

11-15-2011

Both a License and a Sale: How to Reconcile Self-Replicating Technology with Patent Exhaustion

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Recommended Citation

Douglas Fretty, *Both a License and a Sale: How to Reconcile Self-Replicating Technology with Patent Exhaustion*, 5 J. Bus. Entrepreneurship & L. Iss. 1 (2011)

Available at: <https://digitalcommons.pepperdine.edu/jbel/vol5/iss1/1>

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**NOTE: BOTH A LICENSE AND A SALE:
HOW TO RECONCILE SELF-REPLICATING
TECHNOLOGY WITH PATENT
EXHAUSTION**

DOUGLAS FRETTY

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ABSTRACT

Too many authorities view the transfer of patented self-replicating technology (SRT) as either a pure license or a pure sale. If a pure license exists, the patentee can impose post-transfer restrictions on the product’s use, frustrating the policy goals of limited monopoly and free alienability of chattels. If a pure sale is triggered, however, the patentee loses all rights through patent exhaustion, allowing the purchaser to replicate the chattel at will. Sensitive to this latter argument, several courts have enforced Monsanto Company’s “bag tag” seed licenses, which require Monsanto’s farmer customers to destroy all second-generation seed. Urging a middle path, this Note argues that the conveyance of SRT to an end-user must sever the patentee’s control over the chattel’s use. At the same time, the patentee remains entitled to a reasonable royalty on future

replications of the product. This Note explores the doctrinal and policy benefits of such a reform.

I. INTRODUCTION

Patent exhaustion, the rule that a patentee loses rights in a patent-practicing good upon its authorized sale to a consumer, is tormented by uncertainty when the good can self-replicate. The trouble arises because the rationale for patent exhaustion is 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.¹ In addition, many scholars and judges view post-sale restrictions on use as straying outside the scope of the patent grant, violating the Patent Act's goals of limited monopoly.² When the conveyed chattel can self-replicate, however, a risk arises that the consumer will remake the good, prejudicing the patent's value. Such risk, many argue, heightens the patentee's interest in policing the purchaser's exploitation of the chattel's self-replicating qualities.³ An example of the phenomena is Monsanto Company's ("Monsanto") licensing of genetically modified, patent-embodied seeds, chattel that by its nature self-replicates. Monsanto requires its farmer customers to become Monsanto "licensees" and perpetually restricts the farmers' ability to replicate the seeds. Three jurisdictions have upheld such licenses, ruling that the conveyance of Monsanto-licensed seed to a farmer did not trigger patent exhaustion.⁴ Notwithstanding, the current exhaustion law is ill-equipped to balance the equities between patentee and user when self-replicating technology (SRT) is involved: courts either invalidate the post-transfer restrictions and jeopardize the patent's value,⁵ or enforce the restrictions and effectively gut the exhaustion rule.⁶ One solution in the Monsanto context is to invalidate the licensing as a tying in violation of antitrust law; a note by Tempe Smith investigates how Monsanto could avoid this antitrust liability.⁷ Smith concludes that Monsanto *must* allow farmers to plant replicated seeds but *may* charge the farmers a technology fee for the right to do so.⁸ Such a licensing rule has not received comprehensive examination in

¹ See generally Elizabeth I. Winston, *Why Sell What You Can License? Contracting Around Statutory Protection of Intellectual Property*, 14 GEO. MASON L. REV. 93 (2006).

² Harold C. Wegner, *Post-Quanta Post-Sale Patentee Controls*, 7 J. MARSHALL REV. INTELL. PROP. L. 682, 688–92 (2008).

³ See Jason Savich, Note, *Monsanto v. Scruggs: The Negative Impact of Patent Exhaustion on Self-Replicating Technology*, 22 BERKELEY TECH. L. J. 115 (2007).

⁴ See, e.g., *Monsanto Co. v. Scruggs*, 345 F. App'x 552 (Fed. Cir. 2009); *Monsanto Co. v. Scruggs*, 459 F.3d 1328 (Fed. Cir. 2006); *Monsanto Co. v. McFarling*, 302 F.3d 1291 (Fed. Cir. 2002); *Monsanto Co. v. Scruggs*, 342 F. Supp. 2d 584 (N.D. Miss. 2004).

⁵ *Static Control Components, Inc. v. Lexmark Int'l, Inc.*, 2008 U.S. Dist. LEXIS 79805 (E.D. Ky. Oct. 3, 2008).

⁶ *Mallinckrodt, Inc. v. Medipart, Inc.*, 976 F.2d 700, 709 (Fed. Cir. 1992).

⁷ Tempe Smith, Note, *Going to Seed?: Using Monsanto as a Case Study to Examine the Patent and Antitrust Implications of the Sale and Use of Genetically Modified Seeds*, 61 ALA. L. REV. 629, 640–41 (2010); see *infra* Part II, sect C for discussion of tying.

⁸ Smith, *supra* note 7, at 647–48.

the patent exhaustion context. In this Note I argue that an SRT doctrine that exhausts the patentee's rights in the physical chattel, but preserves the patentee's rights in the exploitation of its patent claims, would affect much-needed reform in this fraught area. Part II details why licenses such as Monsanto's offend fundamental public policy. The next three Parts propose three exhaustion benefits of a structure such as Smith's: 1) reconciling SRT with the full line of Supreme Court patent exhaustion precedent, 2) resolving the tension in the districts' and Federal Circuit's decisions, and 3) reforming the broader first-sale doctrine.

II. THE CONTROVERSY OF MONSANTO'S TRANSGENIC-SEED LICENSES

The disconnect between patent exhaustion and SRT is embodied in the case of Monsanto's "Roundup Ready"® seeds. Monsanto makes the world's best-selling weed-killer, Roundup, whose active ingredient is glyphosate.⁹ Glyphosate's drawback in farming is that it cannot discriminate between crops and weeds; it kills both.¹⁰ In 1996 Monsanto developed a process of inserting genes into the seed germplasm that would render the resulting plant immune to Roundup.¹¹ Monsanto received patents on the Roundup-resistant genes and the insertion process, then licensed the technology to about 200 seed producers in the United States.¹² This first Roundup Ready® technology was limited to soybean seeds; in 1998 Monsanto patented and licensed a parallel technology in cotton seeds.¹³ Since then, seed producers have been practicing the Monsanto patents to generate seeds for sale to farmers,¹⁴ with profound effects. Before 1996, no crops in the United States were grown by transgenic seeds; today, Monsanto's transgenic soybean seeds represent 95% of the country's soybean market.¹⁵ The company's revenues approached \$6.5 billion in 2005.¹⁶ Though researchers have made progress developing crop traits resistant to other forms of herbicide,¹⁷ these rival technologies have evidently not inhibited Monsanto's market power. This suggests that Monsanto's market position is embedded enough to preclude the emergence of generic glyphosate-resistance seeds after the patent expires.¹⁸

⁹ Savich, *supra* note 3, at 117.

¹⁰ *Monsanto Co. v. Scruggs*, 342 F. Supp. 2d 584, 587 (N.D. Miss. 2004).

¹¹ *Id.*

¹² *Monsanto Co. v. McFarling*, 302 F.3d 1291, 1293 (Fed. Cir. 2002).

¹³ *Monsanto Co. v. Scruggs*, 459 F.3d 1328, 1333 (Fed. Cir. 2006).

¹⁴ Jon Sievers, Note, *Not So Fast My Friend: What the Patent Exhaustion Doctrine Means to the Seed Industry After Quanta v. LG Electronics*, 14 *DRAKE J. AGRIC. L.* 355, 362 (2009).

¹⁵ Michael Stumo, *Anticompetitive Tactics in AG Biotech Could Stifle Entrance of Generic Traits*, 15 *DRAKE J. AGRIC. L.* 137, 139 (2010).

¹⁶ Savich, *supra* note 3, at 123–24.

¹⁷ See Ganesh M. Kishore et al., *History of Herbicide-Tolerant Crops, Methods of Development and Current State of the Art—Emphasis on Glyphosate Tolerance*, 6 *WEED TECH.* 626, 626–34 (1992).

¹⁸ See Stumo, *supra* note 15, at 139, 143.

A. “Bag Tags:” *How the Farmer Lost Title to Second-Generation Seed*

Monsanto has employed a controversial licensing structure to protect its patented genes and processes. Traditionally, farmers who purchased seeds have always been free to plant second-generation seeds, which grow naturally on the crops.¹⁹ This tradition is expressly preserved by the Plant Variety Protection Act (PVPA). Under the Act, seed producers who cross-breed seeds to enhance desirable characteristics can prevent others from exploiting that cross-breeding.²⁰ However, the PVPA contains a “farmer’s exception” that gives farmers a proprietary right in their second-generation seeds.²¹ Aware that farmers who purchased Roundup Ready® seeds would be free to replant under the current law, Monsanto imposed a two-tiered licensing scheme on the distribution of its seeds.²² The first tier is the license to the seed producers who practice the genetic patents in growing seeds.²³ Seed producers pay Monsanto \$6.50 for every fifty-pound bag conveyed to a farmer,²⁴ and the seed producers agree not to transfer seed to farmers in fee simple, but instead through licenses.²⁵ As for the second tier, farmers must agree to “bag tag” licenses—so called because they are attached to the seed bags—to acquire the seeds.²⁶ The bag tag requires farmers to pay Monsanto another \$6.50-per-bag technology fee; this is in addition to the royalty fee Monsanto receives from the seed producer and the retail price the seed producer charges farmers.²⁷ In addition, the bag tag prohibits farmers from saving second-generation seeds,²⁸ effectively requiring the farmer to destroy the seeds

¹⁹ Smith, *supra* note 7, at 639 (“In an amicus brief in support of [a farmer who saved second-generation seed], the Center for Food Safety argued that by not allowing farmers to save seed the courts were substantially altering the way that farmers throughout the country use seed.”).

²⁰ 7 U.S.C.S. § 2541 (LexisNexis 2011). See Debra L. Blair, Note, *Intellectual Property and Its Impact on the U.S. Seed Industry*, 4 *DRAKE J. AGRIC. L.* 297, 312 (1999) (“To be eligible for protection under the PVPA . . . [1] the plant must be new; [2] the plant must be a distinct or novel variety . . . ; [3] the plant must be uniform and stable; [4] the plant must reproduce sexually; [5] a complete description of the plant . . . must be provided; and [5] a deposit of the seed must be made for viability testing.”).

²¹ 7 U.S.C.S. § 2543 (LexisNexis 2011) (stating that no liability exists under the PVPA where a farmer purchased seeds from the seed variety’s owner and saved second-generation seeds for future planting).

²² Savich, *supra* note 3, at 119.

²³ *Monsanto Co. v. Scruggs*, 342 F. Supp. 2d 584, 587 (N.D. Miss. 2004).

²⁴ *Monsanto Co. v. McFarling*, 302 F.3d 1291, 1293 (Fed. Cir. 2002).

²⁵ Sievers, *supra* note 14, at 362.

²⁶ *Scruggs*, 342 F. Supp. 2d at 588–89.

²⁷ Smith, *supra* note 7, at 631.

²⁸ One Monsanto bag tag license requires the farmer to agree:

To use the seed containing the Monsanto gene technologies for planting commercial crop only in a single season. To not supply any of this seed to any other person or entity for planting, and to not save any crop produced from the seed for replanting, or supply saved seed to anyone for replanting. To not use the seed or provide it to anyone for crop breeding, research, generation of herbicide registration data or seed production.

Sievers, *supra* note 14, at 632 (quoting Mark D. Janis & Jay P. Kesan, *Intellectual Property Protection for Plant Innovation: Unresolved Issues After J.E.M. v. Pioneer*, 20 *NAT. BIOTECHNOLOGY* 1161, 1163 (2002)).

every season and repurchase them at full retail price.²⁹

When a farmer violates the license, Monsanto sues not for breach of contract but for outright patent infringement,³⁰ a more lucrative cause of action thanks to the possibility of punitive and treble damages.³¹ As of 2005, Monsanto collected over \$15 million in damages from farmers.³² Today, many farming communities see little choice but to abandon their traditional seed-saving practice and comply with the Monsanto license.³³ Practitioner Michael Stumo argues that, based on the high startup and regulatory costs of bringing a transgenic seed to market, Monsanto's practices are unlikely to be checked by price competition, absent certain legal reforms.³⁴ Professor Peter Carstensen's research buttresses this theory: the planting of second-generation seeds "has almost entirely disappeared from soybeans and cotton,"³⁵ indicating that Monsanto customers are not seeking a rival.

The question that divides IP commentators is whether the Monsanto licensing scheme violates patent exhaustion.³⁶ Described in the 1873 Supreme Court opinion *Adams v. Burke*, the principle is this: "[W]hen the patentee . . . sells a machine or instrument whose sole value is in its use, he receives the consideration for its use and the parts with the right to restrict that use."³⁷ In Part III, I argue that the Court's default stance is that the patentee's rights in a patent-embodiment chattel are exhausted when the chattel passes from the manufacturer to the end-user, so long as the manufacturer's license permitted the conveyance.³⁸ The one exception, arguably, is that the patentee can restrict the purchaser's use to further a consumer-welfare policy justification.³⁹ Most transfers of patented goods fall clearly inside or outside the rule.⁴⁰ Yet chattels that self-replicate, such as

²⁹ See Stumo, *supra* note 15, at 141.

³⁰ See *Monsanto Co. v. McFarling*, 302 F.3d 1291, 1294 (Fed. Cir. 2002); *Scruggs*, 342 F. Supp. 2d at 589.

³¹ See Caprice L. Roberts, *Intellectual Property Remedies: The Case for Restitution and Unjust Enrichment Remedies in Patent Law*, 14 LEWIS & CLARK L. REV. 653, 679 (2010); Symposium, *Monsanto v. Scruggs: The Scope of Downstream Licensing Restrictions*, 16 FORDHAM INTELL. PROP. MEDIA & ENT. L.J. 1025, 1030 (2006).

³² Winston, *supra* note 1, at 103.

³³ Symposium, *supra* note 31, at 1046.

³⁴ See generally, Stumo, *supra* note 15.

³⁵ See *supra* note 33.

³⁶ Compare Savich, *supra* note 3, with Winston, *supra* note 1.

³⁷ *Adams v. Burke*, 84 U.S. 453, 455 (1873).

³⁸ See generally *Quanta Computer, Inc. v. LG Elecs., Inc.*, 553 U.S. 617 (2008) (finding exhaustion of patented microprocessors where manufacturer was authorized to sell the processors); *United States v. Unisys Lens Co.*, 316 U.S. 241 (1942) (invalidating patentee's license controlling conduct of patented prescription lens purchasers); *Keeler v. Standard Folding Bed Co.*, 157 U.S. 659 (1895) (following *Burke*, 84 U.S. at 453); *Burke*, 84 U.S. at 453 (1873) (refusing to enforce manufacturer's territorial restriction against the manufacturer's customers); See *infra* Part III.

³⁹ See *Gen. Talking Pictures Corp. v. W. Electric Co.*, 304 U.S. 175 (1938) (upholding patentee's authority to restrict the class of purchasers to whom manufacturer could sell).

⁴⁰ Typically a transfer fails to trigger exhaustion only where 1) the sale deprived the patentee of its royalty (see *Ardente, Inc. v. Shanley*, 2010 U.S. Dist. LEXIS 11674, at *18–20 (N.D. Cal. Feb. 10, 2010); *Discovision Ass's. v. Toshiba Corp.*, 2009 U.S. Dist. LEXIS 41662, at *26–30 (S.D.N.Y. May

seeds, occupy a twilight zone. Structurally, the conveyance of the chattel from manufacturer to user should extinguish patentee rights.⁴¹ Functionally, however, the purchaser of SRT is not only a user but also an accidental maker of the good. Even though a farmer who saves seed does so only for personal use, that use certainly causes the patentee to lose sales—the farmer becomes his or her own supplier. As the magnitude of the loss balloons, so does the patentee’s colorable justification for restricting post-sale use, such as seed-saving.⁴²

For marginal cases such as this, resort should be made to the policies that have girded the exhaustion doctrine since its inception. The competing property-right policies most implicated in exhaustion are the patentee’s right to exclude others from trespassing on the claim language,⁴³ counterpoised against a purchaser’s longstanding common-law right to alienate freely his movable property.⁴⁴ Serving both property and competition goals is the principle that a patentee cannot assert IP rights that do not appear in the claim language:⁴⁵ in a property sense, this is like the homeowner who uses self-help against his neighbor’s trespassers;⁴⁶ and in the antitrust sense, it is like the competitor who leverages his advantage in one market to seize control of another.⁴⁷ From a pure competition standpoint, scholars warn that post-sale patentee rights create upward pressure on prices and unnatural output shortages,⁴⁸ outcomes that the Sherman

18, 2009)) or 2) the license expressly forbade the transfer (*see* *New Medium, LLC, v. Barco N.V.*, 612 F. Supp. 2d 958, 961–64 (N.D. Ill. 2009)).

⁴¹ *See Quanta*, 553 U.S. at 625–28 (reciting the Court’s line of patent exhaustion precedent and identifying the transfer of chattel from manufacturer to purchaser as the moment of exhaustion in each).

⁴² As the Federal Circuit described this dilemma in *Scruggs*, “[t]he fact that a patented technology can replicate itself does not give a purchaser the right to use replicated copies of the technology.” *Monsanto Co. v. Scruggs*, 459 F.3d 1328, 1336 (Fed. Cir. 2006).

⁴³ Though Professor Mossoff concedes that the “right to exclude” is commonly invoked as the essential patent right, he concludes that this characterization of patent rights overlooks other rights that nineteenth-century precedent granted patentees. Adam Mossoff, *Exclusion and Exclusive Use in Patent Law*, 22 HARV. J.L. & TECH. 321, 324–26 (2009).

⁴⁴ Supporting a robust first sale rule in the copyright context, Professor Winston quotes a U.S. Copyright Office report, which finds this fundamental U.S. legal principle: “[R]estrictions on the alienation of tangible property are to be avoided in the absence of clear congressional intent to abrogate this principle.” Winston, *supra* note 1, at 103 (quoting U.S. COPYRIGHT OFFICE, A REPORT OF THE REGISTER OF COPYRIGHTS PURSUANT TO §104 OF THE DIGITAL MILLENNIUM COPYRIGHT ACT, vii (2001), available at <http://www.copyright.gov/reports/studies/dmca/sec-104-report-vol-1.pdf>).

⁴⁵ *See Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 535 U.S. 722, 734 (2002) (holding that the patentee may assert property rights only in what is claimed in the final patent grant); *United States v. Unis Lens Co.*, 316 U.S. 241, 251 (1942) (finding that the Supreme Court has long sought “to give effect to the public policy which limits the granted monopoly strictly to the terms of the statutory grant.”).

⁴⁶ The landmark article proposing that delineations among property rights are fundamental to establishing and preserving social relationships is Thomas C. Grey, *The Disintegration of Property*, in *MODERN UNDERSTANDINGS OF LIBERTY AND PROPERTY* (Richard A. Epstein ed., 2000).

⁴⁷ The classic cases of this kind are *International Salt Co. v. United States*, 332 U.S. 392 (1947) (finding defendant improperly required lessees of its patented salt-processing machine to allow the defendant to match salt retailer’s prices) and *United States v. Loew’s*, 371 U.S. 38 (1962) (holding that in licensing motion picture rights to broadcasters, defendant improperly tied “A” pictures to undesirable “B” pictures).

⁴⁸ *See Bonito Boats, Inc. v. Thunder Craft Boats, Inc.*, 489 U.S. 141, 146 (1989) (emphasizing that a fundamental patent policy is the avoidance of monopolies); Harry First, *The IP Grab: The Struggle*

Act, Clayton Act, and Federal Trade Commission Act have signaled are offensive to a free market.⁴⁹ A leading commentator on the subject, Professor Harry First, argues that use restrictions after a first sale have the potential to fix prices, no less than other price-controls that have been found per se illegal.⁵⁰ It is against this policy backdrop that authors have weighed in on Monsanto's licenses, each invoking those considerations that either favor or rebuke the company's practice.

B. A Snapshot of the "Bag Tag" Debate

Most commentators react to the Monsanto seed dilemma in one of two ways: they believe that the transfer of SRT to the user is either a pure license, in which case the patentee's rights may be extended through contract, or a pure sale, in which case those rights expire. The former camp exerts much emphasis on the patent goal of excluding non-patentees from exploiting the patent, reasoning that otherwise the Patent Act's power to motivate innovation is compromised.⁵¹ Jason Savich argues that without post-transfer licenses, "free-riders who do not bear the costs of [research and development]"⁵² could "immediately go into direct competition with the inventor . . ."⁵³ While one farmer cannot reasonably be characterized as a Monsanto "competitor" (the farmer is not licensing or selling the seed), an entire community of seed-saving farmers can amount to a new entrant to the market, who is dramatically undercutting Monsanto's price. Similarly, Jon Sievers argues that farmers who plant second-generation seed are not so much seed users as *makers*, observing, "Patent law has long established that the authorized use of the invention does not authorize the right to make the product."⁵⁴ James Beard concludes that when the consumer community becomes the patentee's de facto competitor, the patentee is forced to charge a higher up-front price for the product in order to recoup his investment.⁵⁵ In the Monsanto context, without its bag tag licenses Monsanto might be forced to charge seed producers much more than the current technology royalties, which in turn would inflate retail prices. This school of commentators concludes that the only way to avoid such price-gouging is to preserve the status quo.

Between Intellectual Property Rights and Antitrust: Controlling the Intellectual Property Grab: Protect Innovation, Not Innovators, 38 RUTGERS L. J. 365, 386–90 (2007); Yuichi Watanabe, *The Doctrine of Patent Exhaustion: The Impact of Quanta Computer, Inc. v. LG Elecs., Inc.*, 14 VA. J.L. & TECH. 273, 275–76 (2009).

⁴⁹ See 6–19 DONALD S. CHISUM, CHISUM ON PATENTS § 19.04 (Supp. 2010).

⁵⁰ First, *supra* note 48, at 387.

⁵¹ Professor Robert Gomulkiewicz has found the practicing of license to be a critical factor in the acceleration of innovation under a patent system. Robert W. Gomulkiewicz, *The Federal Circuit's Licensing Law Jurisprudence: Its Nature and Influence*, 84 WASH. L. REV. 199, 203–08 (2009).

⁵² Savich, *supra* note 3, at 120. See also Sievers, *supra* note 14, at 361 (stating that "in 2005, a small number of seed companies invested more than \$554 million in research and development of seed technologies.").

⁵³ Savich, *supra* note 3, at 127.

⁵⁴ Sievers, *supra* note 14, at 356.

⁵⁵ James Beard, *The Limits of Licensing: Quanta v. LGE and the New Doctrine of Simultaneous Exhaustion*, 2008 UCLA J.L. & TECH. 3, 37 (2008).

At a more abstract level, this position is a critique of the habitually-invoked idea that an IP owner must collect his fee for IP-embodied chattel in one discrete transaction,⁵⁶ what Professor Glen Robinson calls the “one-reward idea.”⁵⁷ Professor Robinson urges a return to the nineteenth-century concept of patent rights as analogous to land rights,⁵⁸ allowing a range of servitudes imposed on subsequent use of the property.⁵⁹ Calling the one-reward formula “empty,” Robinson concludes that a patentee may “take some of its economic rent in the form of limitations on use instead of cash.”⁶⁰ As examined in Part IV, when the Federal Circuit considered two challenges to the Monsanto licenses, *McFarling* and *Scruggs*, the court sided with this bloc of scholars.⁶¹

Others, however, view the Monsanto seed transfer as a pure sale on the theory that patent exhaustion cannot tolerate post-conveyance royalties or restrictions. Professor Mark Patterson concludes that Monsanto’s property rights no longer exist when the seed producer conveys seed to the farmer; instead Monsanto’s only cause of action against seed-saving farmers is breach of contract for flouting the bag tags.⁶² Tod Leaven agrees, reasoning that because “use of the first-generation seed is inseparable from the manufacture of second-generation seed,” the farmer retains his status as an end-user and enjoys the full benefit of patent exhaustion.⁶³ Responding to the argument that invalidating Monsanto’s bag tags would raise prices, farmers argue that the license *currently* allows Monsanto to extract an exorbitant price. In *McFarling*, the plaintiff presented evidence that,

⁵⁶ The Supreme Court in *Univis Lens* considered this concept fundamental to patent exhaustion law, writing,

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.

United States v. *Univis Lens, Co.*, 316 U.S. 241, 251(1942). Professor John Rothchild describes this concept succinctly in the copyright first-sale context: “[O]nce the copyright owner has sold a copy at the price that he has set, he has obtained all the revenue to which the statute entitles him.” John A. Rothchild, *The Incredible Shrinking First-Sale Rule: Are Software Resale Limits Lawful?*, 57 RUTGERS L. REV. 1, 17–18 (2004).

⁵⁷ Glen O. Robinson, *Personal Property Servitudes*, 71 U. CHI. L. REV. 1449, 1496 (2004).

⁵⁸ *Id.* at 1523; *see also* Mossoff, *supra* note 43, at 332–33.

⁵⁹ Robinson reasons that, just as the current owner of Blackacre can impose restrictive covenants on the use of subsequent owners, provided they do not offend public policy, a patentee should be able to impose covenants on the practice of the patent during the patent term. Robinson, *supra* note 57, at 1496–97.

⁶⁰ *Id.*

⁶¹ *Monsanto Co. v. Scruggs*, 459 F.3d 1328, 1333 (Fed. Cir. 2006); *Monsanto Co. v. McFarling*, 302 F.3d 1291, 1293, (Fed. Cir. 2002); *see infra* Part IV.

⁶² Symposium, *supra* note 31, at 1029.

⁶³ Tod Michael Leaven, Recent Development, *The Misinterpretation of the Patent Exhaustion Doctrine and the Transgenic Seed Industry in Light of Quanta v. LG Electronics*, 10 N.C. J.L. & TECH. 119, 138 (2008); Yina Dong, *A Patent Exhaustion Exposition: Situating Quanta v. LGE in the Context of Supreme Court Jurisprudence*, 2010 STAN. TECH. L. REV. 2, 34 (2010) (quoting *Keeler v. Standard Folding Bed Co.*, 157 U.S. 659, 666 (1895)).

without the bag tag, a farmer would save seventeen dollars per fifty-pound bag.⁶⁴

Reacting to patentees' abrogation of patent exhaustion, Professor Elizabeth Winston advocates allowing courts to invalidate "sham" licenses, that is, licenses that have the attributes of pure sales.⁶⁵ According to Winston, courts should test whether a license is in fact a sale by balancing the traditional contract-construction factors such as industry custom, trade usage, course of dealing, and parties' relative bargaining powers.⁶⁶ Winston also believes that "extremely expensive" and "readily reusable" products raise a presumption in favor of licensing, whereas "perishable, inexpensive, or . . . single-use" items favor pure sales.⁶⁷ Applied to Monsanto's transgenic seeds, however, these factors point in opposing directions. Trade usage in the farming industry has historically favored seed-saving as a cherished cultural norm.⁶⁸ However, between 1996 and now, the course of dealing among farmers, seed producers, and Monsanto has reinforced the legitimacy of the Monsanto licenses.⁶⁹ Furthermore, whereas transgenic seeds are perishable and fairly inexpensive, they must be considered "readily reusable" because they self-regenerate.

C. *Why Modern Patent Exhaustion Fails to Account for SRT*

Parts III and IV of this Note explain why, doctrinally, neither the pure-sale approach nor the pure-license approach is faithful to the Supreme Court's patent exhaustion precedent. But how well do these opposing viewpoints serve the social reasons behind exhaustion? While the pure-sale approach clashes with certain patent policies, I find the unchecked approval of Monsanto's licenses by far the greater danger to the fundamental property and competition goals embodied in the exhaustion rule. From a property viewpoint, the Monsanto license shrinks the farmers' bundle of rights to a level unobserved since the patent system began.⁷⁰ Monsanto's attempt to eliminate any vestige of a farmer's ownership interest in seed has proven effective, as the "millennia-old"⁷¹ tradition of seed-saving has all but disappeared in soybean and cotton. In addition, because the property interests that the farmer loses are automatically captured by Monsanto, the licenses sharply violate the policy of limiting a patentee's monopoly to the four corners of its

⁶⁴ Savich, *supra* note 3, at 128 (citing Corrected Brief of Appellant at 5–6, *Monsanto Co. v. McFarling*, 363 F.3d 1336 (Fed. Cir. 2004) (No. 03-1177)). Savich counters that, "[w]hile the initial costs of Roundup Ready® seed are higher for farmers, farmers make other economic gains in the form of reduced labor for pest and weed control as well as improved crop yields." *Id.* at 129. Of course, one could also observe that Monsanto directly benefits from farmers' planting Roundup Ready® seeds, even in the second generation, because those farmers are buying more Roundup.

⁶⁵ Winston, *supra* note 1, at 121.

⁶⁶ *Id.* at 123.

⁶⁷ *Id.* at 124.

⁶⁸ Keith Aoki, *Weeds, Seeds & Deeds: Recent Skirmishes in the Seed Wars*, 11 *CARDOZO J. INT'L & COMP. L.* 247, 255 (2003).

⁶⁹ Farmers have almost entirely abandoned seed-saving in the soybean and cotton industries. Symposium, *supra* note 31, at 1046.

⁷⁰ See generally, Aoki, *supra* note 68.

⁷¹ *Id.* at 255.

patent.⁷² It is true that a fraction of what the farmer loses colorably reads on Monsanto's patent—the practicing of genetic-engineering claims.⁷³ Yet the rest of the farmer's lost property is in the seed's natural traits, traits in which Monsanto has no legitimate property interest.⁷⁴ The situation raises dire competition problems: in Professor First's estimation, courts' "allow[ing] the patentee to impose whatever restrictions will maximize his returns"⁷⁵ empowers companies to charge "monopoly rents."⁷⁶ In Monsanto's case, because Monsanto's fees under the license are not inspiring price-rivalry from other companies, the company's rent-seeking is a particularly acute harm to consumer welfare. In addition, First's competition research indicates that when a patent rule allows rampant rent-seeking, the patentee is receiving not compensation for innovation but a windfall. Removing that windfall, according to First, would not disturb the innovation incentive that the Patent Act envisions.⁷⁷ When courts and scholars caution that invalidation of the Monsanto licenses would "eviscerate" Monsanto's power to recover its costs,⁷⁸ they assume that the only two options are to preserve the status quo or to grant farmers a fee simple title.⁷⁹ In advocating the former, they ignore the licenses' repugnance to centuries-old principles.

Fortunately, there is an alternative to the license/sale dichotomy. Tempe Smith, then a law student at the University of Alabama Law School, examined an antitrust suit against Monsanto alleging that the bag tag licenses were an illegal tying arrangement. Smith concludes that the license is likely illegal under the Sherman Act, because Monsanto is tying its patented matter (the genes and gene-inserting process) to a matter in which it has no property rights (natural seed characteristics).⁸⁰ Citing Monsanto's licensing practices outside the U.S., Smith

⁷² The policy can be traced throughout not only patent exhaustion precedent but also unfair competition precedent. See *Aro Mfg. Co. v. Convertible Top Replacement Co.*, 365 U.S. 336, 360 (1961) (finding no evidence in the legislative history of any Patent Act amendments that Congress intended to grant patentees greater rights than in the literal language of the Act); *United States v. Univis Lens, Co.*, 316 U.S. 241, 251 (1942) (relying on "the public policy which limits the granted monopoly strictly to the terms of the statutory grant."); *Motion Picture Patents Co. v. Universal Film Mfg. Co.*, 243 U.S. 502, 511 (1917) (stating that a patentee's right to control personal property "must be limited to the invention described in the claims of his patent."); *CSU, LLC v. Xerox Corp.* (In re Independent Serv. Orgs. Antitrust Litig.), 203 F.3d 1322, 1327 (Fed. Cir. 2000) (stating that a patentee may not exploit its statutory right to prohibit sales to achieve monopoly in market outside the patent scope); In re Recombinant DNA Tech. Patent & Contract Litig., 850 F. Supp. 769, 773–74 (S.D. Ind. 1994) (stating that a patentee's conditioning licensee's practice of patent on the purchase of items outside the patent claims is per se patent misuse).

⁷³ This single fact appears to have been dispositive in both *Scruggs* and *McFarling*. *Monsanto Co. v. Scruggs*, 459 F.3d 1328, 1333 (Fed. Cir. 2006); *Monsanto Co. v. McFarling*, 302 F.3d 1291, 1293, (Fed. Cir. 2002).

⁷⁴ Winston, *supra* note 1, at 99.

⁷⁵ First, *supra* note 48, at 388.

⁷⁶ *Id.* at 389.

⁷⁷ *Id.* at 386–88.

⁷⁸ *Scruggs*, 459 F.3d at 1336.

⁷⁹ This may be because the defendants in the *Monsanto* cases have pled patent exhaustion as an absolute defense to any of the post-conveyance terms in the bag tag licenses. *Scruggs*, 459 F.3d at 1335; *Monsanto Co. v. McFarling*, 302 F.3d 1291, 1298 (Fed. Cir. 2002).

⁸⁰ Smith, *supra* note 7, at 640.

proposes that “[a]n alternative to the current model would be for Monsanto to allow farmers to save their seed but pay a license fee directly to Monsanto each year.”⁸¹ Smith posits that this reform of the license is necessary to prevent an antitrust violation. I submit that such a license is also necessary to prevent offenses to the policy goals of patent exhaustion. To this end, Parts III-V of this Note explore the doctrinal and policy benefits of allowing farmers to be the outright owners of their seeds, while allowing Monsanto to charge farmers a royalty on the duplication of Monsanto-patented genes. To begin with, such a rule would bring transfers of SRT in line with the history of Supreme Court exhaustion jurisprudence.

III. SUPREME COURT PATENT EXHAUSTION PRECEDENT: A PATTERN EMERGES

In 2008 the Supreme Court decided *Quanta Computer v. LG Electronics*,⁸² its first foray into patent exhaustion since 1942.⁸³ Understanding *Quanta* therefore is crucial to understanding the Court’s exhaustion jurisprudence. The basic facts are that LG licensed to Intel the right to sell microprocessors practicing LG patents.⁸⁴ The license required Intel to notify its customers that they were forbidden from combining the processors with non-LG or non-Intel technology.⁸⁵ One of these customers, Quanta Computer, mingled the processors with other companies’ parts and was sued by LG for infringement.⁸⁶ The unanimous opinion held that LG’s control over the processors ended when Intel sold them to Quanta, for the simple reason that the license agreement authorized Intel to make such sales.⁸⁷ Some read *Quanta* narrowly, concluding that, had LG required that Quanta become an LG licensee to take the microprocessors, LG could have restricted Quanta’s use.⁸⁸ This interpretation would entirely preserve Monsanto’s two-tiered licensing scheme.⁸⁹ Indeed, if *Quanta* is our only source, we could conclude that it is entirely the patentee’s prerogative whether a transfer is an *authorized sale* or a *conditional transfer*, such as a license.⁹⁰ But if this is so, what

⁸¹ *Id.* at 641.

⁸² *Quanta Computer, Inc. v. LG Elecs., Inc.*, 553 U.S. 617 (2008).

⁸³ *United States v. Univis Lens Co.*, 316 U.S. 241 (1942).

⁸⁴ *Quanta*, 553 U.S. at 623.

⁸⁵ *Id.* at 623–24. According to the Court, the LG–Intel agreement provided that “no license ‘is granted . . . to any third party for the combination by a third party of Licensed Products of either party with items, components, or the like acquired . . . from sources other than a party hereto’” *Id.* at 623.

⁸⁶ *Id.* at 624.

⁸⁷ *Id.* at 637.

⁸⁸ In Sievers’ interpretation of *Quanta*, “the Supreme Court crafted its decision very narrowly.” Sievers, *supra* note 14, at 372.

⁸⁹ *Id.*

⁹⁰ According to James Beard:

In cases where no conditions limit the manufacturer licensee’s authority to sell products, the patentee cannot use private licensing to opt-out of . . . patent exhaustion. Where the sale from licensee to purchaser is unconditional, a private arrangement between the patentee and licensee cannot create license privity with

patentee would authorize a sale? Professor First cautions against the narrow *Quanta* interpretation, concluding that end-user licenses undermine the goals of the first-sale doctrine.⁹¹ Practitioner Jason McCammon agrees, concluding that the goal of *Quanta* was to prevent LG from extracting fresh royalties at multiple stages of distribution.⁹² For this reason, McCammon comments, “one doubts that the outcome would have been different had LG simply altered the wording of the license agreement.”⁹³

A literal reading of *Quanta* also ignores a fundamental precept of patent exhaustion: when a patentee licenses the patent, the scope of the license can cover *only* the scope of the patentee’s claim language.⁹⁴ Though *Quanta* does not refer to this over-arching exhaustion policy, the opinion helpfully reinstates the Court’s entire line of exhaustion cases.⁹⁵ Such affirmation matters, because in the three decades prior to *Quanta*, the Federal Circuit had aggressively abrogated patent exhaustion.⁹⁶ Now the old cases are good law again, and my interpretation of the case line is that a patentee’s rights are presumed to extinguish when the patented chattel passes from a licensed manufacturer to a user, unless a pro-consumer policy justifies a use restriction. In a similar take, McCammon believes that the narrowest defensible reading of the *Quanta* line is that conditions burdening a transfer are scrutinized for reasonableness, mindful that extensions of monopolies generally offend public policy.⁹⁷ Such an interpretation strongly suggests that Monsanto cannot impose a license on the *entire* seed purchased by the farmer without breaching public policy, but that a royalty on the duplication of a seed’s

downstream purchasers and users.

Beard, *supra* note 55, at 35.

⁹¹ First, *supra* note 48, at 365–66 (2007); Winston, *supra* note 1, at 106–07.

⁹² Jason McCammon, *Recent Development: The Validity of Conditional Sales: Competing View of Patent Exhaustion in Quanta Computer, Inc. v. LG Electronics, Inc.*, 128 *S. Ct.* 2109 (2008), 32 *HARV. J.L. & PUB. POL’Y* 785, 794 (2009).

⁹³ *Id.* *Quanta*’s wariness of artful drafting of patent claims lends support to this view: the Court firmly held that method-claim patents must be subject to exhaustion, because otherwise patentees would craft composition-of-matter claims as method claims. The Court admonished that such a drafting “end-run” would “seriously undermine the exhaustion doctrine.” *Quanta Computer, Inc. v. LG Elecs., Inc.*, 553 U.S. 617, 629–30 (2008).

⁹⁴ Dong has surveyed the Supreme Court’s patent exhaustion precedent and concluded: “License restrictions that are not within the scope of the patent rights are considered patent misuse” Dong, *supra* note 63, at 25. *See also* Winston, *supra* note 1, at 108. In principle, even scholars such as Savich agree that “a patentee may not impose the condition to impermissibly broaden the physical or temporal scope of the patent grant with anticompetitive effect.” Savich, *supra* note 3, at 123.

⁹⁵ *Quanta*, 553 U.S. at 625 (citing *Bloomer v. McQuewan*, 55 U.S. 539 (1852), and discussing *Adams v. Burke*, 84 U.S. 453 (1873)); *id.* at 625–26 (reaffirming the overturning of *Henry v. A.B. Dick & Co.*, 224 U.S. 1 (1912), and citing *Bauer & Cie v. O’Donnell*, 229 U.S. 1 (1913)); *id.* at 626 (discussing *Motion Picture Patents Co. v. Universal Film Mgt. Co.*, 243 U.S. 502 (1917)); *id.* at 627–28 (discussing *United States v. Univis Lens, Co.*, 316 U.S. 241 (1942)); *id.* at 629 (discussing *Ethyl Gasoline Corp. v. United States*, 309 U.S. 436 (1940)); *id.* at 636 (affirming and distinguishing *Gen. Talking Pictures Corp. v. W. Electric Co.*, 304 U.S. 175 (1938)); *id.* at 637 (quoting *Keeler v. Standard Folding Bed Co.*, 157 U.S. 659 (1895)).

⁹⁶ *See infra* Part IV.

⁹⁷ McCammon, *supra* note 92, at 794–95. McCammon writes that an equally defensible reading of *Quanta* is that a patentee’s rights can never endure after an authorized transfer from manufacturer to user of patent-practicing chattel. *Id.* at 791–92.

transgenic qualities would be upheld under a consumer-welfare justification.

A. *The Default: Patentee Rights Sever Upon Transfer to End-User*

The cases that *Quanta* reinstated follow an unmistakable pattern: when a patent-embodiment good passes from the licensee-manufacturer to a user, that transfer cuts off the patentee's interest in the chattel. This pattern began in 1873 with *Adams v. Burke*, in which the patentee licensed its coffin-lid technology to a manufacturer, whose sale of the finished lids was restricted by a territorial license.⁹⁸ One of the manufacturer's customers subsequently sold the lids outside the authorized territory, but the Court held that the patentee could not restrict the sale, as the lid had already passed from manufacturer to user.⁹⁹ The Court soon extended *Adams* to multiple-use items in *Keeler*,¹⁰⁰ and *Quanta* now extends *Adams* even where the license agreement *claims* to restrict the behavior of the licensee's customers.¹⁰¹

The structure holds true even where the manufacturer's customer is *also* a licensee of the patentee. In *Univis Lens*, the defendant Univis patented the grinding of prescription lenses,¹⁰² which it licensed to the manufacturer of an unfinished product called a "lens blank."¹⁰³ The manufacturer's customers were "finishers" who ground the lenses for retail,¹⁰⁴ and they too were Univis licensees.¹⁰⁵ The Court invalidated this second-tier license between Univis and the finishers.¹⁰⁶ Finally, this pattern of exhaustion holds true even where the manufacturer's conduct and user's conduct read on different patent claims. In *Ethyl Gasoline*, the defendant had a composition-of-matter claim on a type of fuel and a separate claim on the fuel's use.¹⁰⁷ The defendant licensed the composition-of-matter claim to oil refiners on the condition that they sell only to "jobbers" who were also licensees.¹⁰⁸ To these jobbers the defendant licensed the patent's use claim, a licensing tier that the Court invalidated under patent exhaustion.¹⁰⁹

Reading the opinions, one hears the echo of three fundamental public policies. First, encumbrances on tangible property work indignity on property owners by removing their autonomy. According to *Keeler*, free alienability is "an essential incident of . . . ownership,"¹¹⁰ and *Motion Picture Patents* stresses the

⁹⁸ *Adams*, 84 U.S. at 458 (Bradley, J., dissenting).

⁹⁹ *Id.* at 457.

¹⁰⁰ *Keeler*, 157 U.S. at 666.

¹⁰¹ *Quanta Computer, Inc. v. L.G. Elecs., Inc.*, 553 U.S. 617, 636–37 (2008).

¹⁰² *United States v. Univis Lens Co.*, 316 U.S. 241, 243 (1942).

¹⁰³ *Id.* at 246.

¹⁰⁴ *Id.* at 244.

¹⁰⁵ *Id.* at 245.

¹⁰⁶ *Id.* at 250.

¹⁰⁷ *Ethyl Gasoline Corp. v. United States*, 309 U.S. 436, 446 (1940).

¹⁰⁸ *Id.* at 457.

¹⁰⁹ *Id.*

¹¹⁰ *Keeler v. Standard Folding Bed Co.*, 157 U.S. 659, 664 (1895).

need to give consumers repose without “annoyance” from patentees.¹¹¹ Second, allowing patentees to extend their property interests outside the patent language risks facilitating monopolization without any benefits to innovation. *Bloomer v. McQuewan*, the pre-*Adams* case that proposed the exhaustion rule in dicta, cited this exact danger;¹¹² *Ethyl Gasoline* observes that when fuel customers become licensees, the fuel patentee “naturally” becomes a monopolist in two markets, rather than only one.¹¹³ Third, servitudes on patented goods tend to raise prices and create artificial scarcity, beyond the price- and supply-controls inherent in the patent system. In prescient analysis, *Bloomer* describes how a post-sale use restriction would inflate prices to supra-competitive levels, an evil that the opinion directs future courts to avoid.¹¹⁴ *Univis Lens* and *Ethyl Gasoline* did just this by preventing the patentee from extracting a royalty at two stages of distribution, in the name of consumer welfare.¹¹⁵

Under this line of cases and the goals they represent, a court should *presume* that the transfer of transgenic seed exhausts Monsanto’s rights in the seed.¹¹⁶ Despite the clarity of this precedent, some academics (and the Federal Circuit) mistakenly believe that a patentee can sidestep exhaustion by characterizing the sale as “conditional.”¹¹⁷ As evidence, commentators cite cases such as *Motion Picture Patents*, which found patent exhaustion when the terms of a sale were “unconditional.”¹¹⁸ Such a reading ignores the context of the Court’s language: *Motion Picture Patents* was referring to a situation where a patentee *did* set conditions on the manufacturers’ retail sales—minimum prices—yet because such conditions were repugnant to public policy, the sales triggered exhaustion.¹¹⁹ Therefore, “unconditional” sales are not sales on which the patentee imposes zero restrictions, but sales whose restrictions do not offend the public interest.¹²⁰

¹¹¹ *Motion Picture Patents Co. v. Universal Film Mfg. Co.*, 243 U.S. 502, 516 (1917).

¹¹² *See Bloomer v. McQuewan*, 55 U.S. 539, 556–57 (1852) (McLean, J., dissenting).

¹¹³ *Ethyl Gasoline*, 309 U.S. at 454–55.

¹¹⁴ *Bloomer*, 55 U.S. at 557 (McLean, J., dissenting).

¹¹⁵ *United States v. Univis Lens Co.*, 316 U.S. 241, 251 (1942); *Ethyl Gasoline*, 309 U.S. at 456–57.

¹¹⁶ *Quanta* offers Monsanto the possibility of recovering from the farmers under a breach of contract theory. *Quanta Computer, Inc. v. L.G. Elecs., Inc.*, 553 U.S. 617, 637 n.7 (“LGE’s complaint does not include a breach-of-contract claim, and we express no opinion on whether contract damages might be available even though exhaustion operates to eliminate patent damages.”). As Professor Patterson points out, however, breach of contract recoveries do not include the punitive and treble damages that infringement claims can bring and so are not as worthwhile for Monsanto to pursue. Symposium, *supra* note 31, at 1030.

¹¹⁷ *See Mallinckrodt, Inc. v. Medipart, Inc.*, 976 F.2d 700, 709 (Fed. Cir. 1992); Daniel R. Cahoy, *Oasis or Mirage?: Efficient Breach as a Relief to the Burden of Contractual Recapture of Patent and Copyright Limitations*, 17 HARV. J. L. & TECH. 135, 151–52 (2003) (“[C]ontractual restrictions on use rights following a sale have the function of converting the sale into a licensing arrangement, actionable in breach if the conditions are not fulfilled.”).

¹¹⁸ *Motion Picture Patents, Co. v. Universal Film Co.*, 243 U.S. 502, 515–16 (1917) (“[T]he right to ‘vend’ is exhausted by a single, *unconditional* sale . . .”). Adam Mossoff takes this language to mean that only sales with no conditions trigger patent exhaustion. Mossoff, *supra* note 43, at 373.

¹¹⁹ *Motion Picture Patents*, 243 U.S. at 516 (citing *Bauer & Cie v. O’Donnell*, 229 U.S. 1 (1913)).

¹²⁰ McCammon believes that *Quanta* at the very least requires a court to inquire into whether a post-sale use restriction comports with the necessary limits of the patent monopoly. McCammon, *supra*

Practitioner Thomas G. Hungar’s research confirms that a colloquial reading of the word “reflect[s] a misunderstanding” of its use as a term of art in early exhaustion cases.¹²¹

B. The Exception: Patentee Asserts Pro-Consumer Business Justification

The Court’s presumption of exhaustion has one exception, observed only once, in *General Talking Pictures*. There, AT&T licensed its patent on vacuum tube amplifiers to a manufacturer, on the condition that the amplifiers be sold only for private use.¹²² When the defendant purchased and resold the amplifiers for theatrical use, AT&T sued for infringement.¹²³ According to the Court, the defendant’s purchase had not exhausted AT&T’s interest, because the manufacturer had breached the license’s sales terms,¹²⁴ and only an *authorized* sale triggers patent exhaustion.¹²⁵

Because of the outlier result of *General*, it necessarily creates “tension” with *Quanta*.¹²⁶ McCammon proposes two schemes for reconciling the cases. One is that, because the defendants in both cases attempted to limit the scope of downstream purchasers’ use, the exhaustion result in *Quanta* limits *General* closely to its facts.¹²⁷ In the alternative, *Quanta*’s decision not to overrule *General* may imply that post-sale use restrictions are scrutinized for “reasonableness” in light of patent law’s goals.¹²⁸ Elucidating what restrictions might be “reasonable,” other commentators argue that what made the difference in *General* was AT&T’s pro-consumer business justification for its restrictive licensing. AT&T’s amplifiers had two natural markets—private and theatrical—that would pay dramatically different prices.¹²⁹ If private-use customers could achieve arbitrage and undersell AT&T in the theatrical market, AT&T would be unable to price discriminate between the markets,¹³⁰ and would have to charge the theatrical price for all. Therefore, maintaining the two-market structure kept prices low for private users, a compelling justification. Incorporating the public policies described earlier in this Part, the rule of thumb should be to uphold a license that preserves free alienability of movables, but not to an extent that jeopardizes overall

note 92, at 794–95.

¹²¹ Thomas G. Hungar, *Observations Regarding the Supreme Court’s Decision in Quanta Computer, Inc. v. LG Electronics, Inc.*, 49 IDEA 517, 532 (2009).

¹²² *Gen. Talking Pictures Corp. v. W. Electric Co.*, 304 U.S. 175, 179–80 (1938).

¹²³ *Id.* at 180.

¹²⁴ *Id.* at 181 (“The Transformer Company could not convey to petitioner what both knew it was not authorized to sell”).

¹²⁵ *Id.*

¹²⁶ See McCammon, *supra* note 92, at 790.

¹²⁷ *Id.* at 791.

¹²⁸ *Id.* at 794.

¹²⁹ *General Talking Pictures*, 304 U.S. at 180.

¹³⁰ Professor Patterson interprets patent exhaustion cases as permitting post-sale use restrictions that would allow a scheme of price discrimination that keeps prices lower than they otherwise would be. Symposium, *supra* note 31, at 1034–35.

consumer welfare.¹³¹ As Beard puts it, post-sale “limitations must be for a substantive reason beyond a desire to control the use or value of the patent by downstream purchasers.”¹³²

The question, then, is whether public policy justifies the Monsanto licenses. As is, the licenses’ mandate to destroy seed unavoidably breaches the fundamental property rights and consumer-welfare goals of the *Quanta* line. The erasure of a federally-protected farmer’s proprietary right in seed,¹³³ the enablement of rent-level royalty fees, paired with the entrenchment of Monsanto’s market share, reveal that the harms anticipated in *Bloomer* have been realized in the Monsanto scheme. Therefore, allowing the licenses to persist must be a miscarriage of exhaustion policy. Yet, as explored in Part II, if Monsanto could not control second-generation planting, it may transfer all of its R&D costs to the initial seed sale, resulting in a prohibitively high retail price.¹³⁴ The only way for a court to balance competing exhaustion policies is to give farmers an ownership right in Roundup Ready® seed, allowing them to replant multiple generations. At the same time, mindful of *General*, Monsanto should be able to collect a royalty for second-generation planting, provided that the royalty reflects only the value of Monsanto’s genetic-engineering patents. This rule in the exhaustion context is thus harmonious with Tempe Smith’s research in the antitrust context.

The availability of such a license also calls into doubt an assumption that *Quanta* and nearly all commentators make—that Monsanto, even if it cannot sue seed-saving farmers for infringement, may sue the farmers for breach of contract under the current licensing scheme.¹³⁵ While contract remedies do not include treble damages, we should assume that the prospect of a breach of contract suit would deter Monsanto’s farmer customers from seed-saving no less than the specter of an infringement claim would.¹³⁶ It follows that allowing contract remedies under the current Monsanto license would offend the public policies behind exhaustion no less than tort remedies would; the farmers would continue to abrogate their ownership rights by destroying seed, and Monsanto would continue to work competition harms on the market. If courts were presented with a *reformed* Monsanto license—one that allows farmers to seed-save for a seasonal fee—they are more likely to find the current all-or-nothing license unenforceable under *any* cause of action.

IV. TENSION IN THE DISTRICTS AND FEDERAL CIRCUIT

The idea of legally separating a seed’s patent-practicing qualities from its

¹³¹ See *supra* text accompanying notes 110–115.

¹³² Beard, *supra* note 55, at 29.

¹³³ See *supra* text accompanying notes 19–21.

¹³⁴ See *supra* Part II.

¹³⁵ *Quanta Computer, Inc. v. LG Elecs., Inc.*, 553 U.S. 617, 637 n.7 (2008); Watanabe, *supra* note 48, at 286; Sue Ann Mota, *The Doctrine of Patent Exhaustion: Not Exhausted by Quanta Computer v. LG Electronics in 2008*, 11 SMU SCI. & TECH. L. REV. 337, 346 (2008).

¹³⁶ See *supra* text accompanying notes 32–35.

other qualities would also resolve the tension in the District and Federal Circuit decisions. Our federal courts, like most commentators, largely assume that a transfer of patent-practicing chattel must resemble either a pure license or a pure sale, even when the chattel involved practices SRT.¹³⁷ In the pure-license column is the Federal Circuit, which over the past three decades has steadily limited the doctrine of exhaustion.¹³⁸ Most relevant to SRT, the Circuit decided in *Mallinckrodt, Inc. v. Medipart, Inc.* that a post-transfer use-restricting license could not be invalidated under patent exhaustion unless the license violates unfair competition laws.¹³⁹ In so holding, the Federal Circuit never properly inquires whether the patentee's post-transfer restrictions control more than the patentee actually owns, which is an analysis that the Supreme Court precedent requires.¹⁴⁰ *Mallinckrodt* acknowledges that "the restriction [can]not enlarge the patent grant,"¹⁴¹ but reasons, somewhat circularly, that any restriction that is *not* an antitrust violation is "generally recognized as within the patent grant."¹⁴²

A. A "Creative Misreading:" *Mallinckrodt* Favors Licenses

Before considering *Mallinckrodt's* impact on SRT, it must be noted that the Federal Circuit's subsuming of patent exhaustion in antitrust conflicts with Supreme Court precedent. Of the decisions finding that a sale of chattel had exhausted the patentee's rights, only two cases—*Univis Lens*¹⁴³ and *Ethyl Gasoline*¹⁴⁴—conducted full unfair competition analyses. The other cases in the *Adams-to-Quanta* line may refer to competition policies,¹⁴⁵ but they do not follow the elements of any unfair competition cause of action. What is more, the cases

¹³⁷ Compare *Static Control Components, Inc. v. Lexmark Int'l, Inc.*, 2008 U.S. Dist. LEXIS 79805 (E.D. Ky. 2008) with *Mallinckrodt, Inc. v. Medipart, Inc.*, 976 F.2d 700 (Fed. Cir. 1992).

¹³⁸ At the moment when the Federal Circuit's undermining of patent exhaustion began, Professor Wegner cites *Bandag, Inc. v. Al Bolser's Tire Stores, Inc.*, which held that method patents were not limited by the exhaustion doctrine. Wegner, *supra* note 2, at 687 (citing *Bandag, Inc. v. Al Bolser's Tire Stores, Inc.*, 750 F.2d 903, 924 (Fed. Cir. 1984)). This rule was directly overturned in *Quanta*, which admonished, "[e]liminating exhaustion for method patents would seriously undermine the exhaustion doctrine." *Quanta*, 553 U.S. at 629.

¹³⁹ *Mallinckrodt*, 976 F.2d at 701, 706 (emphasizing the "[u]se in violation of a valid restriction may be remedied under the patent law, provided that" the restriction does not "*per se* violate the doctrine of patent misuse or the antitrust law" or constitute an antitrust violation under the rule of reason).

¹⁴⁰ Professor Patterson describes the Federal Circuit's expansion of a patentee's licensing power like so: "The Supreme Court says it is 'reasonably within the reward which the patentee . . . is entitled,' and the Federal Circuit says 'reasonably within the patent grant or relates to subject matter within the scope of the claims.'" (emphasis added). Symposium, *supra* note 31, at 1030.

¹⁴¹ *Mallinckrodt*, 976 F.2d at 703.

¹⁴² *Id.* at 706.

¹⁴³ *United States v. Univis Lens Co., Inc.*, 316 U.S. 241, 243 (1942).

¹⁴⁴ *Ethyl Gasoline Corp. v. United States*, 309 U.S. 436, 450–52 (1940).

¹⁴⁵ See, e.g., *Motion Picture Patents Co. v. Universal Film Mfg. Co.*, 243 U.S. 502, 517 (1917) (suggesting, in dictum, that patent exhaustion serves a similar purpose as a recently-passed antitrust statute, because "the effect of [a condition outside the scope of the patent grant] may be to substantially lessen competition or tend to create a monopoly in any line of commerce") (quoting 38 Stat. 730) (internal quotation marks omitted).

deliberately characterize patent exhaustion as a doctrine independent of the antitrust and patent misuse laws. Most pointedly, *Motion Picture Patents* ruled that a patentee's sale of film projectors exhausted its right to control what films the purchaser projects.¹⁴⁶ Though Congress had recently passed an antitrust statute banning anticompetitive patent licenses, *Motion Pictures Patents* decided that "[o]ur conclusion [regarding exhaustion] renders it unnecessary to make the application of this statute to the case."¹⁴⁷ Further, the only Supreme Court exhaustion case to be overturned is *Henry v. A.B. Dick & Co.*, which held that patent exhaustion is found only when the license's terms are independently unlawful.¹⁴⁸ The Court has since strongly rebuked this holding,¹⁴⁹ and *A.B. Dick's* overruling was reaffirmed in *Quanta*.¹⁵⁰ Yet, as commentators point out, the Federal Circuit's subsuming of patent exhaustion in antitrust is identical to *A.B. Dick's* discredited ruling.¹⁵¹ Some take this to mean that *Mallinckrodt* is now unreliable precedent.¹⁵² Thus, with *Mallinckrodt* already on shaky footing, we turn to that case's relevance to the Monsanto licenses.

The facts of *Mallinckrodt* illustrate the deficiency in the Federal Circuit's analysis regarding easily replicable patented technology. Mallinckrodt, Inc. was the patentee and maker of a medical device called the UltraVent,¹⁵³ which it sold to hospitals with a "Single Use Only" label.¹⁵⁴ Disregarding the label, hospitals began shipping used UltraVents to the defendant, Medipart, Inc., which sterilized the devices for reuse.¹⁵⁵ Mallinckrodt sued Medipart for infringement on a theory that Medipart violated the product's single-use limitation.¹⁵⁶ *Mallinckrodt* read the Supreme Court's caselaw to mean that when a patentee sells its chattel with a condition, anyone who violates the condition is an infringer.¹⁵⁷ The Court's "single use" ruling is what paved the way for Monsanto's licenses mandating farmers to destroy second-generation seed. Yet, as illustrated in Part III, the opinion errs by reading the Court's use of "unconditional" literally, rather than in

¹⁴⁶ *Motion Picture Patents*, 243 U.S. at 516, 518.

¹⁴⁷ *Id.* at 517.

¹⁴⁸ *Henry v. A.B. Dick & Co.*, 224 U.S. 1, 31 (1912).

¹⁴⁹ *Motion Picture Patents* held, "[i]t is obvious that the conclusions arrived at in this opinion are such that the decision in *Henry v. Dick Co.*, 224 U.S. 1, must be regarded as overruled." *Motion Picture Patents*, 243 U.S. at 518.

¹⁵⁰ *Quanta Computer, Inc. v. LG Elecs., Inc.*, 553 U.S. 626 (2008).

¹⁵¹ Leaven, *supra* note 63, at 131.

¹⁵² Hungar considers *Quanta* to have "eliminate[d] the crucial lynchpin of *Mallinckrodt*" by directing courts to consider all exhaustion-policy factors rather than merely the antitrust elements. Hungar, *supra* note 121, at 532.

¹⁵³ *Mallinckrodt, Inc. v. Medipart, Inc.*, 976 F.2d 700, 705 (Fed. Cir. 1992).

¹⁵⁴ *Id.* at 701.

¹⁵⁵ *Id.* at 702.

¹⁵⁶ *Id.* at 702–703 (stating that Medipart did not dispute that it received notice of the single-use labeling restriction).

¹⁵⁷ *Id.* at 706–707 (quoting *Keeler*, *supra* note 100, at 666, that "[when a patentee] has . . . authorized another to construct, sell, and deliver it, or to construct, use, and operate it, *without any conditions*, and the consideration has been paid to him for the thing patented" only then are the patentee's rights exhausted).

context of past cases' facts. Professor Robinson, a supporter of the *Mallinckrodt* rule, admits that while the case may be a "creative misreading" of Court precedent, the Federal Circuit was justified to reject the Court's past hostility toward post-sale restrictions.¹⁵⁸ Robinson champions *Mallinckrodt* for upholding use restrictions that are economically reasonable,¹⁵⁹ a worthy goal in the abstract. Yet by holding that sale terms are unreasonable *only* when they are anticompetitive, the Federal Circuit allows restraints on alienation and expansions of patent scope that the Supreme Court never envisioned.¹⁶⁰ *Quanta* may not have overruled *Mallinckrodt*, but, as many diverse commentators agree, *Quanta* must have substantially engrossed the universe of chattel servitudes that are considered "unreasonable."¹⁶¹

In addition to its myopic view of unreasonable restraints, *Mallinckrodt* skipped an analytic step that should be necessary in SRT cases: the court never inquired whether Medipart, by sterilizing the UltraVent, was practicing a patent claim.¹⁶² Professor Patterson points out that a court is obliged to read the patentee's claims and rule whether the defendant uses the product in a way more characteristic of a product *maker* than a *user*.¹⁶³ *Mallinckrodt* therefore was obligated to ask whether the act of sterilizing the UltraVent read on a *Mallinckrodt* claim *in its entirety*,¹⁶⁴ yet analysis does not appear in the opinion.¹⁶⁵ Professor Robert Gomulkiewicz puzzles at this gap in the Federal Circuit's jurisprudence, considering that classic exhaustion analysis asks two independent questions: whether the patentee's license terms violate some positive law, and whether the subject matter of the license is limited to the patent's claims.¹⁶⁶ By focusing only on the former, the Federal Circuit is overly willing to characterize transfers of SRT as pure licenses. This approach, illustrated by Monsanto, empowers patentees to

¹⁵⁸ Robinson, *supra* note 57, at 1469 (internal quotation marks omitted).

¹⁵⁹ *Id.*

¹⁶⁰ Professor Gomulkiewicz recites the many points at which the Federal Circuit's *Mallinckrodt* precedent has ignored the Supreme Court's policy of invalidating sale restrictions that hobble the purchaser's enjoyment of the product or convert the purchaser into a licensee. Gomulkiewicz, *supra* note 51, at 225–29.

¹⁶¹ See Wegner, *supra* note 2, at 691–692; Gomulkiewicz, *supra* note 51, at 234; McCammon, *supra* note 92, at 795.

¹⁶² Symposium, *supra* note 31, at 1035–36.

¹⁶³ Professor Patterson cites *Jazz Photo* as a case where the Federal Circuit did perform this required added step: in *Jazz Photo*, "the Federal Circuit said that, in a disposable camera, replacing the film cartridge after it is used is repair, not reconstruction," and therefore not an infringement of the patent. *Id.* at 1036 (quoting *Jazz Photo Corp. v. ITC*, 264 F.3d 1094, 1105 (Fed. Cir. 2001)).

¹⁶⁴ This argument evokes the longstanding patent rule that a purchaser has the right to repair the patent-embodiment chattel, so long as that repair is not tantamount to manufacture of a duplicate. *Aro Mfg. Co. v. Convertible Top Replacement Co.*, 365 U.S. 336, 342 (1961). In *Aro*, the plaintiff owned a patent for the retracting top on convertible automobiles, while the defendant made and installed replacement fabric for the same retracting tops. *Id.* at 337. The Supreme Court ruled that replacing the fabric on a patented item is not a remanufacture of the item, because the replacement fabric was only one, unpatented component of the plaintiffs' combination-of-matter claim. *Id.* at 344.

¹⁶⁵ *Mallinckrodt* ends the analysis upon a finding that the single-use restriction is not a per se unfair competition violation and so is enforceable under the patent law. *Mallinckrodt, Inc. v. Medipart, Inc.*, 976 F.2d 700, 708–09 (Fed. Cir. 1992).

¹⁶⁶ Gomulkiewicz, *supra* note 51, at 228.

craft licenses that violate the bedrock goals of exhaustion policy.¹⁶⁷

B. Static Control Finds a Pure Sale

The post-*Quanta* case *Static Control v. Lexmark* falls on the other end of the spectrum, finding a conveyance of easily replicable technology a pure sale, with the purchaser acquiring absolute ownership rights.¹⁶⁸ A district decision, *Static Control* opines that “*Quanta* overruled *Mallinckrodt*, sub silentio,”¹⁶⁹ and so reaches the opposite result as *Mallinckrodt* based on very similar facts. Lexmark owns certain printer-cartridge patents, which it practices to manufacture the cartridges.¹⁷⁰ The product is sold with this label attached:

Please read before opening. Opening this package or using the patented cartridge inside confirms your acceptance of the following license agreement. This patented Return Program cartridge is sold at a special price subject to a restriction that it may be used only once. Following this initial use, you agree to return the empty cartridge only to Lexmark for remanufacturing and recycling.¹⁷¹

Ignoring the label, many customers shipped empty cartridges to the defendant, Static Control, for refilling.¹⁷² Static Control’s defense against patent infringement was that Lexmark’s sale of cartridges to customers was authorized and so exhausted Lexmark’s patent interest.¹⁷³ Citing *Quanta*, the court agreed, because, as the District Court explained in a subsequent opinion, “patent rights [in Lexmark’s cartridges were] exhausted by [their] first sale [to end users].”¹⁷⁴ Just as *Mallinckrodt* is over-determined on the issue of replicable technology, *Static Control* is under-determined. Professor Patterson chastises the district court for not asking whether the act of refilling a Lexmark cartridge actually reads on any Lexmark claims.¹⁷⁵ He argues that if Lexmark’s property includes a cartridge-refilling claim, then the refiller is like a manufacturer, competing with Lexmark in the primary cartridge market.¹⁷⁶

Furthermore, Lexmark may have had a pro-consumer justification for the post-sale restriction. Lexmark’s marketing of the cartridges is very similar to the marketing of vacuum tube amplifiers in *General Talking Pictures*. There, AT&T

¹⁶⁷ Hungar, *supra* note 121, at 530–33.

¹⁶⁸ *Static Control Components, Inc. v. Lexmark Int’l, Inc.*, 2008 U.S. Dist. LEXIS 79805 (E.D. Ky. Oct. 3, 2008).

¹⁶⁹ *Static Control Components, Inc. v. Lexmark Int’l, Inc.*, 615 F. Supp. 2d 575, 587 (E.D. Ky. 2009).

¹⁷⁰ *Static Control*, 2008 U.S. Dist. LEXIS 79805 at *11.

¹⁷¹ *Id.* at *13.

¹⁷² *Id.* at *11.

¹⁷³ *Id.* at *35.

¹⁷⁴ *Id.* at *14.

¹⁷⁵ See generally Symposium, *supra* note 31, at 1035.

¹⁷⁶ *Id.* at 1035. This would cross the line that courts have erected between mere “repair” of a purchased product and “reconstruction” of a new product. *Aro Mfg. Co. v. Convertible Top Replacement Co.*, 365 U.S. 336, 341 (1961).

used post-sale restrictions to price-discriminate between two markets,¹⁷⁷ with the goal of keeping prices low in the private market.¹⁷⁸ Similarly, Lexmark charged separate prices for its product—lower for single-use cartridges, higher for unencumbered cartridges.¹⁷⁹ Single-use customers who refilled were thus enjoying more use than they paid for, and Lexmark’s ability to charge a low price for once-only users was eroding.¹⁸⁰ However, as Yina Dong points out, the district court refused to consider any economic justifications for a post-sale restriction.¹⁸¹

The court in *Static Control* may have reached this uncomfortable result because the alternative, represented in *Mallinckrodt*, of allowing licensors to opt-out of patent exhaustion encourages irresponsible behavior. Some view *Static Control* as representing a nascent trend of tolerating chattel servitudes only “so long as [they] yield social benefits.”¹⁸² This may explain why the court considered *Mallinckrodt* no longer good law:¹⁸³ the “cost, inconvenience, and annoyance to the public” of post-transfer restrictions tend to be socially unjustifiable.¹⁸⁴ The opinion further observes that the exhaustion rule’s roots lie in “the principles of contract, property, and antitrust.”¹⁸⁵ In this light, the case looks less doctrinaire and more sensitive to policy considerations; the outcome, then, may have been different had the court been presented with a licensing option that upheld exhaustion’s public interest ideals, rather than offending them. For example, what if instead of suing for damages, Lexmark had sought an injunction under which *Static Control* would pay Lexmark a low royalty for refilling the cartridges? I hope the court would not have rejected the license out of hand but performed a fact-finding into whether the license would 1) chill Lexmark customers’ freedom to refill their cartridges, 2) raise overall prices to levels resembling rents, or 3) extend Lexmark’s power in the retail cartridge market to some other market.¹⁸⁶ Only if any of these factors were triggered would *Quanta* recommend denying the

¹⁷⁷ Gen. Talking Pictures Corp. v. W. Electric Co., 304 U.S. 175, 179–80 (1938).

¹⁷⁸ See *supra* text accompanying notes 130–32.

¹⁷⁹ *Static Control*, 2008 U.S. Dist. LEXIS 79805 at *12–13 (quoting the cartridge label as stating, “[i]f you don’t accept these terms, return the unopened package to your point of purchase. A regular price cartridge without these terms is available.”).

¹⁸⁰ Dong, *supra* note 63, at 56–58.

¹⁸¹ As Dong understands the court’s reasoning, “because the Supreme Court did not consider economic justifications in *Quanta*, . . . *Lexmark* found that all post-sale restrictions on use were categorically invalid.” *Id.* at 57.

¹⁸² Rochelle Cooper Dreyfuss & Lawrence S. Pope, *Dethroning Lear? Incentives to Innovate After MedImmune*, 24 BERKELEY TECH. L.J. 971, 987 (2009).

¹⁸³ *Static Control Components, Inc. v. Lexmark Int’l, Inc.*, 615 F. Supp. 2d 575, 587 (E.D. Ky. 2009).

¹⁸⁴ *Id.* at 581 (quoting *Motion Picture Patents Co. v. Universal Film Mfg. Co.*, 243 U.S. 502, 516 (1917)) (internal quotation marks omitted).

¹⁸⁵ *Static Control*, 615 F. Supp. 2d at 579.

¹⁸⁶ For its proposition that *Mallinckrodt* is contrary to the pre-*Quanta* precedent, *Static Control* cites Herbert Hovenkamp, *Innovation and the Domain of Competition Policy*, 60 ALA. L. REV. 103, 111 n. 35 (2008). Hovenkamp’s research indicates that the early first-sale cases, both in copyright and patent, tested the validity of post-sale use restrictions on a much broader list of factors than simply the antitrust elements. *Id.* at 114.

injunction.¹⁸⁷ In addition to reflecting exhaustion theory, this tweaking of the exhaustion rule for SRT is consistent with Tempe Smith's thesis that failure to separate a patent-practicing claim from the patent-embodiment chattel is an illegal tying.¹⁸⁸ Still, Smith's characterization of Monsanto's two-tiered license as a Sherman Act violation completely preserves *Mallinckrodt*, because Smith would find Monsanto's conduct independently illegal.¹⁸⁹ Instead, courts should interpret *Quanta* as placing the burden on SRT patentees to show exhaustion-theory *reasonableness* of post-sale restrictions, rather than requiring SRT purchasers to show antitrust *unreasonableness*.¹⁹⁰

C. Monsanto Litigation Has Followed *Mallinckrodt*—So Far

An approach placing some burden on Monsanto to show exhaustion reasonableness should have been invoked when the Monsanto licenses were litigated between 2002 and 2009. The two farmers to challenge the licenses on exhaustion grounds were Homan McFarling of Missouri¹⁹¹ and Mitchell Scruggs of Mississippi.¹⁹² Both had purchased Roundup Ready® seed labeled with the use-restricting bag tag, and both had ignored the tag and replanted second-generation seed.¹⁹³ The Federal Circuit heard Mr. McFarling's case first, before the Supreme Court delivered *Quanta*. McFarling urged the Federal Circuit to follow *Univis Lens*, claiming that his purchase of seed was an authorized first sale that extinguished Monsanto's rights.¹⁹⁴ The Federal Circuit instead held that when Mr. McFarling purchased the seed, he purchased only the right to plant it for crops, not the right to manufacture new seeds.¹⁹⁵ Therefore, the bag tag was enforceable in an infringement action.

Mr. Scruggs met a similar result, as detailed in three separate opinions: one by the Northern District of Mississippi,¹⁹⁶ the next in the Federal Circuit before

¹⁸⁷ Absent those dangers, *General Talking Pictures* would likely recommend granting the license under the theory that it preserves the two-market structure that Lexmark devised. Symposium, *supra* note 31, at 1034–35.

¹⁸⁸ See Smith, *supra* note 7, at 640.

¹⁸⁹ *Mallinckrodt, Inc. v. Medipart, Inc.*, 976 F.2d 700, 706 (Fed. Cir. 1992) (holding that patent use that is not an antitrust violation is “generally recognized as within the patent grant”).

¹⁹⁰ See McCammon, *supra* note 92, at 794.

¹⁹¹ See *Monsanto Co. v. McFarling*, 302 F.3d 1291 (Fed. Cir. 2002).

¹⁹² See *Monsanto Co. v. Scruggs*, 342 F. Supp. 2d 584 (N.D. Miss. 2004).

¹⁹³ Mr. McFarling saved soybean seed for the 1999, 2000, and 2001 seasons. *McFarling*, 302 F.3d at 1293. Mr. Scruggs purchased 10 acres' worth of soybean seed and, by seed-saving over several seasons, realized 8,000 acres' worth. Mr. Scruggs also saved 2,000 acres' worth of cotton seeds from an original purchase of only a few acres' worth. *Scruggs*, 342 F. Supp. 2d at 588.

¹⁹⁴ *McFarling*, 302 F. 3d at 1298 (McFarling's brief cited *Univis Lens*' proposition that “when a patented product has been sold the purchaser acquires ‘the right to use and sell it, and . . . the authorized sale of an article which is capable of use only in practicing the patent is a relinquishment of the patent monopoly with respect to the article sold.” (quoting *United States v. Univis Lens Co.*, 316 U.S. 241, 249 (1942))).

¹⁹⁵ *McFarling*, 302 F. 3d at 1299.

¹⁹⁶ *Monsanto Co. v. Scruggs*, 342 F. Supp. 2d 584 (N.D. Miss. 2004).

Quanta,¹⁹⁷ and the third in the Federal Circuit after *Quanta*.¹⁹⁸ The district court, citing *Mallinckrodt*, rejected patent exhaustion because the transfer of seed had been conditional;¹⁹⁹ the court presumed that conditions placed on chattel were enforceable,²⁰⁰ a curious holding since Supreme Court precedent points in precisely the opposite direction.²⁰¹ The Federal Circuit's opinion two years later repeated the *Mallinckrodt* rule but also hinted that Monsanto has a legitimate business justification for its bag tag license: "The fact that a patented technology can replicate itself does not give a purchaser the right to use replicated copies of the technology."²⁰² The court seems to intuit that when many farmers are planting second-generation seeds they collectively become akin to a rival seed manufacturer.²⁰³ Yet the court makes no distinction between a manufacturer's license, which extends *strictly* to the patent claims, and a license on a user of chattel, which license strays outside the patent grant and covers seed traits that Monsanto does not own.²⁰⁴ After *Quanta*, Scruggs moved to reconsider the patent exhaustion issue. The District denied the motion on the grounds that *Quanta* examined an unencumbered authorized sale, whereas Monsanto's seed sales are not unencumbered.²⁰⁵ The Federal Circuit denied Scruggs' interlocutory appeal on the issue.²⁰⁶

The *Monsanto* opinions appear determined to preserve every inch of *Mallinckrodt* where SRT is involved, apparently on the theory that SRT innovation would wither on the vine without maximalist patentee control.²⁰⁷ In so doing, they privilege one policy consideration—the patentee's exclusivity in practicing the SRT—at the expense of all others,²⁰⁸ even though Professor First's research has questioned whether post-sale patentee rights are even necessary to incentivize innovation.²⁰⁹ District courts, though, should be emboldened by *Quanta* to scrutinize intensely any SRT license that deprives the user of an ownership interest

¹⁹⁷ *Monsanto Co. v. Scruggs*, 459 F.3d 1328 (Fed. Cir. 2006).

¹⁹⁸ *Monsanto Co. v. Scruggs*, 345 F. App'x 552 (Fed. Cir. 2009).

¹⁹⁹ *Scruggs*, 342 F. Supp. 2d at 599.

²⁰⁰ *Id.* ("[W]here a patentee imposes restrictive terms of sale, there is no right to unrestricted use of the patented product.")

²⁰¹ *See supra* Part III.

²⁰² *Scruggs*, 459 F.3d at 1336.

²⁰³ *Id.* However, nowhere does the opinion cite Monsanto's R&D investment or what would happen if Monsanto had to shift all of its costs to the first sale of seed. Thus, if the Federal Circuit was motivated by Monsanto's business justifications for the bag tag license, it treated these justifications *sub silentio*.

²⁰⁴ This is likely because under *Mallinckrodt*, any license restriction that does not directly violate the unfair competition laws is considered within the scope of the patent grant. *Mallinckrodt, Inc. v. Medipart, Inc.*, 976 F.2d 700, 706 (Fed. Cir. 1992).

²⁰⁵ *Monsanto Co. v. Scruggs*, 345 F. App'x 552, 553 (Fed. Cir. 2009) ("[T]he Court's decision in *Quanta* . . . did not undermine this court's decision in *Monsanto*.").

²⁰⁶ *Id.*

²⁰⁷ *Scruggs*, 459 F.3d at 1336.

²⁰⁸ *See Static Control Components, Inc. v. Lexmark Int'l, Inc.*, 615 F. Supp. 2d 575, 579 (E.D. Ky. 2009).

²⁰⁹ *See First, supra* note 48, at 386–88.

in the good. If any alternative licensing scheme would preserve that ownership interest without causing collateral consumer harm, that scheme should receive preference. Tempe Smith cites one such example in the Monsanto case.²¹⁰ The existence of this alternative licensing demonstrates that courts need not adopt the extreme stances of either *Mallinckrodt* or *Static Control*, which found *Mallinckrodt* per se overruled.

V. SRT IN THE BROADER FIRST-SALE DOCTRINE

Finally, a rule that separates self-replicating chattel's patented traits from its other traits after a permitted sale would help resolve the discord within the broader first-sale doctrine. Closely resembling patent exhaustion, the first-sale rule permits the authorized purchaser of copyright-embodying chattel to alienate that chattel freely.²¹¹ The paradigmatic first-sale case is *Bobbs-Merrill Co. v. Straus*, where the copyright owner of a novel sold copies to department stores but forbade the stores from reselling for less than one dollar.²¹² Though a post-sale restriction of copyright-embodying chattel was an issue of first impression for the Court,²¹³ *Bobbs-Merrill* observed that in the patent context, such restrictions had long been presumed invalid.²¹⁴ Ultimately, the Court held that the Copyright Act "do[es] not create the right to impose . . . a limitation at which the book shall be sold at retail by future purchasers . . ." ²¹⁵ Professor John Rothchild's research indicates that this origin of the copyright first-sale doctrine was moored less in statutory construction than in "a common-law aversion to restraints on alienation" of personal property.²¹⁶ The first-sale doctrine is thus an effort to prevent statutory monopolies from trampling on other, older property rights, an echo of the policies behind patent exhaustion. In 1979 the amended Copyright Act expressly instated the *Bobbs-Merrill* rule.²¹⁷

A. *The Doctrine's Discomfort with SRT*

A copyrighted work necessarily involves two separate pieces of property: the chattel, constructed by the manufacturer out of inert material, and the intellectual property, fixed to the chattel in the form of words or images.²¹⁸ As the Fifth Circuit elegantly described the separation, "a 'copyright', together with the

²¹⁰ See Smith, *supra* note 7, at 640.

²¹¹ See 17 U.S.C.S. § 109(a) (LexisNexis 2011) ("[T]he owner of a particular copy or phonorecord lawfully made under this title, or any person authorized by such owner, is entitled, without the authority of the copyright owner, to sell or otherwise dispose of the possession of that copy or phonorecord.").

²¹² *Bobbs-Merrill Co. v. Straus*, 210 U.S. 339, 341 (1908).

²¹³ *Id.* at 343.

²¹⁴ *Id.* at 343–44.

²¹⁵ *Id.* at 350.

²¹⁶ Rothchild, *supra* note 56, at 13.

²¹⁷ 17 U.S.C.S. § 109(a) (LexisNexis 2011).

²¹⁸ See *United States v. Smith*, 686 F.2d 234, 240 (5th Cir. 1982); see also Rothchild, *supra* note 56, at 28.

exclusive rights and privileges associated with the copyright, does not implicate any tangible embodiment of the work . . . [A] copyright is independent of . . . its physical manifestation . . .”²¹⁹ Essentially, dominion over the physical embodiment is the purchaser’s right, while the right to make new embodiments resides with the copyright owner.

However, just as in patent exhaustion,²²⁰ this segregation between IP and chattel is blurred when courts consider SRT. In copyright, the recurring SRT is software. Scholars note the analogy between seeds and software: just as software is “expensive to develop[] and easy to replicate,”²²¹ seeds are “costly to create, but nearly costless to duplicate and disperse.”²²² The concern among software developers is that purchasers of a software-embodiment disc will copy the code and transfer it to another, or to many others through peer-to-peer technology.²²³ In other words, the problem is that the purchaser of SRT can seamlessly transition from user to cottage manufacturer, competing with the copyright holder during the copyright term. Such conduct would violate the software publisher’s right to make copies of the work and to distribute those copies, as provided in 17 U.S.C. §§ 106(1)²²⁴ and 106(3).²²⁵ The well-known solution to this problem is a “shrink-wrap” license attached to the box in which the disc is sold, or a “click-wrap” license, to which an authorized downloader of software agrees in advance of the download.²²⁶ Almost without exception, shrink-wrap and click-wrap licenses survive first-sale challenges.²²⁷ However, the conditions imposed by such a license may abrogate purchasers’ rights that are statutorily guaranteed under 17 U.S.C. § 109(a), the codification of the first-sale doctrine, and so open the door to the same harm to the public interest that *Mallinckrodt* has enabled in the patent context.

The courts have done a poor job assessing whether a shrink-wrap license exerts dominion over more property than the software company owns and, if so,

²¹⁹ *Smith*, 686 F.2d at 240 (citing *United States v. Bottone*, 365 F.2d 389, 393 (2d Cir. 1966); *Local Trademarks, Inc. v. Price*, 170 F.2d 715, 718 (5th Cir. 1948); *King Bros. Productions, Inc. v. RKO Teleradio Pictures, Inc.*, 208 F. Supp. 271, 277 (S.D.N.Y. 1972)).

²²⁰ *See Mallinckrodt, Inc. v. Medipart, Inc.*, 976 F.2d 700, 709 (Fed. Cir. 1992) (holding that a patentee can dictate the post-sale use of a patent-embodiment chattel even where the use does not read on one of the patent claims); *see also Static Control Components, Inc. v. Lexmark Int’l, Inc.*, 615 F. Supp. 2d 575, 587 (E.D. Ky. 2009) (holding that after the sale of chattel the patentee cannot prevent the practicing of its patent claims to replicate the chattel).

²²¹ *Winston*, *supra* note 1, at 100.

²²² *Savich*, *supra* note 3, at 129.

²²³ *See, e.g., Savich* *supra* note 3, at 130 (noting that “piracy became rampant as the number of peer-to-peer end-users and the number of technological options for file-sharing increased.”).

²²⁴ 17 U.S.C.S. § 106(1) (LexisNexis 2011).

²²⁵ 17 U.S.C.S. § 106(3) (LexisNexis 2011).

²²⁶ *See, e.g., Beard* *supra* note 55, at 20 (explaining that “shrink-wrap licenses’ . . . establish privity between the owner of the intellectual property and the end user even where there is no direct contractual relationship between the two.”)

²²⁷ *Symposium*, *supra* note 31, at 1040 (“The last time I checked, there are in the range of thirty to forty ProCD-type cases . . . I have to tell you that the results have been overwhelmingly in favor of shrink-wrap licenses.”).

whether the extension of rights is justified by property or competition policy.²²⁸ Some license conditions properly reflect that a software publisher has rights only in the software code itself, rather than chattel (the disc) embodying the code. In *Apple, Inc. v. Psystar Corp.*, the software purchaser had agreed to license terms forbidding the copying and transferring of software code, which terms are exactly coextensive with Apple's statutory rights in its code.²²⁹ License terms, however, do not stop there, and the courts routinely uphold conditions that control the chattel itself.²³⁰

Professor Rothchild finds the courts' blurring between computer programs and their inert embodiments "puzzling, given that courts have not had the slightest difficulty distinguishing between the work and the object with respect to other types of copyrighted works."²³¹ One explanation for the confusion is the software industry's historically fraught relationship with the IP regimes: makers of early computer programs, unsure whether their work was protectable by copyright or patents, required users to enter special agreements theretofore uncommon in the conveyance of expressive works.²³² Such licensing practices, in one scholar's words, have "outlived any doubt about the availability of intellectual property protection for software;"²³³ this phenomenon of covering CDs and online downloads with licenses may thus beguile judges by their specialness to the software world.²³⁴ It is equally possible these courts, in granting publishers control over the chattel, assume the software purchaser first installs the disc onto his/her computer before effecting the chattel transfer.²³⁵ Where that is the case, the purchaser's conduct should create infringement liability, because the copying and transferring of the disc created two embodiments of copyrighted code where before there was only one.²³⁶ However, this should be a matter of fact for the court to

²²⁸ Professor Winston warns that the delicate balance in IP law between protecting the owner's monopoly and protecting the purchaser's use "is upset by licensing products that embody intellectual property" and is "shifting . . . away from the public interest." Winston, *supra* note 1, at 99.

²²⁹ *Apple, Inc. v. Psystar Corp.*, 673 F. Supp. 2d 931 (N.D. Cal. 2009).

²³⁰ *See, e.g., Adobe Syst. Inc. v. Stargate Software Inc.*, 216 F. Supp. 2d 1051 (N.D. Cal. 2002) (software license may restrict the class of users to which the purchaser may transfer the disc); *DSC Comm. Corp. v. Pulse Comm., Inc.*, 170 F.3d 1354 (Fed. Cir. 1999) (software license may characterize purchaser as not an "owner," to extinguish software owners' rights under 17 U.S.C. §117); *NCR Corp. v. ATM Exch., Inc.*, 2006 U.S. Dist. LEXIS 30296 (S.D. Ohio, May 17, 2006) (software license may entirely extinguish purchaser's first sale rights); and *Vernor v. Autodesk, Inc.*, 621 F.3d 1102 (9th Cir. Wash. 2010) (shrink-wrap license may bar purchaser from transferring code-embodying disc to anyone).

²³¹ Rothchild, *supra* note 56, at 49.

²³² Robinson, *supra* note 57, at 1473.

²³³ *Id.* at 1474.

²³⁴ Rothchild, *supra* note 56, at 49 ("The answer, it seems to me, must lie in the fact that no other type of copyrighted work (with the exception of motion pictures) is routinely distributed subject to a 'license agreement.'").

²³⁵ The policy of preventing rampant copying by purchasers is an undercurrent in many first-sale cases. *See Adobe Syst. Inc. v. Stargate Software Inc.*, 216 F. Supp. 2d 1051, 1059 (N.D. Cal. 2002); *Vernor*, 621 F.3d at 1114–15; *Brilliance Audio, Inc. v. Hights Cross Comm'n., Inc.*, 474 F.3d 365, 374 (6th Cir. 2007).

²³⁶ *Stephens v. Cady*, 55 U.S. 528 (1852) (conveyance of chattel does not waive right to prohibit reproduction).

explore, not a presumption in all software cases.

If the software purchaser is transferring the disc without first copying it, a license would not be enforcing the publisher's § 106 rights; instead, in Professor Winston's words, the publisher would be "privately legislating" a copyright remedy.²³⁷ According to Professor Winston, this manufacture of IP law through contract is not legitimate: "Licenses may . . . clarify[] what restrictions are being placed on the chattel," but they should not "circumvent public legislation by restricting the downstream use of the chattel in a manner not commensurate with the scope of" the rights.²³⁸ Professor Daniel Cahoy also balks at the contractual rewriting of copyright law, concluding that such terms "seem to fly in the face of important statutory or common law rules . . ."²³⁹ The common-law principles that Cahoy and Winston likely have in mind are those that the Supreme Court has affirmed in its patent-exhaustion rulings: hostility toward running servitudes on tangible property, suspicion that such servitudes raise prices, and empirical evidence that most post-sale restrictions are not necessary to spur creation of new intellectual property.²⁴⁰

B. Borrowing Reform from Patent Exhaustion

Two authorities propose a reform to courts' application of the first-sale doctrine to SRT: Professors Winston and Rothchild argue that courts should scrutinize the license to determine whether the user is functionally an owner, defined as one whose property interest in the software is both 1) permanent and 2) connected to his/her enjoyment rather than manufacture of the good.²⁴¹ Rothchild emphasizes that the traditional IP meaning of a "license" is a "grant of permission" to exploit the IP commercially, which exploitation is limited in time or scope.²⁴² Thus, he reasons, a user whose enjoyment of software is not limited in time or limited to commercial exploitation should be deemed by courts as not a licensee, regardless of the agreement's terms.²⁴³

This approach seems almost right. Yet, as in the *Static Control* opinion, Rothchild's and Winston's willingness to characterize software transfers as pure sales overlooks the SRT problem—the heightened possibility that a beneficial user, through his/her use, could become a maker of the product and so cause the IP owner to lose sales.²⁴⁴ The line of patent-exhaustion cases that *Quanta* reaffirmed provides a model framework for evaluating licenses of copyrighted SRT. My

²³⁷ Winston, *supra* note 1, at 93.

²³⁸ *Id.* at 108.

²³⁹ Cahoy, *supra* note 117, at 154.

²⁴⁰ Professor First's research into the interconnectedness of post-sale use restrictions and inefficient rent-seeking made the same conclusions in both the patent and copyright arena. First, *supra* note 48, at 386–89.

²⁴¹ Winston, *supra* note 1, at 121–24; Rothchild, *supra* note 56, at 34–35.

²⁴² Rothchild, *supra* note 56, at 33.

²⁴³ *Id.* at 34–35.

²⁴⁴ See *supra* text accompanying notes 51–55.

theory of these cases' overarching rule, supported by the literature, is that conveyance of patent-practicing chattel does create a presumption of exhaustion, unless a post-conveyance restriction is tailored to a pro-consumer justification.²⁴⁵ Applied to copyright, the license enforced in *Apple v. Psystar* should be the default boundary of a shrink-wrap license's power to control what a purchaser does with his/her chattel.²⁴⁶

At the same time, limitations on software use that serve a pro-consumer purpose should be upheld; a prime candidate for such exception is the agreement in *Adobe v. Stargate*, which licensed the software at an "education" price and so restricted transfer of the chattel to non-educators.²⁴⁷ Enforcing the license in an infringement action, the court noted that Adobe was price-discriminating in order to maintain two markets—the educational market, which enjoyed a discount, and the general market, which did not.²⁴⁸ *Adobe*, then, is the copyright equivalent of *General Talking Pictures*, the only Supreme Court case that did not find patent exhaustion, where the license preserved a scheme that kept one market's prices low.²⁴⁹ To settle marginal cases in the SRT context, Smith's proposed structure for evaluating patent licenses provides a model for more nuanced use-restricting software licenses, on terms that reflect SRT's uniqueness. For example, a software company that offered its product online for download might find that charging one up-front price deterred low-intensity users from purchasing, and failed to curb piracy. As a solution, the company could license online use of the software and "meter" the customer's intensity of use, charging according to an agreed-on schedule. A court should find the licensing not barred by the first-sale doctrine, provided that the payment schedule did not raise overall prices or restrict overall consumption of the software.²⁵⁰ Such a rule is roughly analogous to the idea that Monsanto can sell transgenic seed to farmers and obtain a seasonal technology fee for every season that the farmers plant second-generation seed; the contract does not offend the principles of free alienability and the tailoring of IP rights to the scope of the IP grant.²⁵¹

VI. CONCLUSION

Courts considering whether transfers of SRT trigger patent exhaustion should presume that encumbrances on the end-user's title offend longstanding principles, such as the free alienability of movables and the prevention of inefficient rent-seeking. Only when consumer welfare is endangered by users'

²⁴⁵ See *supra* text accompanying notes 98–109, 122–32.

²⁴⁶ *Apple, Inc. v. Psystar Corp.*, 673 F. Supp. 2d 931, 933–35 (N.D. Cal. 2009).

²⁴⁷ *Adobe Syst. Inc. v. Stargate Software Inc.*, 216 F. Supp. 2d 1051, 1052–53 (N.D. Cal. 2002).

²⁴⁸ *Id.*

²⁴⁹ See *supra* text accompanying notes 122–32.

²⁵⁰ Professor Hovenkamp explains that, in antitrust cases, metering licenses should be evaluated under the rule of reason, because of their potential to keep prices low and supply high. HERBERT HOVENKAMP, *ECONOMICS AND FEDERAL ANTITRUST LAW* 123, 230–33 (West Group, 1985).

²⁵¹ See Smith, *supra* note 7, at 640–45.

duplication of a patented good can that use be properly restricted. Therefore, while patentees of SRT must allow purchasers to take title to goods embodying the patent, patentees may likewise obtain royalties when purchasers deliberately make copies of SRT. Furthermore, courts should place the burden on patentees to show the reasonableness of a use restriction, in terms of patent exhaustion's social goals, rather than placing a burden on licensees to prove unreasonableness under unfair competition law.