purchaser to use the patented article through an enforceable contract.”⁵² That is, a conditional sale “preserve[s] the patentee’s right to sue for infringement if the condition is not met or the restriction is violated.”⁵³ This doctrine offers far more protections to patent holders than does pure contract law.⁵⁴ For example, while “the remedy for [contract] breach will generally be capped at expectation damages,” patent remedies include “treble damages and attorney’s fees for cases of willful infringement.”⁵⁵ Moreover, a claim for breach of contract requires a “special relationship between the patentee and the alleged infringer,” whereas patent

⁴⁶ *Id.*

⁴⁷ *Id.*

⁴⁸ *Id.* (quoting 17 U.S.C. § 117(a)(1) (2012)) (internal quotation mark omitted).

⁴⁹ 534 U.S. 124 (2001).

⁵⁰ *Bowman*, 133 S. Ct. at 1767 (alteration in original) (quoting *J.E.M.*, 534 U.S. at 140).

⁵¹ *Id.* at 1767–68.

⁵² Austin, *supra* note 4, at 2948–49.

⁵³ *Id.* at 2949.

⁵⁴ *See id.* at 2949–52.

⁵⁵ Jason McCammon, Recent Development, *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, 785 n.2 (2009). For other differences between patent infringement and breach of contract causes of action, see Austin, *supra* note 4, at 2949–52.

rights attach to the invention itself.⁵⁶ Thus, a viable conditional sales doctrine enables patentees to enforce contract restrictions against downstream buyers.⁵⁷

The conditional sales doctrine has been recognized by the Federal Circuit, but a recent Supreme Court case cast some doubt on it. In *Mallinckrodt, Inc. v. Medipart, Inc.*,⁵⁸ the Federal Circuit held that a patentee could sue for patent infringement based on a violation of a contractual restriction, provided that the restriction was valid under sales law and “within the scope of the patent grant.”⁵⁹ Subsequent cases have relied on *Mallinckrodt* as affirming the viability of the conditional sales doctrine,⁶⁰ but the Supreme Court’s decision in *Quanta Computer, Inc. v. LG Electronics, Inc.*⁶¹ injected new uncertainty. *Quanta* examined “whether patent exhaustion applie[d] to the sale of components of a patented system that must be combined with additional components in order to practice the patented methods.”⁶² LG Electronics (LGE) and Intel entered into a licensing agreement that broadly authorized Intel to make, use, and sell products that practiced LGE’s patents, but that attempted to limit the right of downstream buyers to combine components of LGE’s patented system with outside items.⁶³ After *Quanta*, a downstream buyer, purchased such components from Intel and combined them with standard, non-Intel parts to make computers that practiced LGE’s patents, LGE sued *Quanta* for patent infringement.⁶⁴ The Supreme Court rejected LGE’s claim, holding that the authorized sale of an article that “substantially embodies” a patent exhausts the patentee’s rights.⁶⁵ The Court emphasized that the LGE-Intel license gave Intel unconditional authority to sell products that practiced LGE’s patented system.⁶⁶ Intel’s authorized sale to *Quanta* thus took the sold components “outside the scope of the patent monopoly.”⁶⁷

⁵⁶ Austin, *supra* note 4, at 2951.

⁵⁷ See Saami Zain, *Quanta Leap or Much Ado About Nothing? An Analysis on the Effect of Quanta vs. LG Electronics*, 20 ALB. L.J. SCI. & TECH. 67, 82 (2010).

⁵⁸ 976 F.2d 700 (Fed. Cir. 1992).

⁵⁹ *Id.* at 709.

⁶⁰ *E.g.*, *Monsanto Co. v. Scruggs*, 459 F.3d 1328, 1335–36 (Fed. Cir. 2006); *Monsanto Co. v. McFarling*, 302 F.3d 1291, 1298 (Fed. Cir. 2002); *B. Braun Med., Inc. v. Abbott Labs.*, 124 F.3d 1419, 1426 (Fed. Cir. 1997); *Ariz. Cartridge Remanufacturers Ass’n v. Lexmark Int’l, Inc.*, 290 F. Supp. 2d 1034, 1043 (N.D. Cal. 2003).

⁶¹ 553 U.S. 617 (2008).

⁶² *Id.* at 621. A product *P* “practices” company *X*’s patent if *X* has patent rights to *P*.

⁶³ *Id.* at 623.

⁶⁴ *Id.* at 624.

⁶⁵ *Id.* at 638. The Court explained that the components “substantially embodied the LGE patents because they had no reasonable noninfringing use and included all the inventive aspects of the patented methods.” *Id.*

⁶⁶ *Id.*

⁶⁷ *Id.*

Quanta firmly established that a sale that did not restrict the rights of the immediate buyer triggered patent exhaustion, but it did not expressly address the conditional sales doctrine. Although some commentators⁶⁸ and at least one court⁶⁹ have interpreted *Quanta* to cut off patentees' ability to limit exhaustion through a conditional sale, another court has recognized that *Quanta* did not implicate the conditional sales doctrine,⁷⁰ and many scholars have agreed.⁷¹ Indeed, the LGE-Intel licensing agreement did not place *any* restrictions on Intel's ability to make, use, or sell LGE's patented products,⁷² distinguishing *Quanta* from any case in which the patentee restricts the licensee's rights at the time of sale.

The *Bowman* Court did not take the opportunity to apply the conditional sales doctrine. The Court could have ruled that Monsanto limited exhaustion of its seeds by selling them pursuant to a licensing agreement. Monsanto's sales were conditional: the farmers purchased a limited right to use and sell the patented seeds for purposes *other than replanting*.⁷³ This condition was passed on downstream to Bowman, because "the farmers could not convey to the grain dealers" — and the grain dealers to Bowman — "what they did not possess themselves."⁷⁴ It was as though Monsanto's seeds bore an indelible "no replanting" sticker — a sticker absent in *Quanta*, where the licensing agreement placed no restrictions on the licensee's rights. Rather than apply the conditional sales doctrine, however, the Court decided the case on exhaustion grounds, ruling that Monsanto's patent rights were not exhausted because Bowman made *new* Roundup Ready seeds through replanting.⁷⁵

The Court reached the correct outcome but via the wrong route for at least two reasons. First, the Court's opinion obfuscates the role of the licensing agreement. Monsanto sold its seeds pursuant to an ex-

⁶⁸ See, e.g., Herbert Hovenkamp, *Innovation and the Domain of Competition Policy*, 60 ALA. L. REV. 103, 111 n.35 (2008); Thomas G. Hungar, *Observations Regarding the Supreme Court's Decision in Quanta Computer, Inc. v. LG Electronics, Inc.*, 49 IDEA 517, 520 (2009); Jared Tong, *You Pay for What You Get: The Argument for Allowing Parties to Contract Around Patent Exhaustion*, 46 HOUS. L. REV. 1711, 1723 (2010).

⁶⁹ *Static Control Components, Inc. v. Lexmark Int'l, Inc.*, 615 F. Supp. 2d 575, 585–86 (E.D. Ky. 2009).

⁷⁰ See *Monsanto Co. v. Scruggs*, No. 3:00CV-161-P-D, 2009 WL 536833, at *1 (N.D. Miss. Mar. 3, 2009).

⁷¹ See, e.g., Robert W. Gomulkiewicz, *The Federal Circuit's Licensing Law Jurisprudence: Its Nature and Influence*, 84 WASH. L. REV. 199, 225 (2009); David McGowan, *Reading Quanta Narrowly*, PATENTLY-O (July 27, 2008, 2:17 PM), <http://www.patentlyo.com/patent/2008/07/reading-quanta.html>.

⁷² See *Quanta*, 553 U.S. at 623.

⁷³ See *Bowman*, 133 S. Ct. at 1764.

⁷⁴ *Monsanto Co. v. Bowman*, 686 F. Supp. 2d 834, 839 (S.D. Ind. 2009).

⁷⁵ *Bowman*, 133 S. Ct. at 1766.

press licensing agreement, and the Court did not make clear whether its interpretation of exhaustion was limited to cases with such agreements. The district court had specifically distinguished past cases of patent exhaustion by observing that transactions in those cases were effectuated “without sufficient conditions to protect . . . patent rights,”⁷⁶ indicating that the licensing agreement was pivotal to its holding. Monsanto’s licensing agreement at first appears to have been much less significant for the Supreme Court: in a footnote, the Court indicated that, even in the absence of an express license, “the farmer might reasonably claim that the sale came with an implied license.”⁷⁷ This dictum suggests that the Court was prepared to find that the no-copy exception protected patentees like Monsanto with or without a licensing agreement. Later in the opinion, however, the Court observed that its holding will not “prevent farmers from making appropriate use of the Roundup Ready seed they buy” in part because Monsanto “does not — could not realistically — preclude all planting” and “sells Roundup Ready seed to farmers with a license to use it to make a crop.”⁷⁸ The Court was thus satisfied that its “rule in this context . . . will allow farmers to benefit from Roundup Ready, even as it rewards Monsanto for its innovation.”⁷⁹ This discussion suggests that the Court’s patentee-friendly interpretation of exhaustion depended, at least in part, on the fact that Monsanto’s licensing agreement reasonably permitted farmers to plant Roundup Ready seeds once. These conflicting signals obfuscate the role of the licensing agreement in the Court’s interpretation of exhaustion, leaving patentees and users of patented self-replicating technologies unsure about the legal significance of their licensing agreements and lower courts without a guiding principle for resolving disputes.

Second, exhaustion doctrine is ill suited to address the challenges posed by self-replicating technologies. As the Court implicitly acknowledged in its exhaustion analysis, the self-replicating nature of Monsanto’s seeds presented an interesting puzzle: On the one hand, exhaustion means that farmers could use purchased seeds as they please, and planting is arguably one of “the normal way[s]” farmers *use* seeds.⁸⁰ On the other hand, this normal use naturally results in *new* seeds, in violation of the principle that buyers cannot create new copies of patented inventions.⁸¹ As Professor Jeremy N. Sheff explains, the application of the use/make distinction — a distinction at the heart of

⁷⁶ *Monsanto*, 686 F. Supp. 2d at 839.

⁷⁷ *Bowman*, 133 S. Ct. at 1767 n.3.

⁷⁸ *Id.* at 1768.

⁷⁹ *Id.*

⁸⁰ *Id.*

⁸¹ *Id.* at 1766.

exhaustion doctrine — “ignores the elephant in the room” in cases of self-replicating technologies: “[T]he only and intended ‘use’ of seeds or any other self-replicating technology necessarily ‘makes’ a newly infringing article — this is the defining characteristic of self-replicating technologies.”⁸² Indeed, Monsanto’s licensing agreement explicitly permitted “farmers to plant, grow (i.e., *make*), harvest, and sell” Monsanto’s patented seeds once.⁸³ What the agreement restricted was the farmers’ “commercial *uses* of those patented articles, the *making* of which is explicitly authorized.”⁸⁴ This interpretive puzzle cannot be resolved analytically: “[S]elf-replicating technologies, by their nature, destabilize the use/make distinction and render it an inadequate tool for defining the scope and limits of patent rights.”⁸⁵

Instead, the Court tried to resolve this challenge by appealing to policy: if planting were a mere use, “[t]he grower could multiply his initial purchase, and then multiply that new creation, *ad infinitum* — each time profiting from the patented seed without compensating its inventor.”⁸⁶ But there is no clear way to extend this policy rationale to other self-replicating technologies. The Court ruled that exhaustion did not apply in the case of genetically modified seeds; would it apply in the case of a computer program whose use automatically results in a new copy of the program? The Court acknowledged that an “article’s self-replication might occur outside the purchaser’s control” or “might be a necessary but incidental step in using the item for another purpose,” but explicitly declined to address these situations.⁸⁷ The exhaustion doctrine is ill equipped to resolve these challenges.

Although the conditional sales doctrine is not a perfect substitute for exhaustion,⁸⁸ courts should apply the doctrine in cases with express

⁸² Jeremy N. Sheff, *Self-Replicating Technologies*, 16 STAN. TECH. L. REV. 229, 238 (2013); see also Yee Wah Chin, *Inexhaustible: Patents on Self-Replicating Technologies*, LANDSLIDE, May–June 2011, at 12, 13 (“[I]n the context of self-replicating technology, it is unclear how the patent-exhaustion/first-sale doctrine should apply.”); Kevin Rodkey, *Exhaustion and Validity of Single-Use Licenses for Transgenic Seeds in the Wake of Quanta v. LG Electronics*, 19 FED. CIR. B.J. 579, 590 (2010) (“[S]elf-replicating technologies present a unique set of challenges for companies who wish to avoid the exhaustion doctrine.”); Jason Savich, *Monsanto v. Scruggs: The Negative Impact of Patent Exhaustion on Self-Replicating Technology*, 22 BERKELEY TECH. L.J. 115, 115 (2007) (explaining that inventors of self-replicating technologies “face a unique challenge when trying to make a return on their investments . . . because every consumer turns into a potential producer”).

⁸³ Sheff, *supra* note 82, at 238.

⁸⁴ *Id.*

⁸⁵ *Id.*

⁸⁶ *Bowman*, 133 S. Ct. at 1767.

⁸⁷ *Id.* at 1769.

⁸⁸ Despite exhaustion doctrine’s weaknesses in this context, courts may need to apply this doctrine in the few cases without express licensing agreements. If the parties never bargained to limit exhaustion of the patentee’s rights through a contract, then the conditional sales doctrine would not apply. Such failure to bargain could occur from inadvertence, failure to reach a compromise,

licensing agreements. Whenever parties have successfully bargained to allocate rights to a self-replicating technology, courts should give effect to the parties' intentions, recognizing that each self-replicating technology presents unique challenges that cannot be addressed with a blanket judicial rule. This approach would not only create certainty and consistency, but also fulfill the purpose of the exhaustion doctrine: to ensure that the buyer can control those items, and only those items, for which the patentee received a reward.⁸⁹ In the case of non-replicating technologies, the exhaustion doctrine reflects the principle that "once a user owns the chattel, that user's interest in free alienation of personal property outweighs the patentee's interest in further recouping the investment."⁹⁰ When the chattel can generate multiple embodiments of itself, however, there is a risk that the consumer will remake it, undercutting the patent's value and "heighten[ing] the patentee's interest in policing the purchaser's exploitation of the chattel's self-replicating qualities."⁹¹ Whether this risk exists and the extent to which it threatens the patentee's rights depend on the nature of the self-replicating technology. Buyers and patentee-sellers — the parties that are most knowledgeable about the self-replicating technology at issue — may well find that exhaustion doctrine does not fit their needs. For example, a software company may seek to sell its patented computer program with a licensing agreement that permits the program to be copied without limit on a single device but forbids copying to all other devices. To encourage the creation, development, and commercialization of new inventions, the Court ought to offer innovators the opportunity to decide which bundle of rights to their inventions to sell at which price.

A robust conditional sales doctrine would enable buyers and sellers of self-replicating technologies to agree to different sets of limitations on patent exhaustion within the scope of the patent right. The no-copy principle may have sufficiently incentivized innovation in the day of mostly mechanical inventions, but there may not be a one-size-fits-all exception to exhaustion that protects modern patentees of self-replicating technologies.

or even reliance on the exhaustion doctrine. In cases without an express contract, courts could fall back on the exhaustion doctrine and the no-copy exception to find that reasonable terms were implied in the transaction. *See id.* at 1767 n.3. As the *Bowman* Court observed, however, such cases are "unlikely to arise." *Id.*

⁸⁹ *See Bowman*, 133 S. Ct. at 1766.

⁹⁰ Douglas Fretty, Note, *Both a License and a Sale: How to Reconcile Self-Replicating Technology with Patent Exhaustion*, 5 J. BUS. ENTREPRENEURSHIP & L. 1, 2 (2011).

⁹¹ *Id.*