

CONTRACTUAL EXPANSION OF THE SCOPE OF PATENT INFRINGEMENT THROUGH FIELD-OF-USE LICENSING

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ABSTRACT

Patentees sometimes employ field-of-use licenses, under which they grant the right to use their inventions, but only in specified ways. Field-of-use licensing is often procompetitive, because the ability to provide different licensing terms for different users can encourage broader licensing of inventions. But in recent cases, the Court of Appeals for the Federal Circuit and several district courts have upheld field-of-use licenses that prohibited activities that would otherwise have been permitted by patent law, such as the repair and resale of patented products. By treating any violation of a license agreement as patent infringement, and by upholding license provisions that prohibited previously permitted activities, the courts have allowed patentees to expand the scope of patent infringement liability. This Article describes the dramatic expansion of patent law that has resulted, and it advocates a test that would require a patentee to show that the conduct it challenges would be infringement in the absence of a license before it can seek to make it infringement by license. The Article also briefly compares these effects in patent law to the analogous effects of shrink-wrap licenses and the DMCA in copyright law, and it assesses the potential for similar expansion of patent infringement liability in Europe.

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INTRODUCTION

Patentees have a variety of options for licensing their patented inventions. One common technique is the field-of-use license, under which the patentee grants the right to use the patented invention, but only in a specified way. Field-of-use licensing is generally seen as procompetitive, because the ability to provide different licensing terms for different users can encourage broader licensing of inventions.¹ For example, the Supreme Court has upheld a field-of-use licensing arrangement under which several patentees licensed third parties to manufacture audio amplifiers using their patented technologies, but only for home use.² This arrangement allowed the patentees to reserve the right to manufacture for commercial use, which was apparently more profitable, while still allowing the technologies to be used broadly for home applications.³ If licensing had required the patentees to share the commercial business as well, they might not have licensed the technologies for home use at all.

But field-of-use licensing need not always be procompetitive. The anticompetitive concerns can be especially great when the patentee imposes restrictions on the ultimate purchasers of the patented products rather than on manufacturing licensees.⁴ In recent U.S.

1. See, e.g., U.S. DEPT OF JUSTICE & FED. TRADE COMM'N, ANTITRUST GUIDELINES FOR THE LICENSING OF INTELLECTUAL PROPERTY (Apr. 6, 1995), available at <http://www.usdoj.gov/atr/public/guidelines/0558.htm> [hereinafter IP GUIDELINES], ("Field-of-use, territorial, and other limitations on intellectual property licenses may serve procompetitive ends by allowing the licensor to exploit its property as efficiently and effectively as possible."); Commission Notice, Guidelines on the Application of Article 81 of the EC Treaty to Technology Transfer Agreements, 2004 O.J. (C 101/2) 182 [hereinafter TTBER Guidelines] ("Field of use restrictions may have pro-competitive effects by encouraging the licensor to license his technology for applications that fall outside his main area of focus."); Makan Delrahim, *The Long and Winding Road: Convergence in the Application of Antitrust to Intellectual Property*, 13 GEO. MASON L. REV. 259, 264 (2005) (discussing the use of field-of-use licenses to price discriminate among licensees and observing that "allowing the firm that developed the [innovation] to price discriminate may increase social welfare by promoting the efficient commercialization of the asset").

2. See *Gen. Talking Pictures Corp. v. W. Elec. Co.*, 305 U.S. 124, 127 (1938).

3. See *id.* at 126.

4. Indeed, it has been argued that the Supreme Court decisions are best read only as approving use restrictions on manufacturing licensees like that in *General Talking Pictures*. See Richard H. Stern, *The Unobserved Demise of the Exhaustion Doctrine in US Patent Law*,

cases, patentees have used field-of-use licensing to prevent purchasers of patented products from repairing those products, and to enforce distribution restraints.⁵ In these contexts, the use restrictions might not have facilitated broader licensing. Instead, the restrictions appear to have been employed to allow the patentees to price discriminate or to control more fully activities in related markets, neither of which is necessarily procompetitive.⁶

Furthermore, the effects of these recent field-of-use licensing arrangements have not been carefully examined because the courts have accorded them very deferential treatment.⁷ The Court of Appeals for the Federal Circuit has established a test that depends in theory on whether the restraint is “within the scope of the patent claims,”⁸ a criterion that could be useful in assessing the relationship of use restrictions to the patentee’s inventive contribution. Subsequent decisions, however, have turned simply on the Federal Circuit’s view that any contractual condition on a license makes the exhaustion doctrine inapplicable,⁹ and on the court’s unwillingness to evaluate the effects of any license restrictions that are not per se antitrust violations.¹⁰

Moreover, although these restrictions are contractual, their effects are not simply matters of contract law. As a result of the Federal Circuit’s view that any violation of a patent license is patent

15 EUR. INTEL. PROP. REV. 460, 465 (1993) [hereinafter Stern, *Unobserved Demise*]. One federal district court reached a similar conclusion, but was reversed by the Federal Circuit in what has become the leading case on use licensing. See *Mallinckrodt, Inc. v. Medipart, Inc.*, No. 89-C-4524, 1990 U.S. Dist. LEXIS 1974, at *10 (N.D. Ill. Feb. 16, 1990), *rev’d in part, vacated in part*, 976 F.2d 700 (Fed. Cir. 1992). See *infra* Part IV.B.

5. See *Ariz. Cartridge Remfrs. Ass’n, Inc. v. Lexmark Int’l, Inc.*, 290 F. Supp. 2d 1034, 1045 (N.D. Cal. 2003), *aff’d*, 421 F.3d 981 (9th Cir. 2005) (discussing prevention of repair); *Pioneer Hi-Bred Int’l, Inc. v. Ottawa Plant Food, Inc.*, 283 F. Supp. 2d 1018, 1058 (D. Iowa 2003) (discussing distribution restraints). For further discussion of both cases, see *infra* notes 99-129 and accompanying text.

6. See *infra* Part II.A.

7. See *id.*

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

9. Under the exhaustion doctrine, or first-sale doctrine, a patentee’s rights in its invention are exhausted upon the first sale of the invention. But the Federal Circuit has held that the doctrine applies only to an unconditional sale, so that any restriction imposed by the patentee—on the purchaser’s field of use or otherwise—avoids application of the doctrine. See *infra* text accompanying notes 46-60.

10. See *infra* text accompanying notes 63-71.

infringement, contract law and patent law coincide here.¹¹ That is, violation of the terms of a use license by a licensee or purchaser is not only a breach of contract but also patent infringement. This result is especially troubling because the Federal Circuit has permitted patentees to restrict uses that the Supreme Court has said are not patent infringement.¹² As a result, the Federal Circuit's rules allow patentees to use contract law to transform previously permissible conduct into patent infringement.¹³ Indeed, the lower courts have applied these rules in such a way as to give patentees carte blanche to expand the scope of infringement.¹⁴

This issue echoes two similar issues in copyright law. First, several cases have considered contractual clauses in copyright licenses that eliminate the fair use right to reverse engineer the copyrighted software.¹⁵ Using contract in this way, to redefine copyright law, is similar to the application of use licensing to redefine patent law.¹⁶ Indeed, the copyright decisions are arguably less troubling, in that the applicability of the fair use defense has not been entirely clear in the cases that have allowed its elimination.¹⁷

Second, a somewhat similar concern exists regarding the effect of the Digital Millennium Copyright Act (DMCA)¹⁸ on fair use.¹⁹ The

11. *Mallinckrodt*, 976 F.2d at 707 n.6 (“[T]he remedy for breach of a binding license provision is not exclusively in contract, for a license is simply a promise not to sue for what would otherwise be patent infringement.”).

12. See *infra* text accompanying notes 49-52 and Part III.A.

13. See discussion *infra* Parts I.B., II.A.

14. See *infra* Part II.A.

15. See, e.g., *Davidson & Assocs. v. Jung*, 422 F.3d 630, 632 (8th Cir. 2005); *Bowers v. Baystate Techs., Inc.*, 320 F.3d 1317, 1323 (Fed. Cir. 2003).

16. The contractual elimination of this fair use right has generally been decried by commentators. See, e.g., Mark A. Lemley, *Intellectual Property and Shrinkwrap Licenses*, 68 S. CAL. L. REV. 1239, 1264 (1995); Michael J. Madison, *Legal-Ware: Contract and Copyright in the Digital Age*, 67 FORDHAM L. REV. 1025, 1128-29 (1998); David A. Rice, *Public Goods, Private Contract and Public Policy: Federal Preemption of Software License Prohibitions Against Reverse Engineering*, 53 U. PITT. L. REV. 543, 548-49 (1992).

17. Although most courts considering the issue have held that reverse engineering is a fair use, they have generally focused on its use to make interoperable products. See, e.g., *Sega Enters. Ltd. v. Accolade, Inc.*, 977 F.2d 1510, 1514 (9th Cir. 1992); *Atari Games Corp. v. Nintendo of Am., Inc.*, 975 F.2d 832, 842-43 (Fed. Cir. 1992). Interoperability, however, was not the central issue in either *Bowers*, 320 F.3d 1317, or *Davidson*, 422 F.3d 630. Cf. *Alcatel USA, Inc. v. DGI Techs., Inc.*, 166 F.3d 772, 793 (5th Cir. 1999) (holding that a contractual tying restriction that prevented achievement of interoperability was copyright misuse).

18. 17 U.S.C. § 1201 (2006).

19. See, e.g., Dan L. Burk, *Anticircumvention Misuse*, 50 UCLA L. REV. 1095, 1105-06

DMCA creates a cause of action against one who circumvents a technological protection measure for a copyrighted work.²⁰ No general exception exists under the DMCA for circumvention for fair use.²¹ Therefore, one who circumvents a technological measure protecting a copyrighted work may be liable under the DMCA, even if the use to which the copyrighted work would be put is a fair use, and thus otherwise permissible under the Copyright Act. This problem has arisen in a number of contexts²² and is presumably not the result Congress intended when it passed the DMCA.²³ Nevertheless, one could argue that the result is at least one created by statute. In contrast, the amendments of patent law effected by use licensing have been created by the courts and patentees with very little judicial, let alone legislative, analysis.²⁴

Although the alteration of copyright law by contract and by the DMCA has received much attention, the similar alteration of patent law has been less noticed.²⁵ The time is particularly opportune for an assessment of field-of-use licenses because the use of such licenses in the United States has increased, and the proper scope of the licenses is a question likely to reach the Supreme Court soon. Recently, the Federal Circuit upheld one such license²⁶ and the

(2003); Jacqueline D. Lipton, *Solving the Digital Piracy Puzzle: Disaggregating Fair Use from the DMCA's Anti-Device Provisions*, 19 HARV. J.L. & TECH. 111, 124-34 (2005).

20. 17 U.S.C. § 1201 (2006).

21. There is an exception for reverse engineering to achieve interoperability, 17 U.S.C. § 1201(f) (2006), but not for fair use more generally.

22. See ELEC. FRONTIER FOUND., UNINTENDED CONSEQUENCES: SEVEN YEARS UNDER THE DMCA (2006), http://www.eff.org/IP/DMCA/DMCA_unintended_v4.pdf (documenting reported cases in which anti-circumvention provisions of the DMCA have been invoked against "consumers, scientists, and legitimate competitors.").

23. See R. Anthony Reese, *Will Merging Access Controls and Rights Controls Undermine the Structure of Anticircumvention Law?*, 18 BERKELEY TECH. L.J. 619, 651 (2003).

24. See *infra* Part II.A.

25. Articles criticizing the Federal Circuit's approach in *Mallinckrodt, Inc. v. Medipart, Inc.*, 976 F.2d 700 (Fed. Cir. 1992), appeared in the wake of that decision. See James B. Kobak, Jr., *Contracting Around Exhaustion: Some Thoughts About the CAFC's Mallinckrodt Decision*, 75 J. PAT. & TRADEMARK OFF. SOC'Y 550, 562-64 (1993); Richard H. Stern, *Post-Sale Patent Restrictions After Mallinckrodt—An Idea in Search of Definition*, 5 ALB. L.J. SCI. & TECH. 1, 29-35 (1994) [hereinafter Stern, *Post-Sale*]; Stern, *Unobserved Demise*, *supra* note 4, at 465. As discussed here, however, the pace and variety of patentees' exploitation of the opportunities offered by *Mallinckrodt* have recently increased. See Peter Carstensen, *Post-Sale Restraints Via Patent Licensing: A "Seedcentric" Perspective*, 16 FORDHAM INTELL. PROP. MEDIA & ENT. L.J. 1053, 1053 (2006).

26. *Monsanto Co. v. McFarling*, 363 F.3d 1336, 1342-43 (Fed. Cir. 2004).

licensee petitioned for certiorari; the Supreme Court asked for the views of the Solicitor General before denying the application, indicating that the Court has taken an interest in the issue.²⁷

This Article argues that patent law limitations should be restored to field-of-use licensing. More specifically, the courts should recognize that the scope of infringement liability is defined in the first instance by patent law, not by contract. *Within* the limits of infringement liability, contracts can permit or deny users the right to make particular uses of the invention. *Outside* the scope of infringement liability as it is defined by patent law, however, patentees cannot create new forms of infringement. Hence, this Article argues that in any analysis of the violation of a license the first step—a step that has been neglected by some lower courts—should be to ask whether the challenged conduct is within the scope of patent infringement as defined by patent law. Contrary to some recent decisions, only if the answer to that question is yes does it become relevant whether the conduct was licensed.

The Article proceeds in the next Part by outlining the legal background for field-of-use licensing; this discussion focuses on the law in the United States, but it also describes how the law in Europe is critically different in this area. Part II then describes several recent cases from the lower U.S. courts and examines shortcomings in the analyses of those courts, both with respect to patent law and contract law, again drawing comparisons to the law in Europe. Part III describes the effect of unbridled field-of-use licensing, which is to allow patentees to define by contract the nature of patent infringement without regard to previous limitations on infringement. Finally, Part IV describes alternative means that patentees could use to achieve the procompetitive purposes served by field-of-use licensing.

27. The Solicitor General filed a brief arguing that the petition for certiorari should be denied. Brief for the United States as Amicus Curiae Supporting Respondents, *McFarling v. Monsanto Co.*, 545 U.S. 1139 (2005) (No. 04-31).

I. THE LEGAL FRAMEWORK FOR FIELD-OF-USE LICENSING

The legal framework for field-of-use licensing is somewhat confused. The Supreme Court approved use licensing in one case,²⁸ but both that case and others suggest limitations on use licensing that the Federal Circuit has eliminated. The first two sections below discuss the use licensing cases from both courts, but because the law is uncertain, it is worth considering also how field-of-use licenses are treated in other jurisdictions. Therefore, the final section below discusses the treatment of use licensing in Europe, where the European Commission has maintained some important distinctions that the Federal Circuit has abandoned.

A. *The Supreme Court*

The Supreme Court has said that a patentee “may grant a license ‘upon any condition the performance of which is reasonably within the reward which the patentee by the grant of the patent is entitled to secure.’”²⁹ This statement, from *General Talking Pictures Corp. v. Western Electric Co.*, a 1938 case that is still the Court’s leading case on use licensing, appears to contemplate review of the economic justification for a license restriction by focusing on whether the restriction provides the patentee with rewards beyond those to which the patent entitles it. The case involved a restriction in an agreement that permitted a licensee to manufacture goods using the patented technology for a limited market, as described above.³⁰

A case like *General Talking Pictures*, in which the use restriction is imposed on a manufacturing licensee, differs from recent use-licensing cases, in which the restrictions have been imposed on the ultimate purchasers of the patented product.³¹ Of course, a patentee is free to restrict its own use of its patent in whatever way it chooses, and there seems no reason why a patentee’s decision to license others to manufacture the patented product, rather than to

28. See *supra* notes 2-3 and accompanying text; see also *Gen. Talking Pictures Corp. v. W. Elec. Co.*, 305 U.S. 124, 126-27 (1938).

29. *Gen. Talking Pictures*, 305 U.S. at 127 (quoting *United States v. Gen. Elec. Co.*, 272 U.S. 476, 489 (1926)).

30. See *supra* notes 2-3 and accompanying text.

31. See discussion *infra* Part II.A.

manufacture the product itself, should eliminate that freedom. That is, manufacturing licensees in effect stand in the shoes of the patentee, and imposing use restrictions on them can reasonably be treated as economically equivalent to individual decisions by the patentee itself, as the Supreme Court has indicated.³²

Restrictions on the purchasers of patented goods, however, cannot be viewed as equivalent to restrictions on the patentee itself. Furthermore, the Supreme Court has never upheld the use of a patent infringement suit to enforce license restrictions on the ultimate purchasers of patented products. Although the Court has also never said that such restrictions are unenforceable through patent law, it has described the exhaustion principle in a way that suggests this conclusion, holding that when a patentee “sells a machine or instrument whose sole value is in its use, he receives the consideration for its use and he parts with the right to restrict that use.”³³

Such exhaustion of the patentee’s *patent* rights does not necessarily exhaust its right to restrict use of its products through other means, though. More particularly, the Court has indicated that any restrictions on the ultimate users of patented products are subjects of contract law, not patent law: “The extent to which the use of the patented machine may validly be restricted to specific supplies or otherwise by special contract between the owner of a patent and the purchaser or licensee is a question outside the patent law and with it we are not here concerned.”³⁴ Additionally, restrictions that are purely contractual would not receive any of the protection from antitrust scrutiny that might be accorded a restriction under patent law. For example, in *United States v. Univis Lens Co.*,³⁵ in which the patentee “licensed” both its wholesalers and retailers on terms that set sales prices, the Court said that “[t]he added stipulation by the

32. See *Bement v. Nat'l Harrow Co.*, 186 U.S. 70, 93 (1902) (“The owner of a patented article can, of course, charge such price as he may choose, and the owner of a patent may assign it or sell the right to manufacture and sell the article patented upon the condition that the assignee shall charge a certain amount for such article.”).

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

34. *Motion Picture Patents Co. v. Universal Film Mfg. Co.*, 243 U.S. 502, 509 (1917) (citing *Keeler v. Standard Folding Bed*, 157 U.S. 659 (1895)); see also *Keeler*, 157 U.S. at 666 (“It is, however, obvious that such a question would arise as a question of contract, and not as one under the inherent meaning and effect of the patent laws.”).

35. 316 U.S. 241 (1942).

patentee fixing resale prices derives no support from the patent and must stand on the same footing under the Sherman Act as like stipulations with respect to unpatented commodities.”³⁶

Moreover, the Court has taken care to ensure that patentees do not avoid the limits discussed above by merely formal means. For example, in *Victor Talking Machine*,³⁷ the patentee sought to characterize the purchasers of its products as licensees, but the Court rejected that approach:

If we look through the words and forms, with which the plaintiff has most elaborately enveloped its purpose, to the substance and realities of the transaction contemplated, we shall discover several notable and significant features. First, while as if looking to the future, the notice, in terms, imposes various restrictions as to title and as to the “use” of the machines by plaintiff’s agents, wholesale and retail, and by the “unlicensed members of the public,” for itself, the plaintiff makes sure, that the future shall have no risks, for it requires that all that it asks or expects at any time to receive for each machine must be paid in full before it parts with the possession of it.³⁸

The Court indicated that the traditional distinction between property and non-property rights was determinative:

Courts would be perversely blind if they failed to look through such an attempt as this “License Notice” thus plainly is to sell property for a full price, and yet to place restraints upon its further alienation, such as have been hateful to the law from Lord Coke’s day to ours, because obnoxious to the public interest.³⁹

In this fashion, the Court has traditionally resisted attempts to use contract to expand the scope of patent law.

36. *Id.* at 251 (citing *Ethyl Gasoline Corp. v. United States*, 309 U.S. 436 (1940)).

37. *Straus v. Victor Talking Mach. Co.*, 243 U.S. 490 (1917).

38. *Id.* at 498.

39. *Id.* at 500-01.

B. The Federal Circuit

The Court of Appeals for the Federal Circuit, which is the primary appellate court for patent issues in the United States, has replaced the Supreme Court's substantive approach with a formal one. The source of the formal approach is *Mallinckrodt, Inc. v. Medipart, Inc.*,⁴⁰ in which the Federal Circuit reviewed the validity of a restriction that took the form of a "single use only" inscription on the patented product. The patent covered a "nebulizer" for the delivery of radioactive or medicinal substances in aerosol form to the lungs of medical patients.⁴¹ The alleged infringer accepted the used products from hospitals, sterilized them with high doses of radiation, repackaged them with new (unpatented) components, and resold them to the hospitals.⁴²

The district court's analysis was consistent with the Supreme Court's approach⁴³ and focused on the fact that the restriction had been imposed on a purchaser of the patented product, not a manufacturing licensee.⁴⁴ On appeal, the Federal Circuit said that the district court "held that no restriction whatsoever could be imposed under the patent law, whether or not the restriction was enforceable under some other law, and whether or not this was a first sale to a purchaser with notice."⁴⁵ The district court's holding was actually limited to restrictions on the ultimate purchasers of the patented products and was consistent with Supreme Court holdings. But by (mis)representing the district court's holding more broadly, the Federal Circuit was able to conclude that it was inconsistent with precedent and to substitute its own approach.

The first step in the Federal Circuit's own analysis was to determine that the exhaustion doctrine was inapplicable. To do so, the court relied on the purported "condition" on the sale of the product created by the "single use only" notice.⁴⁶ Although the court explicitly declined to decide whether the notice was sufficient to

40. 976 F.2d 700 (Fed. Cir. 1992).

41. *Id.* at 701-02.

42. *Id.* at 702.

43. *See supra* Part I.A.

44. *See Mallinckrodt, Inc. v. Medipart, Inc.*, No. 89-C-4524, 1990 U.S. Dist. LEXIS 1974, at *6 (N.D. Ill. Feb. 16, 1990), *rev'd in part, vacated in part*, 976 F.2d 700 (Fed. Cir. 1992).

45. *Mallinckrodt*, 976 F.2d at 701.

46. *Id.* at 703.

create a contract,⁴⁷ it rejected the district court's reliance on the exhaustion doctrine as applicable only to unconditional sales.⁴⁸ In this way, the Federal Circuit established a new rule, based on its interpretation of the Supreme Court's cases:⁴⁹ "This exhaustion doctrine ... does not apply to an expressly conditional sale or license."⁵⁰

This broad statement, however, is not supported by Supreme Court decisions. Although the Court has sometimes observed that sales were made "without any conditions" in rejecting infringement suits against purchasers,⁵¹ it has never suggested that simply imposing conditions of any kind would allow infringement suits against purchasers. On the contrary, the Court has relied on the exhaustion doctrine in many cases despite conditions attached to the original sale.⁵² It is true that in the only cases in which the Court has considered violations by purchasers of patentee-imposed conditions, those conditions were per se antitrust violations.⁵³ In several cases, however, the Court has rejected infringement suits against parties that bought patented goods in the exclusive territory of one licensee and resold them in the territory of another.⁵⁴ The challenged conduct in those cases certainly subverted the goals of the patentees' restrictions, but the Court held that the patentees' rights were exhausted by the initial sales, which were in compliance

47. *See id.* at 709.

48. *Id.* at 708.

49. There was no clear precedent for this rule. *Mallinckrodt* simply said that "[v]iewing the entire group of these early [Supreme Court] cases, it appears that the Court simply applied, to a variety of factual situations, the rule of contract law that sale may be conditioned." *Id.* at 708 (footnote omitted). The critical point ignored by this statement is the distinction between contract law and property law. That a condition may be imposed as a matter of contract does not necessarily mean that it may be enforced through the property protections of patent law. *Cf.* F.2d at 707 n.6 ("[T]he remedy for breach of a binding license provision is not exclusively in contract, for a license is simply a promise not to sue for what would otherwise be patent infringement." (citations omitted)).

50. *B. Braun Med. Inc. v. Abbott Labs.*, 124 F.3d 1419, 1426 (Fed. Cir. 1997).

51. *See Keeler v. Standard Folding Bed Co.*, 157 U.S. 659, 663 (1895) (quoting *Mitchell v. Hawley*, 83 U.S. (16 Wall.) 544, 546-47 (1873)).

52. *See infra* notes 54-55.

53. *See, e.g.*, *Motion Picture Patents Co. v. Universal Film Mfg. Co.*, 243 U.S. 502 (1917) (addressing tying); *Bauer & Cie v. O'Donnell*, 229 U.S. 1, 16-18 (1913) (addressing resale price maintenance).

54. *See, e.g.*, *Keeler*, 157 U.S. 659; *Hobbie v. Jennison*, 149 U.S. 355 (1893); *Adams v. Burke*, 84 U.S. (17 Wall.) 453 (1873).

with the restrictions because they were made in the assigned territories.⁵⁵

General Talking Pictures was different. In that case, the Court permitted an infringement suit against a purchaser, but the Court relied on the fact that the original sale was in violation of the license restriction. The Court emphasized that the licensee had manufactured the products outside the scope of its license, which was limited to a particular field of use.⁵⁶ The purchaser was liable for infringement, the Court made clear, not because *it* had used the products outside the scope of a license, but because, knowing that the manufacturing licensee had exceeded the scope of *its* license, the purchaser was “in no better position than if it had manufactured the amplifiers itself without a license.”⁵⁷ *Mallinckrodt* was different because the original sale of the nebulizer did not violate the “single use only” restriction, so it was a valid first sale.⁵⁸ Furthermore, nothing in the Supreme Court’s decisions indicates that the presence of a purported restriction that would apply only to the ultimate purchaser would prevent the application of the exhaustion doctrine.⁵⁹

Nevertheless, given the Federal Circuit’s holding in *Mallinckrodt* that the patentee’s restriction avoided the exhaustion doctrine, the next step was to determine whether the restriction was permissible as a matter of patent law. Here, the Federal Circuit set out a test that appeared to be consistent with the Supreme Court’s: “The appropriate criterion is whether Mallinckrodt’s restriction is reasonably within the patent grant, or whether the patentee has ventured beyond the patent grant and into behavior having an anticompetitive effect not justifiable under the rule of reason.”⁶⁰ The first part of this test is consistent with the Supreme Court’s approach if asking whether a restriction “is reasonably within the patent grant” is the same as asking whether it “is reasonably within the reward which the patentee by the grant of the patent is entitled

55. See *Keeler*, 157 U.S. at 661; *Hobbie*, 149 U.S. at 362-63; *Adams*, 84 U.S. at 456-57.

56. See *Gen. Talking Pictures Corp. v. W. Elec. Co.*, 305 U.S. 124, 126 (1938).

57. *Id.* at 127.

58. See *Mallinckrodt, Inc. v. Medipart, Inc.*, 976 F.2d 700, 703 (Fed. Cir. 1992).

59. See *supra* notes 52-58 and accompanying text.

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

to secure.”⁶¹ Further, by making the restriction subject to antitrust law, the second part of the test would effectively treat it as any other contractual restriction, as the Supreme Court directed.

In fact, though, *Mallinckrodt* allowed a very broad scope for field-of-use restrictions. Whereas the Supreme Court’s test appeared to focus on the economic effects of a restriction, the Federal Circuit in *Mallinckrodt* interpreted its “within the patent grant” test as a more technical one, asking whether the restriction “relates to subject matter within the scope of the patent claims.”⁶² But the court did not explain what is required for a restriction to “relate” to patent claims. At its broadest, as the requirement has in fact come to be interpreted, it could simply mean that the defendant’s activity in some way involves the patented invention. Such an interpretation effectively removes any limitations on field-of-use licensing.

Indeed, subsequent to *Mallinckrodt*, the Federal Circuit has granted patentees wide latitude over field-of-use licensing. The first step in this expansion of permissible field-of-use licensing came in *B. Braun Medical Inc. v. Abbott Laboratories*,⁶³ which recast the question of whether the use restriction is within the scope of the patent claims into a question of whether “the patentee has impermissibly broadened the “physical or temporal scope” of the patent grant with anticompetitive effect.”⁶⁴ *Braun* offered only tying and enforcement of the patent beyond its term as examples of such impermissible broadening and said that “field of use restrictions ... are generally upheld.”⁶⁵

More recently, the Federal Circuit appears, though in passing and perhaps in dictum, to have eliminated all doubt about the status of field-of-use licenses:

Under the patent laws, a patentee has the right to exclude others from making, using, or selling a patented invention. Conduct falling within the scope of protection includes, *inter alia*, limited use licensing, and charging of royalties. Field of use

61. See *supra* note 29 and accompanying text.

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

63. 124 F.3d 1419 (Fed. Cir. 1997).

64. *Id.* at 1426 (quoting *Windsurfing Int’l, Inc. v. AMF, Inc.*, 782 F.2d 995, 1001 (Fed. Cir. 1986) (quoting *Blonder-Tongue Labs., Inc. v. Univ. of Ill. Found.*, 402 U.S. 313, 343 (1971), and citing *Mallinckrodt*, 976 F.2d at 704)).

65. *Id.*

licensing restrictions, i.e., permitting the use of inventions in one field and excluding it in others, are also within the scope of the patent grant.⁶⁶

In making these statements, the court cited not only *Mallinckrodt* but also *General Talking Pictures*, which, as described above,⁶⁷ was a considerably more narrow decision.

The extent to which Federal Circuit law in this area has deviated from the Supreme Court's is also illustrated by its treatment of the right of the purchaser of a patented product to repair the product. The Supreme Court has held that purchasers of patented goods have the right to repair those goods, though not the right to reconstruct them.⁶⁸ The Federal Circuit, however, said in *Mallinckrodt* that if the "single use only" restriction there was valid (presumably under its "within the patent grant" test⁶⁹), "any reuse is unlicensed and an infringement, and there is no need to choose between repair and reconstruction."⁷⁰ The implication of this approach was to take the right of repair, which appeared to be a limitation on a patentee's rights, and give the patentee contractual control over it.

The result was especially odd because the Supreme Court, in describing the right of repair, had said that when distinguishing between repair and reconstruction, its decisions had "steadfastly refused to extend the patent monopoly beyond the terms of the grant."⁷¹ That is, the Supreme Court viewed the repair right as a limit on the patent grant. In contrast, the Federal Circuit, despite stating that its test turned on whether a restriction was "within the patent grant," allowed patentees to eliminate the repair right by contract.⁷² In this respect, and as illustrated more generally in this Section, Federal Circuit precedent stands in contrast to that established by the Supreme Court.

66. *Monsanto Co. v. Scruggs*, 459 F.3d 1328, 1338 (Fed. Cir. 2006) (citations omitted).

67. See *supra* notes 56-59 and accompanying text.

68. See *Aro Mfg. Co. v. Convertible Top Replacement Co.*, 365 U.S. 336, 346 (1961).

69. See *Mallinckrodt*, 976 F.2d at 708.

70. *Id.* at 709.

71. *Aro Mfg. Co.*, 365 U.S. at 342.

72. See *Mallinckrodt*, 976 F.2d at 708.

C. *The IP Guidelines*

Although these court decisions establish current U.S. law, the federal antitrust agencies have expressed their own views on field-of-use licenses. The agencies' Antitrust Guidelines for the Licensing of Intellectual Property⁷³ state that field-of-use licenses "may serve procompetitive ends by allowing the licensor to exploit its property as efficiently and effectively as possible."⁷⁴ Interestingly, this statement is followed by an example that illustrates use licensing with restrictions on ultimate purchasers.⁷⁵ The example restrictions, however, truly limit the *field* of use to settings such as hospitals or group medical practices; they do not limit the manner in which the purchasers may use the intellectual property within that field, as the "single use only" restriction in *Mallinckrodt* did. That is, the restrictions approved in the example are akin to those in *General Talking Pictures*, in that they serve to partition the market among purchasers, rather than to the restrictions in *Mallinckrodt*, which partition the market within individual purchasers.

D. *Field-of-Use Licensing Rules in Europe*

In contrast to the United States, field-of-use licensing in Europe is addressed by regulation. Specifically, use licensing can be exempt under the European Commission's Technology Transfer Block Exemption Regulation (TTBER).⁷⁶ For most of the use-licensing arrangements in recent U.S. cases, however, the TTBER would be

73. IP GUIDELINES, *supra* note 1.

74. *Id.* at 5.

75. *Id.* at 6.

76. Commission Regulation (EC) No. 772/2004 on the Application of Article 81(3) of the Treaty to Categories of Technology Transfer Agreements, 2004 O.J. (L 123/11) [hereinafter TTBER].

The TTBER generally exempts licensing restrictions between firms whose market shares do not exceed specified thresholds. If the parties are noncompetitors, the block exemption applies so long as the share of neither party exceeds 30 percent. *Id.* at art. 3(2). If they are competitors, the block exemption applies so long as the parties' combined share does not exceed 20 percent. *Id.* at art. 3(1). The exemption does not apply, however, to restrictions that are in "hardcore" or "excluded" categories, but field-of-use licensing generally does not fall into those categories. The TTBER specifically excludes nonreciprocal use licensing between competitors from the hardcore category, and use licensing does not fall into any of the hardcore categories for licenses between noncompetitors. *Id.* at art. 4(1)(c)(i)-(ii).

inapplicable. For example, consider *Mallinckrodt*, which involved a license to a user of the patented product, not to a producer of it.⁷⁷ Because the TTBER applies only to “technology transfer agreements entered into between two undertakings permitting the *production* of contract products,”⁷⁸ the license in *Mallinckrodt* would not qualify as a technology transfer agreement under the TTBER.

The significance of this point lies in what it says about a use restriction like that in *Mallinckrodt*. It is telling that the TTBER does not view a restriction on the sale of a completed product as involving a transfer of the patentee’s technology, which suggests that the *Mallinckrodt* patent was only peripheral to the restriction. Indeed, the transfer of a completed product does not necessarily implicate patented technology in the same way as the manufacture of the product does. The manufacturer of the patented product certainly pays the patentee for the technology and reaps the benefit of selling a product that incorporates that technology. Whether a downstream restriction on purchasers also implicates the technology itself, however, or does so in a way that the purchasers have not already paid for, is exactly the inquiry contemplated by the U.S. Supreme Court’s requirement that a condition imposed by the patentee be “reasonably within the reward which the patentee by the grant of the patent is entitled to secure.”⁷⁹ The Federal Circuit’s approach avoids this inquiry, which is discussed further below,⁸⁰ but by not automatically exempting downstream restrictions, the TTBER insists upon it.

Another way to illustrate the implications of the TTBER’s focus on the production of the patented product is to focus on the reconditioning of the product performed by the defendant in *Mallinckrodt* and on patent law’s repair doctrine. Perhaps it could be argued that because the purchasers in *Mallinckrodt* arranged for the recondi-

77. See *supra* Part I.B.

78. TTBER, *supra* note 76, at art. 2 (emphasis added); see also TTBER Guidelines, *supra* note 1, ¶ 41 (“It follows from Article 2 that for licence agreements to be covered by the TTBER they must concern ‘the production of contract products,’ that is, products incorporating or produced with the licensed technology. In other words, to be covered by the TTBER the licence must permit the licensee to exploit the licensed technology for production of goods or services (see recital 7 of the TTBER).”).

79. *Gen. Talking Pictures Corp. v. W. Elec. Co.*, 305 U.S. 124, 127 (1938) (citation omitted).

80. See *infra* Part IV.A.

tioning of the nebulizer, the “license” of the nebulizer permitted the “production”—that is, the reconditioning—of the product, as the TTBER requires. The “license” in *Mallinckrodt*, however, actually forbade reconditioning, so it seems difficult to view the *Mallinckrodt* license, or the other similar licenses discussed below, as permitting production of the patented product.⁸¹ That is, the *sale* in *Mallinckrodt* permitted the reconditioning in the sense that it made the product available, but the license agreement itself did not permit reconditioning, or production, of the patented product.

Whether a patented product may permissibly be reconditioned is the exact question addressed by the repair doctrine, which is discussed further below.⁸² By denying an antitrust exemption to no-repair restrictions like those in *Mallinckrodt*, the TTBER requires a patentee to argue that a reconditioner is reconstructing the patented product and thus infringing.⁸³ Again, the Federal Circuit’s approach short-circuits this inquiry by allowing the patentee to simply argue that the reconditioner (or the purchaser⁸⁴) is violating the contractual restriction requiring only a single use.

These points are reinforced by the definition of a field-of-use license provided in the TTBER and in its accompanying Guidelines.⁸⁵ That definition is critical in the TTBER because if a particular restriction is not in fact a field-of-use license, but some other sort of restriction, the TTBER might not exempt it.⁸⁶ Analogously, the characterization of these restrictions as use restrictions leads to deferential treatment of them in the United States, despite the fact that the courts have not articulated a definition of a “use” restriction.⁸⁷ The TTBER’s reference to field-of-use licensing limits the exemption to “the obligation on the licensee(s) to produce with the licensed technology only within one or more technical fields of use

81. The *Monsanto* cases discussed below differ in this respect, however. See *infra* Parts III.A.3, IV.B.3.

82. See *infra* Part III.A.1.

83. See TTBER Guidelines, *supra* note 1, ¶ 182.

84. Although the defendant in *Mallinckrodt* was the reconditioner, it is actually the purchaser that uses the product a second time and thus arguably violates the “single use only” restriction.

85. TTBER Guidelines, *supra* note 1, ¶ 179.

86. See *supra* note 76.

87. See *infra* note 90.

or one or more product markets.”⁸⁸ The Guidelines further state that “the field of use must be defined objectively by reference to identified and meaningful technical characteristics of the licensed product.”⁸⁹

This approach appears to contrast with the Federal Circuit’s approach in the United States, where that court appears to view *any* restriction on use as a field-of-use restriction, regardless of whether it is related to the patented technology or its “technical characteristics.”⁹⁰ If the use restrictions in *Mallinckrodt* and recent cases instead were viewed as other sorts of restrictions—such as customer restrictions, territorial restrictions, or, more generally, typical nonprice vertical restraints⁹¹—the appropriate treatment of the

88. TTBER, *supra* note 76, at art. 4(1)(c)(i). The “product market” possibility recalls the use restriction discussed in the U.S. IP Guidelines. *See supra* notes 74-76 and accompanying text.

89. TTBER Guidelines, *supra* note 1, ¶ 180.

90. The Federal Circuit has not really provided a definition of a field-of-use restriction, but after reviewing the Supreme Court cases, it said that “[v]iewing the entire group of these early cases, it appears that the Court simply applied, to a variety of factual situations, the rule of contract law that sale may be conditioned.” *Mallinckrodt, Inc. v. Medipart, Inc.*, 976 F.2d 700, 708 (Fed. Cir. 1992); *see also* *B. Braun Med., Inc. v. Abbott Labs.*, 124 F.3d 1419, 1426 (Fed. Cir. 1997) (“[E]xpress conditions accompanying the sale or license of a patented product are generally upheld.”). The court thus appears to include a nearly unlimited range of restrictions within the category of use restrictions. On the other hand, one might view its reference to restrictions “reasonably within the patent grant” as a more narrow definition of use restrictions. Under that interpretation, use restrictions, or restrictions “reasonably within the patent grant,” would be *per se* legal, *see Mallinckrodt*, 976 F.2d at 708, and other restrictions would be judged under the rule of reason. Under either interpretation, the Federal Circuit’s scrutiny is less searching than that contemplated by the TTBER.

91. It is worth pointing out here that in Europe the restriction in *Mallinckrodt* and similar restrictions probably would not be viewed as typical nonprice distribution restraints. The EC’s vertical agreement regulation applies to agreements between undertakings in which each operates “at a different level of the production or distribution chain.” Commission Regulation (EC) No. 2790/1999 on the Application of Article 81(3) of the Treaty to Categories of Vertical Agreements and Concerted Practices, 1999 O.J. (L 336/21) art. 2(1) [hereinafter Vertical Agreement Regulation]. The purchasers of the patented products in a case like *Mallinckrodt* are not really in the distribution chain because they use the finished product in their own operations, rather than distributing it to downstream purchasers.

In this respect, it is possible to draw by analogy on the EC’s motor vehicle block exemption, in which the regulation states that “‘independent repairer’ means a provider of repair and maintenance services for motor vehicles not operating within the distribution system set up by the supplier.” Commission Regulation (EC) No. 1400/2002, On the Application of Article 81(3) of the Treaty to Categories of Vertical Agreements and Concerted Practices in the Motor Vehicle Sector, 2002 O.J. (L 203/30) art. 1(m). This language indicates that independent aftermarket reconditioners of patented products, like the defendant in *Mallinckrodt*, would not be viewed by the Commission as within the distribution chain. Again, this suggests that

restrictions would be less obviously related to the patentee's intellectual property rights. Consequently, the restrictions could then be seen to be merely contractual and subject to limitations such as antitrust law, as the Supreme Court has directed.⁹²

In sum, the European approach in the TTBER is considerably more demanding than the Federal Circuit's approach. More to the point, perhaps, it seems similar to the Supreme Court's approach. Like the Supreme Court, but unlike the Federal Circuit, the TTBER confines the application of field-of-use licenses to manufacturing licensees. Moreover, the TTBER requires that the field of use be defined by the "technical characteristics of the licensed product,"⁹³ an approach that is in accord with the language of the Federal Circuit's test but not with its application.

II. THE U.S. APPROACH IN THE LOWER COURTS

The actual result in *Mallinckrodt* was not as troubling as is the path on which it set other U.S. courts. *Mallinckrodt* merely returned the case to the district court for reconsideration of the "single use only" restriction, so it is not clear that even under the Federal Circuit's test the restriction would have been permissible.⁹⁴ But as Richard Stern has said, interpreted broadly, "*Mallinckrodt* would permit patentees to accomplish many things that previously were infeasible."⁹⁵ In fact, this prediction has been borne out as the courts have relied on *Mallinckrodt* to reach results that appear to be anticompetitive.⁹⁶ Just as importantly, the courts in these cases have failed to examine carefully either the patent law or contract law issues that they present.

restrictions like those in *Mallinckrodt* should not receive the deferential treatment accorded to distribution restraints, but should be evaluated under the repair doctrine of patent law.

92. See, e.g., *Bus. Elecs. Corp. v. Sharp Elecs. Corp.*, 485 U.S. 717 (1988); *Cont'l T.V., Inc. v. GTE Sylvania Inc.*, 433 U.S. 36 (1977).

93. TTBER Guidelines, *supra* note 1, ¶ 180.

94. The district court might have determined that the Federal Circuit had not preempted the possibility that a restriction on the right to recondition the product was outside the scope of the patent. The parties settled the case, though, so the district court issued no decision on remand.

95. Stern, *Post-Sale*, *supra* note 25, at 8.

96. See *infra* Part II.A.

*A. Recent Cases**1. Lexmark*

The lack of scrutiny given the post-*Mallinckrodt* cases by the courts was illustrated in *Arizona Cartridge Remanufacturers Association v. Lexmark International, Inc.*⁹⁷ Although presented indirectly,⁹⁸ the issue in *Lexmark* was whether Lexmark could enforce a restriction on purchasers of its laser printer toner cartridges that required the buyers to return their used cartridges to Lexmark and prohibited refilling them.⁹⁹ Lexmark also offered cartridges for which refilling was permissible, but at a higher price.¹⁰⁰ In effect, then, the question was whether Lexmark could enforce the price difference, which it referred to as a “Prebate” program, through patent law.¹⁰¹

The district court applied an analysis similar to that of the Federal Circuit in *Mallinckrodt*. First, the court indicated that the exhaustion doctrine does not apply where a sale is conditioned.¹⁰² Next, it held that the Lexmark sale was in fact conditioned because the buyer of the cartridge was on notice of the restriction and in exchange for it paid a lower price.¹⁰³ Whether notice of the sort provided is sufficient to create a contract is controversial, as discussed below,¹⁰⁴ but the court was not troubled by the issue. By relying on the notice, the *Lexmark* court followed the approach that was adopted in a footnote in *Mallinckrodt*; however, *Mallinckrodt* did not provide a correct exposition of contract law.¹⁰⁵

On the patent issues, the *Lexmark* district court concluded that the use restriction was enforceable, though here the reasoning was opaque:

97. 290 F. Supp. 2d 1034 (N.D. Cal. 2003), *aff'd*, 421 F.3d 981 (9th Cir. 2005).

98. *See infra* note 111 and accompanying text.

99. *Lexmark*, 290 F. Supp. 2d at 1042.

100. *Id.* at 1037.

101. *Id.*

102. *Id.* at 1043.

103. *Id.* at 1044.

104. *See infra* Part II.B.1.

105. *See id.*

In short, the circumstances of the sale indicate: (1) purchasers, including end-users, are on notice of the single-use condition; (2) purchasers have an opportunity to reject the condition; and (3) the Prebate is offered at a special price that reflects an exchange for a single-use condition. Based on these circumstances, the Court concludes that Lexmark has not exhausted its rights. The Prebate is a conditional sale and the single-use condition is enforceable.¹⁰⁶

Again, the court appeared to be relying on its conclusion that the use restriction was part of a valid contract.¹⁰⁷ That a restriction is binding under contract law, however, does not establish that it is permissible as a matter of patent law. Consequently, the court's approach neglected entirely the "within the patent grant" inquiry established by *Mallinckrodt*.¹⁰⁸

Most tellingly, the district court in *Lexmark* did not provide any discussion of the patents at issue. It is difficult to see how it is possible to determine whether a restriction "relates to subject matter within the scope of the patent claims"¹⁰⁹ without even referring to those claims. In part, the court's approach might have neglected the patents because the case was brought by the plaintiff on a false advertising theory, under which it argued that Lexmark's imposition of the no-refilling condition was misleading because patent law prohibited it.¹¹⁰ Additionally, the plaintiff apparently did not pursue the patent issue vigorously and did not even raise it on appeal.¹¹¹ But the patent issues were essential to the claim.¹¹²

106. *Lexmark*, 290 F. Supp. 2d at 1045.

107. The court also showed elsewhere in its opinion that it treated the two inquiries as identical: "To determine whether Lexmark's Prebate imposes an unenforceable post-sale condition, the Court must determine whether the circumstances of the Prebate sale indicate that Lexmark exhausted its patent rights." *Id.* at 1042.

108. Alternatively, the court implicitly treated the issue as one of repair that was decided by *Mallinckrodt*: "Thus, where the purchaser of an unconditional sale has every right to repair the device, the purchaser of a conditional sale does not." *Id.* at 1043 (citing *Mallinckrodt, Inc. v. Medipart, Inc.*, 976 F.2d 700, 709 (Fed. Cir. 1992) ("[E]ven repair of an unlicensed device [a conditionally sold device] constitutes infringement.")).

109. *Mallinckrodt*, 976 F. Supp. 2d at 708.

110. *Lexmark*, 290 F. Supp. 2d at 1039.

111. See *Arizona Cartridge Remfrs. Ass'n, Inc. v. Lexmark Int'l, Inc.*, 421 F.3d 981, 987 (9th Cir. 2005).

112. See *Lexmark*, 290 F. Supp. 2d at 1037 ("This may not be a patent case, but to determine whether or not Lexmark has engaged in deceptive and unfair business practices the

Consequently, the court's failure to address the enforceability of the restriction as a separate issue is perplexing.

2. *Ottawa Plant Food*

Another recent case presents an even more surprising application of a use restriction. In *Pioneer Hi-Bred International, Inc. v. Ottawa Plant Food, Inc.*,¹¹³ the court upheld a "no resale" policy, despite the fact that such a policy is an explicit contractual elimination of the exhaustion doctrine. In fact, subsequent to the events at issue in the case, the patentee, Pioneer, actually imposed an explicit prohibition on resale. The restriction before the court, however, stated that purchasers' uses of the patented product, seed corn, were limited "only to produce forage or grain for feeding or processing."¹¹⁴ Pioneer argued that under this restriction resales were impermissible, contending that since a purchaser who resold the corn was not using it to produce forage or grain, the resale was outside the scope of the license and was therefore infringement.¹¹⁵

Despite this patent infringement claim, the case actually concerned distribution restraints. Pioneer used a system of authorized dealers, and Ottawa was not a part of Pioneer's distribution system.¹¹⁶ Instead, Ottawa obtained corn from an authorized dealer of Pioneer's products and resold it to farmers in a different geographical territory.¹¹⁷ In the usual nonpatent case, Pioneer could have sued the authorized dealer who sold to Ottawa if its contract with that dealer did not permit the sales. It is unlikely, however, that it could have sued Ottawa itself.¹¹⁸ Therefore, by use of the no-resale restrictions, Pioneer sought to use patent law to enforce a distribution policy that would have been difficult to enforce through contract.

Court must analyze this case under the rubric of patent law.").

113. 283 F. Supp. 2d 1018 (N.D. Iowa 2003). I served as an expert witness for the defendant in this case.

114. *Id.* at 1024-25.

115. *See id.* at 1024.

116. *Id.* at 1023-24.

117. *Id.*

118. Perhaps Pioneer could have sued Ottawa on a theory of interference with contractual relations. But the fact that Ottawa's conduct could be characterized as such interference only emphasizes that it was not a proper subject of a patent infringement action.

To conclude that the restriction was permissible, the court applied the *Mallinckrodt* analysis, adding an additional step to turn the restriction “only to produce forage or grain” into a “no resale” restriction. First, it held that because the sale of the seed was subject to the restriction, the sale was conditional and the exhaustion doctrine did not apply.¹¹⁹ Second, the court said that the restriction of purchasers to a particular use—production for forage or grain—was a denial of the right to all other uses, including the right of resale.¹²⁰ Third, the court concluded that the defendant had not raised an issue of fact regarding the validity of the restriction. The court’s analysis here, as in *Lexmark*, was cursory:

Pioneer’s express limitation on any use other than production of grain or forage, which reserves to Pioneer the right to sell the invention, as stated, falls squarely within the patent grant. To put it another way, the restrictions in the Pioneer “limited label license” are “field of use restrictions,” and such restrictions “are generally upheld.”¹²¹

In this way, although the court expanded the *Mallinckrodt* analysis, it did so without critical analysis.

Once again, the court did not examine the patent claims at issue. It was undisputed that the seed corn was covered by the patents, but that presumably did not determine whether the restriction itself “relat[ed] to subject matter within the scope of the patent claims.”¹²² In any event, the farmers to whom the defendant ultimately sold the corn complied with the restriction, planting the corn for forage or grain and not to propagate future generations of the seed, which was presumably the use that Pioneer sought to prevent.¹²³ Thus, Pioneer’s enforcement efforts were not even directed at an ultimate use outside the restriction, but at the interposition of a reseller in its distribution system.

119. *Ottawa Plant Food*, 283 F. Supp. 2d at 1031-35.

120. *Id.* at 1035-39.

121. *Id.* at 1045 (citing *B. Braun Medical, Inc. v. Abbott Labs.*, 124 F.3d 1419, 1426 (Fed. Cir. 1997), and *Mallinckrodt, Inc. v. Medipart, Inc.*, 976 F.2d 700, 705 (Fed. Cir. 1992) (“[A] restrictive license to a particular use is permissible.”)).

122. *Mallinckrodt*, 976 F.2d at 708; see *infra* Part II.B.2.

123. See *Ottawa Plant Food*, 283 F. Supp. 2d at 1024.

Admittedly, in the court's view the defendant had not sufficiently alleged any anticompetitive effect of the restriction. The court said that "[a]t most, Ottawa asserts that Pioneer has imposed a prohibition on resale to discipline its licensed Sales Representatives and licensed dealers and to maintain prices, but Ottawa has pointed to no evidence demonstrating either such an intention or such an effect of the limited label license."¹²⁴ Given the court's conclusion that the restriction was within the patent grant, however, any anticompetitive effect would have been irrelevant under the *Mallinckrodt* framework.

Moreover, it is unclear why simply using the property protections of patent law to enforce contractual distribution restraints is not anticompetitive. Antitrust law uses the rule of reason to strike a balance between the procompetitive and anticompetitive aspects of distribution restraints.¹²⁵ The rule of reason contemplates that the restraints being assessed are contractual, not that they are enforceable through property protections. Indeed, in early cases, the Supreme Court objected to distribution restraints precisely because they had the character of restraints on alienation.¹²⁶ Although the Court no longer follows that approach, property enforcement has additional substantive implications that can be anticompetitive, as is discussed below.¹²⁷

3. *The Monsanto Cases*

In two other recent seed cases, *Monsanto Co. v. McFarling*¹²⁸ and *Monsanto Co. v. Scruggs*,¹²⁹ the patentee sought to enforce somewhat similar restrictions, which prohibited the replanting of seed

124. *Id.* at 1046. It seems, though, that Ottawa could have alleged a tying violation, claiming that the effect of the restriction was to require those who purchased Pioneer seed to obtain sales services only from licensed Pioneer dealers. In that respect, the court might have been incorrect in stating that "the 'limited label license' does not expressly or even impliedly tie purchase or sale of Pioneer® brand seed corn to the purchase or sale of any other product." *Id.* at 1045.

125. *See, e.g.*, *Gen. Talking Pictures Corp. v. W. Elec. Co.*, 305 U.S. 124 (1938); *Bement v. Nat'l Harrow Co.*, 186 U.S. 70 (1902).

126. *See, e.g.*, *Dr. Miles Med. Co. v. John D. Park & Sons Co.*, 220 U.S. 373, 404 (1911), *overruled by* *Leegin Creative Leather Prods., Inc. v. PSKS, Inc.*, 127 S. Ct. 2705 (2007).

127. *See infra* Part III.B.

128. 363 F.3d 1336 (Fed. Cir. 2004).

129. 342 F. Supp. 2d 568 (N.D. Miss. 2004), *aff'd*, 459 F.3d 1328 (Fed. Cir. 2006).

harvested from the growth of the patented seed, against defendants that had replanted the seed. These cases both built on each other and expanded a patentee's ability to restrict downstream use. The Federal Circuit's decision in *McFarling* raises some unique issues.¹³⁰ Furthermore, the district court in *Scruggs* ultimately relied on the Federal Circuit's approval of the similar license in *McFarling* to grant summary judgment to Monsanto.¹³¹

In its decision on a motion for a preliminary injunction, however, the district court in *Scruggs* relied on a different analysis. The court began much as in the previous cases, with the statement that the exhaustion doctrine does not apply to conditional licenses.¹³² Although the defendants argued that they never agreed to the condition, the court rejected their argument, relying on *Mallinckrodt's* statement that "a license notice may become a term of sale, even if not part of the original transaction, if not objected to within a reasonable time."¹³³ As applied in these cases, this is not obviously a correct statement of contract law.¹³⁴

As in the other cases, the *Scruggs* district court determined that the restriction was within the patent grant, but also provided some analysis on this point:

In this case, the single use restriction does fall within the patent grant. Given the fact that the gene technology at issue is passed on to subsequent generations of seed, Monsanto's restriction to the production of a single commercial crop is logically intended to protect its patent monopoly and to thereby permit it to capture revenue in the form of future sales of technology. Without the prohibition against the saving of seed for replanting or resale, Monsanto's patent would soon be rendered useless by virtue of the potential for exponential multiplication of the seed containing its patented technology. Given the risk of Monsanto's thus losing control of its technology, the limited license of its technology was the only reasonable alternative available to it if it hoped to garner a reasonable return on its sizeable investment

130. See *infra* Part III.A.3.

131. *Scruggs*, 342 F. Supp. 2d at 584.

132. *Monsanto Co. v. Scruggs*, 249 F. Supp. 2d 746, 753 (N.D. Miss. 2001).

133. *Id.* at 754 (quoting *Mallinckrodt, Inc. v. Medipart, Inc.*, 976 F.2d 700, 708 (Fed. Cir. 1992)).

134. See *infra* Part II.B.1.

while making the technology available for commercial use at a reasonable price to consumers.¹³⁵

Thus, the district court, unlike other courts, offered some actual analysis of the restriction.

This analysis at least provides a test for the “within the patent grant” inquiry: whether the restriction is necessary in order to reap a reasonable return on the technology. Whether the facts of the *Scruggs* case really met that test is unclear, given that the defendants proposed an alternative that could have provided the patentee with the same return and that was used by the patentee in other countries. It is also unclear whether the need to reap a reasonable return should be construed as an interest “within the patent grant,” as the grant of a patent is not intended to guarantee the patentee a particular return on his invention, but only to give him the right to exclude others from certain unauthorized activities. Nevertheless, the district court in *Scruggs*, unlike those in *Lexmark* and *Ottawa Plant Food*, at least recognized the need to find an economic justification for the restriction that the patentee imposed.¹³⁶

In any event, the court’s reliance on *McFarling* in its later summary judgment opinion eliminated this approach, and on appeal the Federal Circuit also reverted to a formal approach. Citing *Mallinckrodt*, the Federal Circuit categorically stated that “[c]onduct falling within the scope of protection includes, *inter alia*, limited use licensing,”¹³⁷ and, citing *General Talking Pictures*, stated that “[f]ield of use licensing restrictions, i.e., permitting the use of inventions in one field and excluding it in others, are also within the scope of the patent grant.”¹³⁸ Neither of those previous cases, however, made the categorical statements for which the court cited them.

In its evaluation of the enforceability of the no-replanting use restriction, the Federal Circuit in *Scruggs* also stated:

135. *Scruggs*, 249 F. Supp. 2d at 753.

136. *See id.*

137. *Monsanto Co. v. Scruggs*, 459 F.3d 1328, 1338 (2006) (citing *Mallinckrodt*, 976 F.2d at 703).

138. *Id.* (citing *Gen. Talking Pictures v. Gen. Elec. Co.*, 305 U.S. 124, 127 (1938)).

Monsanto has a right to exclude others from making, using, or selling its patented plant technology, and its no replant policy simply prevents purchasers of the seeds from using the patented biotechnology when that biotechnology makes a copy of itself. This restriction therefore is a valid exercise of its rights under the patent laws.¹³⁹

This statement provides no analysis, however. Every field-of-use restriction, if valid, “prevents purchasers ... from using the patented biotechnology [or other technology].”¹⁴⁰ That statement merely restates the problem; it does not provide a test for deciding whether the restriction is valid. Even if the court meant to refer to the self-replicating characteristic of seeds, a mere reference to that characteristic does not explain its legal significance. The special problems posed by self-replicating seeds are discussed below.¹⁴¹

In another respect, the courts in *Scruggs* went even further. The defendants challenged a Monsanto license term that prohibited “engaging in any research or experimentation with ‘Monsanto Know-How And Biological Material’ or ‘Licensed Patent Rights.’”¹⁴² The district court concluded that this was simply a field-of-use restriction, which seems reasonable given that the limitation was confined to Monsanto’s own materials. The Federal Circuit, however, consistently referred to the restriction as one “prohibiting research or experimentation,” with no reference to the application to Monsanto’s own materials, and it stated that “the no research policy is a field of use restriction and is also within the protection of the patent laws.”¹⁴³ In combination with the other categorical statements of the Federal Circuit in the case, this statement reinforces the view that the Federal Circuit has abandoned any scrutiny of use licensing.

139. *Id.* at 1340 (citation omitted).

140. *Id.*

141. See *infra* Part IV.B.3.

142. *Monsanto Co. v. Scruggs*, 342 F. Supp. 2d 568, 575 (N.D. Miss. 2004), *aff'd*, 459 F.3d 1328 (Fed. Cir. 2006).

143. *Scruggs*, 459 F.3d at 1340.

B. Shortcomings in the Courts' Contract and Patent Analyses

The cursory nature of the courts' analyses in the cases discussed above¹⁴⁴ is hard to explain. It seems that the combination of contract law and patent law in the cases prevented the courts from carefully focusing on either body of law. The courts did not carefully analyze the contract claims, perhaps because the cases were fundamentally about patent infringement. Further, the courts did not carefully analyze the patent claims, perhaps because the alleged infringer had breached a contract that was, formally at least, a patent license, which therefore indicates patent infringement. This Section attempts to examine closely both the contract and patent shortcomings inherent in the courts' analyses.

1. Contract Analysis

The "single use only" restriction in *Mallinckrodt* was embodied in a notice on the patented product, but there was no clear act of consent to the restriction by the purchasers.¹⁴⁵ This is typical of the other recent U.S. cases. For example, in *Pioneer Hi-Bred International, Inc. v. Ottawa Plant Food, Inc.*,¹⁴⁶ the basis of the contract was again a notice on the products sold, which in that case were bags of corn seed. The same was true in *Monsanto Co. v. McFarling*¹⁴⁷ and *Monsanto Co. v. Scruggs*,¹⁴⁸ where cotton and soybean seeds were at issue.

The key problem in the courts' contract analyses in these cases is that, generally speaking, notice of the terms that a seller would like to impose is not sufficient to establish a contract on the basis of those terms. This point was recognized by the Federal Circuit in *Hewlett-Packard Co. v. Repeat-O-Type Stencil Manufacturing Corp.*:¹⁴⁹

144. See *supra* Part II.A.

145. See *supra* notes 40-50 and accompanying text.

146. 283 F. Supp. 2d 1018 (N.D. Iowa 2003).

147. 363 F.3d 1336 (Fed. Cir. 2004).

148. 342 F. Supp. 2d 568 (N.D. Miss. 2004), *aff'd*, 459 F.3d 1328 (Fed. Cir. 2006).

149. 123 F.3d 1445 (Fed. Cir. 1997).

The question is not whether the patentee at the time of sale intended to limit a purchaser's right to modify the product.... Each case turns on its own particular facts, but a seller's intent, unless embodied in an enforceable contract, does not create a limitation on the right of a purchaser to use, sell, or modify a patented product as long as a reconstruction of the patented combination is avoided. A noncontractual intention is simply the seller's hope or wish, rather than an enforceable restriction.¹⁵⁰

In *Repeat-O-Type*, however, the patentee had simply included a package insert that, in the court's words, "suggest[ed]" the patentee's desired restriction.¹⁵¹ Therefore, although the court's refusal to enforce the restriction appeared to turn on the lack of any assent to it by the purchaser, it could also have been a product of a more equivocal notice than those at issue here.

In any event, in *Mallinckrodt*, where the "single use only" notice was clear (and thus perhaps more than a "suggestion"), the Federal Circuit took an entirely different approach. It held that "a license notice may become a term of sale, even if not part of the original transaction, if not objected to within a reasonable time."¹⁵² In this respect, *Mallinckrodt* relied on section 2-207 of the Uniform Commercial Code, adopted in most U.S. states. Section 2-207 is designed to address the "battle of the forms" created in sales of goods when contracting parties exchange documents with different terms.¹⁵³ Under this section, as *Mallinckrodt* says, a restriction "may become a term of sale" without explicit assent under certain circumstances.¹⁵⁴

For several reasons, however, the circumstances in which this "may" happen do not include the circumstances in these field-of-use cases. First, section 2-207(2), to which the *Mallinckrodt* court refers, is directed at exchanges of writings with different terms.¹⁵⁵ It is not clear that the patent cases discussed here should even be viewed as involving the exchanges of communications to which section 2-207

150. *Id.* at 1453.

151. *Id.*

152. *Mallinckrodt, Inc. v. Medipart, Inc.*, 976 F.2d 700, 708 n.7 (Fed. Cir. 1992) (citing U.C.C. § 2-207(2)(c)).

153. U.C.C. § 2-207 cmt. n.1 (2004).

154. *Mallinckrodt*, 976 F.2d at 708 n.7.

155. U.C.C. § 2-207(1) (2004).

applies. The specific types of communications referred to by section 2-207 are a “definite and seasonable expression of acceptance or a written confirmation which is sent within a reasonable time.”¹⁵⁶ A notice on a product, as in *Mallinckrodt* or *Ottawa*, may be neither. Such notices do not even possess the legal character of terms printed on the boxes in the shrink-wrap license cases.¹⁵⁷ This distinction matters, because receipt of a written statement expressing contract terms puts the purchaser on notice of contractual implications in a way that a simple notice on a product does not.¹⁵⁸

Second, even if the notices met this requirement and, in the language of section 2-207, were sufficient to be “construed as proposals for addition to the contract,”¹⁵⁹ not all such proposals become part of the contract. One way in which they may not is referred to by *Mallinckrodt*: section 2-207(2)(c) says proposals do not become part of the contract if the receiving party objects, and *Mallinckrodt* suggested that the absence of an objection could form a contract.¹⁶⁰ Section 2-207(2)(b), however, which *Mallinckrodt* ignored, also requires that additional terms do not become part of the contract between merchants if “they materially alter it,” regardless of whether an objection is made.¹⁶¹ The restrictions at issue here—limiting the purchaser to a single use or eliminating the right of resale—certainly seem to materially alter the contract. Moreover, if the sales are to non-merchants, like individual consumers, as some were in *Lexmark*, section 2-207 provides that the additional terms do not become part of the contract in any case.¹⁶²

Despite the observation of the Federal Circuit in *Repeat-O-Type* that a use restriction requires an enforceable contract, the lower

156. *Id.*

157. *See infra* Part III.B.

158. As a result, the transactions at issue in the patent cases might actually involve acceptance by conduct, which is governed by a different subsection, U.C.C. § 2-207(3) (2004). That subsection provides that “the terms of the particular contract consist of those terms on which the writings of the parties agree, together with any supplementary terms incorporated under any other provisions of [the Uniform Commercial Code].” *Id.* Thus, the use restrictions in these cases would not become part of the contract under this subsection.

159. U.C.C. § 2-207(2) (2004).

160. *Mallinckrodt, Inc. v. Medipart, Inc.*, 976 F.2d 700, 708 n.7 (Fed. Cir. 1992).

161. *See* U.C.C. § 2-207(2)(b) (2004).

162. *Id.* In *Lexmark*, the use restriction prohibited the refilling of laser printer toner cartridges, and the restriction was printed on the cartridge packaging. *Ariz. Cartridge Remfrs. Ass’n, Inc. v. Lexmark Int’l, Inc.*, 421 F.3d 981, 983-84 (9th Cir. 2005).

courts in these field-of-use cases did not actually engage in a careful determination of whether such contracts existed. This is especially evident in the preliminary injunction opinion in *Monsanto Co. v. Scruggs*,¹⁶³ which was relied upon by *Ottawa*. *Ottawa* correctly described *Scruggs* as holding that:

[B]ecause the defendants had known about the restrictions on the use of the seed, from various sources, including the labels and trade journals, their failure to contest the terms of the license within a reasonable time after the sale suggested that Monsanto's licensing conditions became enforceable terms of the sale.¹⁶⁴

It is simply not true, however, that a patentee can impose contractual terms on a purchaser by publishing those terms in labels or trade journals, even if the purchaser sees those terms.

A critical point in these cases is whether the terms were provided to the purchaser before or after the purchase. Both *Mallinckrodt* and *Scruggs* treated the terms as provided *after* the sale,¹⁶⁵ which distinguishes them from the typical shrink-wrap cases, and from *Lexmark*.¹⁶⁶ When terms are provided after the sale, the patentee cannot argue, as the copyright owners did in the shrink-wrap cases, that the purchaser accepted the terms in the initial sale transaction itself. Thus, the patentee must rely instead on section 2-207, which provides purchasers the protections described above.¹⁶⁷

These issues were discussed more carefully in an analogous case, *Step-Saver Data Systems, Inc. v. Wyse Technology*,¹⁶⁸ which involved copyright rather than patent law. The additional terms in *Step-Saver* were printed on the box of software that was the subject of a telephone-and-mail transaction.¹⁶⁹ The copyright owner, TSL, argued that the additional terms—denials of warranties—were

163. 249 F. Supp. 2d 746 (N.D. Miss. 2001), *aff'd*, 459 F.3d 1328 (Fed. Cir. 2006).

164. *Pioneer Hi-Bred Int'l, Inc. v. Ottawa Plant Food, Inc.*, 283 F. Supp. 2d 1018, 1047 (N.D. Iowa 2003) (citing *Monsanto Co. v. Scruggs*, 249 F. Supp. 2d 746, 754 (N.D. Miss. 2001)).

165. *See supra* notes 146, 150-55, 164 and accompanying text.

166. *See infra* notes 176-78 and accompanying text.

167. *See supra* notes 154-63 and accompanying text.

168. 939 F.2d 91 (3d Cir. 1991).

169. *Id.* at 93-94.

binding upon the purchaser, Step-Saver.¹⁷⁰ In addition to holding that the denials of the warranties would materially alter the contract and thus would not bind Step-Saver without its assent, the court drew the critical distinction between notice and assent that eluded the *Mallinckrodt* and *Ottawa* courts:

Given TSL's failure to obtain Step-Saver's express assent to these terms before it will ship the program, Step-Saver can reasonably believe that, while TSL desires certain terms, it has agreed to do business on other terms—those terms expressly agreed upon by the parties. Thus, even though Step-Saver would not be surprised to learn that TSL desires the terms of the box-top license, Step-Saver might well be surprised to learn that the terms of the box-top license have been incorporated into the parties' agreement.¹⁷¹

The contrast between the careful analysis in *Step-Saver*, which continues over ten pages of the printed opinion,¹⁷² and the one- or two-sentence conclusory statements in the patent cases is striking and hard to explain.¹⁷³ Perhaps the dichotomy derives from the fact that in the patent cases, the use restrictions at issue seem more like issues of patent law than contract law, in contrast to the warranty disclaimers in *Step-Saver*. Contract law is essential to these cases, however, and the courts should not impose “license” conditions on purchasers without carefully determining whether there is, in fact, a license.

It is true that courts have upheld various instances of “shrink-wrap” and “click-wrap” licenses, though largely in the copyright context.¹⁷⁴ The courts that have done so, however, generally relied upon the availability of the terms to the purchasers at the time of sale; on a requirement that the purchaser acknowledge his aware-

170. *Id.* at 97-98.

171. *Id.* at 104.

172. *Id.* at 96-106.

173. In addition, although contract law is state law, these cases do not turn to the law of the states to resolve the license questions. See *Rhone-Poulenc Agro, S.A. v. DeKalb Genetics Corp.*, 284 F.3d 1323, 1327 (Fed. Cir. 2002) (“In general, the Supreme Court and this court have turned to state law to determine whether there is contractual ‘authority’ to practice the invention of a patent. Thus, the interpretation of contracts for rights under patents is generally governed by state law.”).

174. See *infra* Part III.B.

ness of the license terms (typically by responding to a computer program inquiry); and on the opportunity for the purchaser to decline the terms (sometimes by returning the product). In *Mallinckrodt, Ottawa*, and *Scruggs*, the terms were simply printed on the products or packaging, and it is not clear that the purchasers either knew of the terms at the time of the purchase or had the option to return the products if they did not accept the conditions.

The only recent case that arguably might meet such conditions is *Lexmark*, where the term was a prohibition on refilling a laser printer toner cartridge.¹⁷⁵ Because the term was printed on the toner cartridge package, the only acknowledgment of the term would occur through the purchase or the opening of the package. But the notice on the package offered purchasers the option of returning the package to the seller, an option upon which courts have relied in finding contractual consent in the shrink-wrap cases.¹⁷⁶ In addition, the package notice also explained that Lexmark offered buyers the option of paying a higher price for a cartridge that they were permitted to refill.¹⁷⁷ The other cases lacked even these limited indications of the consent of buyers.

2. Patent Analysis

Even if the buyers of these patented products entered into valid license contracts with the patentees, it is not clear that those contracts should have been enforceable. *Mallinckrodt* left open the possibility that a field-of-use license might go beyond the scope of the patent claims, but the courts considering these issues generally have not given that possibility serious consideration. As described above, the lower courts generally have relied on the mere existence of the patents and on the courts' views that the purchasers have assented to the restrictions.¹⁷⁸ At most, the courts have adverted to the statement in *B. Braun Medical* that "express conditions accompanying the sale or license of a patented product are generally

175. *Ariz. Cartridge Remfrs. Ass'n, Inc. v. Lexmark Int'l, Inc.*, 421 F.3d 981, 983-84 (9th Cir. 2005).

176. *See id.*

177. *Id.* at 984.

178. *See supra* Part II.B.1.

upheld.”¹⁷⁹ Additionally, the Federal Circuit in *Scruggs* apparently held that all field-of-use licenses are within the scope of the applicable patents.¹⁸⁰

Thus, the courts have not meaningfully followed the Federal Circuit’s initial statement in *Mallinckrodt* that in order to be enforceable, a field-of-use license must be “reasonably within the patent grant.”¹⁸¹ Instead, these courts have generally required nothing more than a reference to the patents at issue and to the contractual field-of-use restriction. This approach conflates the patent and contract inquiries. As argued below, the proper approach is to maintain the independence of the patent inquiry by focusing on the boundaries both of the patents at issue and of patent protection itself.¹⁸²

III. FIELD-OF-USE LICENSING AND THE SCOPE OF PATENT INFRINGEMENT

The Federal Circuit recast the question of whether a use restriction is within the scope of the patent claim into the question of whether “the patentee has impermissibly broadened the “physical or temporal scope” of the patent grant with anticompetitive effect.”¹⁸³ A patent’s scope, however, is defined by more than the “physical” products its claims cover and the “temporal” period of its coverage. Its scope is also defined by the classes of conduct that the patent can be used to prohibit.¹⁸⁴ It may be possible for a patentee to impermissibly broaden the scope of acts that constitute infringement, not just the coverage of the patent. As this Part explains, in several of the lower court cases at issue there would be no infringement in the absence of the use restrictions, even if there were no

179. *B. Braun Med., Inc. v. Abbott Labs.*, 124 F.3d 1419, 1426 (Fed. Cir. 1997); *see, e.g., Lexmark*, 421 F.3d at 986-87 (“A restriction on a patented use is permissible as long as it is found to be reasonably within the patent grant.” (quoting *Mallinckrodt, Inc. v. Medipart, Inc.*, 976 F.2d 700, 708 (Fed. Cir. 1992))).

180. *See supra* notes 138-39 and accompanying text.

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

182. *See infra* Part III.

183. *B. Braun*, 124 F.3d at 1426 (quoting *Windsurfing Int’l, Inc. v. AMF, Inc.*, 782 F.2d 995, 1001-02 (Fed. Cir. 1986)).

184. *See generally* ROGER E. SCHECHTER & JOHN R. THOMAS, PRINCIPLES OF PATENT LAW 275-95 (2004) (discussing the scope and infringement of patent rights).

license.¹⁸⁵ Patentees were able to transform permissible conduct into infringement only by adoption of the use restrictions.¹⁸⁶

This Part argues that the broadening of the scope of infringement can be prevented by first requiring an independent infringement inquiry. That is, at the threshold, the court should conduct an initial inquiry into whether the patent at issue is infringed, without regard to whether the alleged infringer has consented to a field-of-use license. If the conduct at issue would not be infringement in the absence of the license, as would be the case for permissible repair, a breach of a contract should not constitute patent infringement.

Patent law authorizes a patentee to sue any party that “without authority makes, uses, offers to sell, or sells any patented invention, within the United States, or imports into the United States any patented invention.”¹⁸⁷ Because these cases involve “use” licensing, one would expect that the scope of the prohibition on the unauthorized “use” of the invention would be at issue. In fact, however, the particular conduct challenged in most of these cases is better characterized as “making” the invention, rather than “using” it. For example, in *Mallinckrodt*, the alleged infringer, Medipart, did not itself use the patented products, but only reconditioned them for hospitals.¹⁸⁸ Similarly, in *Lexmark* the parties to the litigation were remanufacturers of the patented toner cartridges, not the ultimate users of the cartridges.¹⁸⁹ And in *Ottawa Plant Food*, the defendant was simply a reseller of the patented product; it neither used nor

185. See *infra* Part III.A.

186. The general approach of the analysis here is similar to that in Kobak, *supra* note 25, at 559-64, in that it focuses on the use of contract to escape substantive limitations of patent law. The scope of this phenomenon has in recent years increased dramatically beyond that in the immediate post-*Mallinckrodt* period in which Kobak was writing. See *supra* Part II.A.

The use of state contract law to extend patent protection could also be viewed as a preemption issue, as it has in the software context. See John E. Mauk, Note, *The Slippery Slope of Secrecy: Why Patent Law Preempts Reverse-Engineering Clauses in Shrink-Wrap Licenses*, 43 WM. & MARY L. REV. 819, 819-20 (2001). But a proper application of the limits of patent law would eliminate the preemption problem by eliminating the extension of protection. Cf. Mark A. Lemley, *Beyond Preemption: The Law and Policy of Intellectual Property Licensing*, 87 CAL. L. REV. 111, 138-44 (1999) (discussing the trouble with fitting preemption rules into an intellectual property context).

187. 35 U.S.C. § 271(a) (2006).

188. *Mallinckrodt, Inc. v. Medipart, Inc.*, 976 F.2d 700, 702 (Fed. Cir. 1992).

189. *Ariz. Cartridge Remfrs. Ass'n, Inc. v. Lexmark Int'l, Inc.*, 421 F.3d 981, 983-84 (9th Cir. 2005).

made the product.¹⁹⁰ Thus, despite the fact that the license restrictions at issue in these cases were termed “field-of-use” restrictions, the forms of infringing conduct in these cases were the “making” and the “selling,” not the “using,” of the patented products.

Of course, in normal language both making and selling might be construed as uses of a product. Nevertheless, the fact that the statute distinguishes among these various activities suggests caution before treating them as one. The next two Sections will demonstrate that by failing to exercise such caution, the courts have permitted patentees to transform permissible making and selling into impermissible using. Additionally, the third Section illustrates another problem with this approach: it allows for the avoidance of difficult policy decisions regarding the nature of infringement by making even ambiguous conduct simply an impermissible “use.”

A. *The Scope of Infringement*

1. *Making and Repair*

When a patentee alleges that another is liable for infringing its patent by making the invention, an essential question should be whether the “making” of the invention is permissible under patent law.¹⁹¹ If so, there can be no infringement regardless of whether there is a violation of a use restriction. Therefore, the first question in these cases should ask whether an infringing act exists independent of the licensing restriction. If not, the violation of a use restriction might be a breach of contract, but even a breach of the contract would not constitute infringement.

The repair issue was central to several of the field-of-use cases. For example, in *Lexmark* and *Mallinckrodt*, the allegedly infringing acts involved arguable “makings” of inventions.¹⁹² By refilling toner cartridges or sterilizing and repackaging nebulizers, the alleged infringers in those cases arguably “made” new toner cartridges and nebulizers, respectively.¹⁹³ These “makings” of the inventions,

190. *Pioneer Hi-Bred Int’l, Inc. v. Ottawa Plant Food, Inc.*, 283 F. Supp. 2d 1018, 1024 (N.D. Iowa 2003).

191. See SCHECHTER & THOMAS, *supra* note 184, at 276-78.

192. See *Lexmark*, 421 F.3d at 983-84; *Mallinckrodt*, 976 F.2d at 702.

193. See *Lexmark*, 421 F.3d at 983-84; *Mallinckrodt*, 976 F.2d at 702.

however, might have been permissible because they were repairs of the patented inventions. In *Aro I*,¹⁹⁴ the Supreme Court held that purchasers of patented products have the right to repair those products:

[A]lthough there is no right to “rebuild” a patented combination, the entity “exists” notwithstanding the fact that destruction or impairment of one of its elements renders it inoperable; and that, accordingly, replacement of that worn-out essential part is permissible restoration of the machine to the original use for which it was bought.¹⁹⁵

That is, although “rebuilding” a patented product is infringement, the Supreme Court placed repair outside the boundary of infringing activity, as is illustrated in Figure 1.

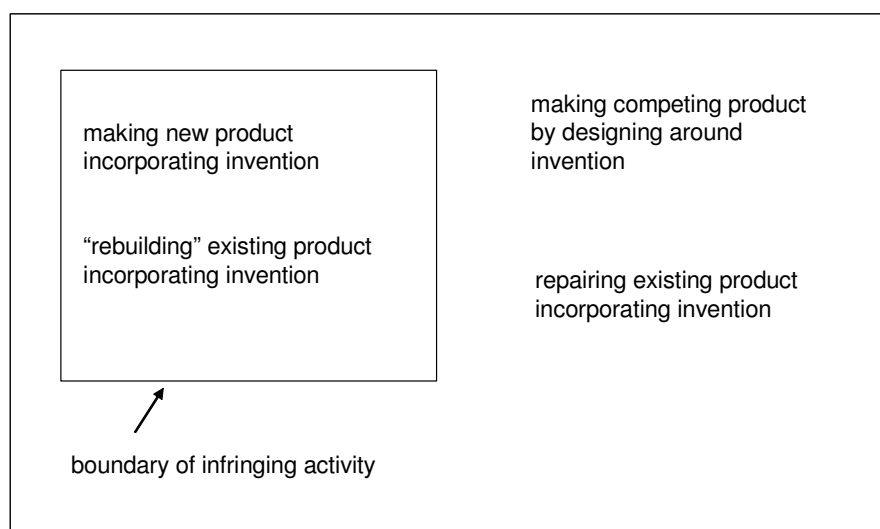


Figure 1. Infringement for “making,” as defined by 35 U.S.C. § 271 and the Supreme Court.

194. *Aro Mfg. Co. v. Convertible Top Replacement Co.* (*Aro I*), 365 U.S. 336 (1961).

195. *Id.* at 342 (citing *Wilson v. Simpson*, 50 U.S. (9 How.) 109, 123 (1850)). The focus in both *Aro I* and in *Wilson v. Simpson* was on inventions that were combinations of components. *Aro I*, 365 U.S. at 337-38; *Wilson*, 50 U.S. (9 How.) at 110.

In *Mallinckrodt*, however, the Federal Circuit held that a patentee can eliminate the right of repair by contract.¹⁹⁶ To reach this conclusion, *Mallinckrodt* relied on the Supreme Court's holding in *Aro II*¹⁹⁷ that application of the repair doctrine requires that the initial sale of the product be authorized.¹⁹⁸ Because the initial sale of the nebulizers to the hospitals *was* authorized in *Mallinckrodt*, however, and the only conduct that was arguably unauthorized was the reconditioning¹⁹⁹—whose validity turns precisely on the repair doctrine—the Federal Circuit's reasoning constitutes impermissible bootstrapping.

The unauthorized conduct in *Aro II* was the unlicensed manufacture of the patented product,²⁰⁰ which would have been unauthorized regardless of whether the purchasers of the products subsequently repaired them. In contrast, the *Mallinckrodt* court concluded that the initial sale might have been unauthorized only by relying on its conclusion that the subsequent repair might have been unauthorized, depending on whether a contract was formed eliminating the right of repair. This analysis impermissibly reverses the inquiry, making the validity of the original sale turn on the permissibility of repair rather than vice versa, as the Supreme Court held.

When *Mallinckrodt*'s holding, which allowed the right of repair to be eliminated by contract, is combined with the Federal Circuit's view that conduct by the licensee that is outside the scope of the license is patent infringement,²⁰¹ the Federal Circuit has redefined the scope of infringement for “making” the patented product, as shown in Figure 2.

196. *Mallinckrodt*, 976 F.2d at 709.

197. *Aro Mfg. Co. v. Convertible Top Replacement Co. (Aro II)*, 377 U.S. 476 (1964).

198. *Mallinckrodt*, 976 F.2d at 709 (quoting *Aro II*, 377 U.S. at 480).

199. *See id.*

200. *Aro II*, 377 U.S. at 482.

201. *See Mallinckrodt*, 976 F.2d at 707 n.6 (“[T]he remedy for breach of a binding license provision is not exclusively in contract, for a license is simply a promise not to sue for what would otherwise be patent infringement.”) (citations omitted).

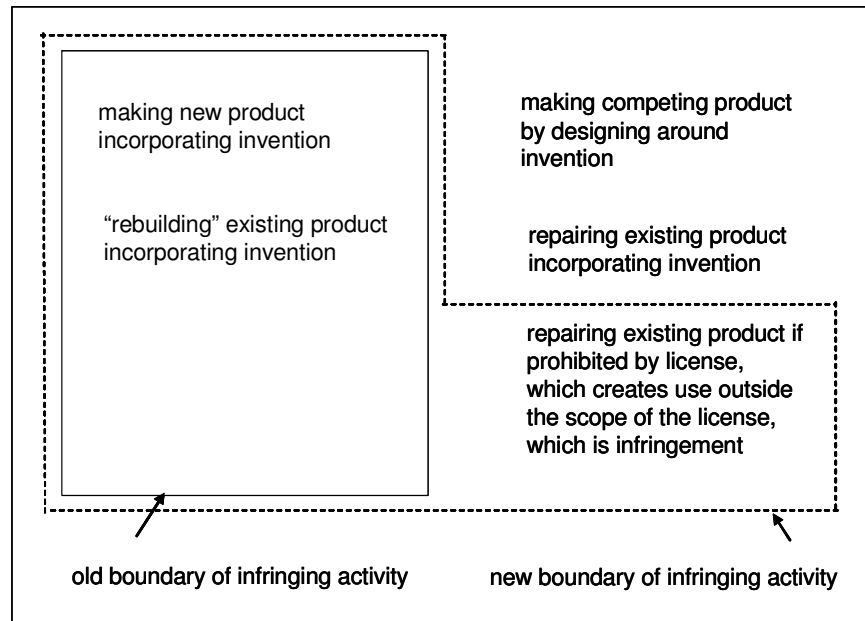


Figure 2. Infringement for “making,” as redefined by the Federal Circuit.

No doubt the Federal Circuit does not view itself as rewriting section 271 of the Patent Act as it has been interpreted by the Supreme Court’s repair cases.²⁰² Instead, it presumably views the right of repair as something akin to an implied license.²⁰³ Under that view, repairing a patented product would always be infringement statutorily, but it would sometimes be licensed by the patentee. The problem is that there is no support in the Supreme Court’s decisions for the implied-license interpretation. The Court in *Aro I* was quite explicit: “The [patent] monopolist cannot prevent those to whom he sells from ... reconditioning articles worn by use,

202. This section defines infringement. 35 U.S.C. § 271 (2006).

203. The district court in *Lexmark* appeared to take this position: “In the case of a conditional sale, the purchaser does not receive the same implied license that the purchaser in an unconditional sale receives. Thus, where the purchaser of an unconditional sale has every right to repair the device, the purchaser of a conditional sale does not.” *Ariz. Cartridge Remfrs. Ass’n, Inc. v. Lexmark Int’l, Inc.*, 290 F. Supp. 2d 1034, 1043 (N.D. Cal. 2003). The *Lexmark* court cited *Mallinckrodt* for this approach, but *Mallinckrodt* did not adopt it, at least not explicitly. See *Mallinckrodt*, 976 F.2d at 709.

unless they in fact make a new article.”²⁰⁴ Although the Federal Circuit presumably would take the view that because the license is conditional there is no “sale,” the Supreme Court’s decisions provide no support for this view.

The Supreme Court has never decided whether a patentee may contractually eliminate the right of repair. There were four separate opinions in *Aro I*, and each of them focused on the substantive nature of the repair-reconstruction inquiry rather than on any freedom of the patentee to limit the repair right.²⁰⁵ Furthermore, the Court appeared to say that the patentee may not single out the repair right from other aspects of the invention: “[A] license to use a patented combination includes the right ‘to preserve its fitness for use so far as it may be affected by wear or breakage.’”²⁰⁶ This statement seems to indicate that if the patentee chooses to license its product at all, it cannot retain the right to repair it.

Moreover, the Court considered a case similar to *Mallinckrodt* and declined to afford the patentee the right to contractually limit the right to repair. In *American Cotton-Tie Co. v. Simmons*,²⁰⁷ the Court was faced with the sale of cotton bale ties, on which were stamped the words “Licensed to use once only.”²⁰⁸ Although the Court held that the defendant had infringed the patent, it reached that conclusion through a careful analysis of the patent and the

204. *Aro Mfg. Co. v. Convertible Top Replacement Co. (Aro I)*, 365 U.S. 336, 343 (1961) (quoting *United States v. Aluminum Co. of Am.*, 148 F.2d 416, 425 (2d Cir. 1945)).

205. Justice Brennan’s concurring opinion offered a list of factors that he thought important in the repair determination:

Appropriately to be considered are the life of the part replaced in relation to the useful life of the whole combination, the importance of the replaced element to the inventive concept, the cost of the component relative to the cost of the combination, the common sense understanding and intention of the patent owner and the buyer of the combination as to its perishable components, whether the purchased component replaces a worn-out part or is bought for some other purpose, and other pertinent factors.

Id. at 363-64 (Brennan, J., concurring) (footnotes omitted). It is notable here that although Justice Brennan refers to the intention of both the patentee and the buyer, his reference is to their “common sense” intention, not to their contractual intention. *Id.*

206. *Id.* at 345 (majority opinion) (quoting *Leeds & Catlin Co. v. Victor Talking Mach. Co.*, 213 U.S. 325, 336 (1909)); *see also id.* at 369 (“The underlying rationale of the rule is of course that the owner’s license to use the device carries with it an implied license to keep it fit for the use for which it was intended, but not to duplicate the invention itself.”) (Harlan, J., dissenting).

207. 106 U.S. 89 (1882).

208. *Id.* at 91.

relationship of the defendant's activities to the claims.²⁰⁹ After the original description of the words stamped on the product, the Court did not mention them further.

By virtue of its exposure to the issue in *Cotton-Tie*, the possibility of a patentee's attempt to limit the right of repair was certainly before the Court in *Aro I*. Moreover, each of the four *Aro I* opinions mentioned the *Cotton-Tie* case,²¹⁰ but none suggested that the repair right could be denied by contract. The majority did say that the "Licensed to use once only" stamp "was deemed of importance by the Court,"²¹¹ but it is unclear on what that statement was based, given the absence of any discussion of the issue in *Cotton-Tie*. Indeed, Justice Harlan responded that although "the Court there [in *Cotton-Tie*] did refer to the fact that the original ties were stamped 'Licensed to use once only,' it is manifest that nothing really turned on that point."²¹²

Thus, a fair reading of the Supreme Court's opinions reveals no support for a contractual elimination of the right of repair. Because the Court has never decided the issue, however, it is again worth considering the law in Europe, where recent cases from two European countries reflect an approach closer to that of the U.S. Supreme Court than that of the Federal Circuit. The repair issue was explored in the 2004 *Flügelradzähler* decision of the German Federal Supreme Court.²¹³ Taking a substantive approach, the court stated that the repair-reconstruction determination requires a balancing of the patentee's interest in the exploitation of its

209. *Id.* at 90-95.

210. *Aro I*, 365 U.S. at 343 n.9, 346; *id.* at 355-56 (Black, J., concurring); *id.* at 364 n.7, 367 (Brennan, J., concurring); *id.* at 369 (Harlan, J., dissenting).

211. *Id.* at 343 n.9 (majority opinion).

212. *Id.* at 374 n.3 (Harlan, J., dissenting); see also *id.* at 356 (Black, J., concurring) (discussing *Cotton-Tie* and observing that "[m]arked on each [cotton bale tie], for whatever it was worth, was 'Licensed to use once only.'").

213. See Bundesgerichtshof [BGH] [Federal Court of Justice] May 4, 2004, Gewerblicher Rechtsschutz und Urheberrecht [GRUR] 758 (Case No. X ZR 48/03 (F.R.G.)). An English translation of this decision appears at *Decisions, Germany, "Means Within Patent Act, Sec. 10—Whether Replacement of Parts of Device is Equivalent to Making the Device—X ZR 48/03—"Impeller Flow Meter"*, 36 IIC: INT'L REV. OF INTELL. PROP. & COMP. L. 963 (2005) [hereinafter *Impeller Flow Meter*]. The case is also discussed in Niels Hölder, *Contributory Patent Infringement and Exhaustion in Case of Replacement Parts – Comment on a Recent Supreme Court Decision in Germany*, 36 IIC: INT'L REV. OF INTELL. PROP. & COMP. L. 889 (2005).

invention and the purchaser's interest in the unhindered use of it.²¹⁴ More specifically, the court said that a replacement of parts is permissible if they are parts "that usually must be replaced—possibly several times—during the expected working life of a machine."²¹⁵ On the other hand, the replacement is impermissible if the "part implements the technical or commercial benefit of the invention a second time."²¹⁶

Although the court in *Flügelradzähler* was not confronted with an attempt to restrict the repair right through contract, like the U.S. Supreme Court in *Aro I* it referred to the right of repair as a part of the right to use the invention: "It is true that the use of a patented product as intended also includes the maintenance and re-establishment of usability if the function or performance of the specific product is impaired or lost in whole or in part by wear or damage or on other grounds."²¹⁷ The court went further than *Aro I*, however, by suggesting that the right of the patentee to deny its consent to repair would turn on the specific nature of the invention. The court stated that although the public's expectation of a right to repair "may generally exist and be justified, it is unfounded if such a switch is impossible without the patent holder's consent *precisely because* of the protection applying to a specific impeller flow meter."²¹⁸ In other words, the patentee's ability to deny the right of repair depends on the nature of the invention, not just "[t]he mere fact that the [patentee] expressly refers to its patent protection."²¹⁹

Furthermore, a recent decision by the House of Lords in the United Kingdom, *United Wire Ltd. v. Screen Repair Services (Scotland) Ltd.*,²²⁰ is more explicit, addressing the contract issue directly:

Repair is one of the concepts (like modifying or adapting) which shares a boundary with "making" but does not trespass upon its territory. I therefore agree with the Court of Appeal that in an

214. See *Impeller Flow Meter*, *supra* note 213, at 969.

215. *Id.* at 969-70.

216. *Id.* at 970.

217. *Id.* at 969.

218. *Id.* at 968 (emphasis added).

219. *Id.* The argument that the permissibility of a use restriction should turn on the nature of the patentee's inventive contribution is taken up later in this Article. See *infra* Part IV.A.2.

220. 2000 E.N.P.R. 324 (H.L.).

action for infringement by making, the notion of an implied licence to repair is superfluous and possibly even confusing. It distracts attention from the question raised by section 60(1)(a), which is whether the defendant has made the patented product. As a matter of ordinary language, the notions of making and repair may well overlap. But for the purposes of the statute, they are mutually exclusive. The owner's right to repair is not an independent right conferred upon him by licence, express or implied. It is a residual right, forming part of the right to do whatever does not amount to making the product.²²¹

This decision makes clear that at least in the United Kingdom, the Federal Circuit's approach of allowing the contractual elimination of the repair right is unacceptable. On the contrary, because repair is conduct outside the scope of patent infringement, no consent is needed by purchasers for repair; if they agreed to cede that right by contract, any breach of the resulting contract would not constitute patent infringement. Analytically, *United Wire* provides a much sounder approach to the repair issue than the contractual approach of *Mallinckrodt*, especially in light of the casual approach to finding a contract that has prevailed in the United States.

2. *Selling and Reselling*

In *Ottawa Plant Food*,²²² the allegedly infringing act was a resale of the patented product. Prior to *Ottawa*, however, the *reselling* of a patented product was not viewed as "selling" (or "using") the product for infringement purposes. On the contrary, although less explicit on this issue than courts of other jurisdictions, the Supreme Court has on several occasions made clear that there is no infringement liability for resales of patented goods.²²³ Thus, the legal framework was that shown in Figure 3.

221. *Id.* at 329.

222. *Pioneer Hi-Bred Int'l, Inc. v. Ottawa Plant Food, Inc.*, 283 F. Supp. 2d 1018 (N.D. Iowa 2003).

223. *See supra* note 54 and accompanying text.

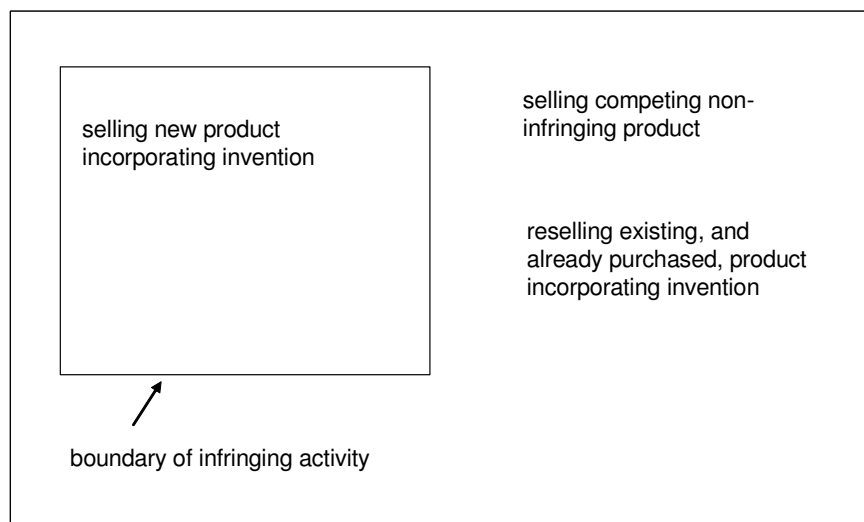


Figure 3. Infringement for “selling,” as defined by the exhaustion doctrine.

By defining a resale as a “use” and allowing the patentee to eliminate the right to that use with a “field-of-use” license,²²⁴ *Ottawa* redefined the boundaries of infringement for “selling” in a way analogous to *Mallinckrodt*’s redefinition of “making,” resulting in the situation shown in Figure 4.²²⁵

224. *Ottawa Plant Food*, 283 F. Supp. 2d at 1044-46.

225. See *supra* notes 192-202 and accompanying text.

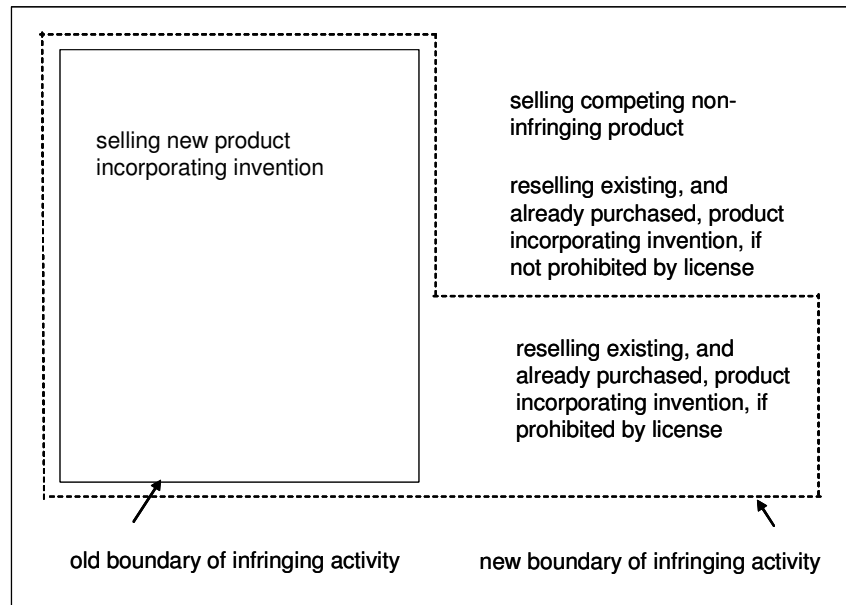


Figure 4. Infringement for “selling,” as redefined by *Ottawa Plant Food*.

As in *Mallinckrodt*, the *Ottawa* court surely did not view itself as amending the patent laws, but as enforcing a license restriction. The court made clear, however, that it was relying on the contractual restriction to make the exhaustion doctrine inapplicable: “Ottawa has failed to generate a genuine issue of material fact that the sale of Pioneer® brand seed corn was *not always* conditional, so that, in the face of undisputed evidence that the sales *were* conditional, the ‘patent exhaustion’ defense is simply inapplicable as a matter of law.”²²⁶ Thus, the court effectively viewed the first-sale doctrine as one of implied license, just as *Mallinckrodt* did with the repair doctrine.

No court other than *Ottawa Plant Food* has gone so far as to allow a patentee to eliminate the first-sale doctrine by contract, but dictum in another recent case indicates that the Federal Circuit agrees with this general approach. In *Anton/Bauer, Inc. v. PAG*,

226. *Ottawa Plant Food*, 283 F. Supp. 2d at 1033.

Ltd.,²²⁷ the court said that “[t]he [Supreme] Court’s statements in [*United States v. Univis Lens Co.*] demonstrate how closely related the exhaustion doctrine is to the grant of an implied license. Indeed, they suggest that an implied license stems from the exhaustion of a patent right.”²²⁸

If the court meant to suggest that the exhaustion doctrine is *merely* an implied license that can be eliminated by the patentee,²²⁹ that claim finds no support in *Univis*²³⁰ or in any other Supreme Court decision. Indeed, in a case that, like *Ottawa*, involved a purchaser’s sales of patented goods outside the territory assigned to the original seller, the Supreme Court made clear that an effort by a patentee to restrict resale would be merely contractual and could not support an infringement suit:

Whether a patentee may protect himself and his assignees by special contracts brought home to the purchasers is not a question before us, and upon which we express no opinion. It is, however, obvious that such a question would arise as a question of contract, and not as one under the inherent meaning and effect of the patent laws.²³¹

Additionally, the Court indicated in *Univis*, cited by the Federal Circuit in *Anton/Bauer*,²³² that such contracts “derive[] no support from the patent and must stand on the same footing under the Sherman Act as like stipulations with respect to unpatented commodities.”²³³ This statement seems clearly to reflect the view that a patentee cannot change the rules of exhaustion by contract, just as a patentee cannot deny the right of repair by contract. The

227. 329 F.3d 1343 (Fed. Cir. 2003).

228. *Id.* at 1350 (referencing *United States v. Univis Lens Co.*, 316 U.S. 241 (1992)).

229. Alternatively, the statement might just reflect unintentional conflation of the implied license and exhaustion doctrines. For an excellent discussion of the two doctrines that illustrates how the Federal Circuit sometimes fails to maintain a distinction between them, see Rufus J. Pichler, William I. Schwartz, & Stephen M. Obenski, Recent Developments in the Law of Patent Exhaustion and Implied Licenses, Presentation at the 7th Annual Advanced Patent Law Institute (Nov. 30 - Dec. 1, 2006) (on file with author).

230. *Univis Lens Co.*, 316 U.S. 241.

231. *Keeler v. Standard Folding Bed Co.*, 157 U.S. 659, 666 (1895).

232. *Anton/Bauer, Inc.*, 329 F.3d at 1349-51.

233. *Univis*, 316 U.S. at 251 (citing *Ethyl Gasoline Corp. v. United States*, 309 U.S. 436, 456-57 (1940)). Although *Univis* involved resale price maintenance, the Court’s reasoning in that case is consistent with that in its cases addressing territorial restrictions.

Ottawa court nevertheless expanded the scope of infringement to encompass resales of patented products.²³⁴

Part of the problem here may stem from the Federal Circuit's failure to distinguish between contracts and licenses. Despite the Supreme Court's suggestion that patentees may use contracts to impose restrictions on purchasers,²³⁵ that suggestion does not mean that those contracts should be treated as patent licenses. Although a patent license is a contract, not every contract is a patent license. In fact, the Supreme Court in the passage quoted above from *Keeler* used the term "contract" in this context, rather than "license."²³⁶ As another example, the Court in *Motion Picture Patents* referred to the patentee's "contract" with the "purchaser or licensee."²³⁷ If every contract were a license, the purchaser would *be* a licensee, and the Court would have no need to distinguish the two. The Court has maintained this contract/license distinction in patent cases of various types.²³⁸

Interestingly, the Federal Circuit also apparently adopted this distinction in at least one copyright case. In *Bowers v. Baystate Technologies, Inc.*,²³⁹ the court concluded that "private parties are free to contractually forego the limited ability to reverse engineer a software product under the exemptions of the Copyright Act."²⁴⁰ This and other cases considering contractual eliminations of fair use reverse-engineering rights are analogous to the contractual expansions of patent protection discussed here. *Bowers* affirmed only the breach of contract claim, however, without considering

234. See *Pioneer Hi-Bred Int'l, Inc. v. Ottawa Plant Food Inc.*, 283 F. Supp. 2d 1018, 1033 (N.D. Iowa 2003) ("Ottawa has failed to generate a genuine issue of material fact that the sale of Pioneer® brand seed corn was *not always* conditional, so that, in the face of undisputed evidence that the sales *were* conditional, the 'patent exhaustion' defense is simply inapplicable as a matter of law.").

235. See *supra* note 34 and accompanying text.

236. See *supra* notes 232, 234 and accompanying text.

237. *Motion Picture Patents Co. v. Universal Film Mfg. Co.*, 243 U.S. 502, 509 (1917).

238. See, e.g., *Aronson v. Quick Point Pencil Co.*, 440 U.S. 257, 263-65 (1979); *Lear, Inc. v. Adkins*, 395 U.S. 653, 669-75 (1969) (using "contract" when referring to state-law contract rights and "license" when referring to patent rights); *Mercoird Corp. v. Mid-Continent Inv. Co.*, 320 U.S. 661, 666 (1944) ("When the patentee ties something else to his invention, he acts only by virtue of his right as the owner of property to make contracts concerning it and not otherwise. He then is subject to all the limitations upon that right which the general law imposes upon such contracts.").

239. 320 F.3d 1317 (Fed. Cir. 2003).

240. *Id.* at 1325-26.

copyright infringement; the court even suggested, though somewhat obscurely, that the contract might not change the limits of copyright law.²⁴¹

In its own area of patent law, the Federal Circuit has been less discriminating. Thus, the court is incomplete in stating that “the remedy for breach of a binding license provision is not exclusively in contract, for a license is simply a promise not to sue for what would otherwise be patent infringement.”²⁴² Although that statement may be true, the Supreme Court indicated that the critical question is whether a particular contract is in fact a license to which that statement should apply.²⁴³ If so, the breach of the license is indeed patent infringement. If not, the remedy *is* exclusively in contract.

3. *Self-Replicating Products*

As noted above,²⁴⁴ the Federal Circuit’s approach in *Monsanto Co. v. McFarling*²⁴⁵ was different in some respects from the other cases discussed here. The restriction at issue in *McFarling*, which was similar to the one in *Scruggs*, required that those purchasing Monsanto’s seed enter into an agreement under which they would use the seed “for planting a commercial crop only in a single season” and would “not save any crop produced from this seed for replanting, or supply saved seed to anyone for replanting.”²⁴⁶ The effect of the restriction in both cases was to prevent growers from propagating the seeds containing Monsanto’s patented inventions for sale.

Although the plaintiff in *McFarling* argued that the restriction on replanting was a field-of-use restriction, the Federal Circuit rejected that characterization because the grower used the patented seed in the same way regardless of whether he replanted the new seeds.²⁴⁷ The court pointed out that instead of restricting the use of the

241. *Id.* at 1326 (“[A] party bound by such a contract may elect to efficiently breach the agreement in order to ascertain ideas in a computer program unprotected by copyright law.”).

242. *Mallinckrodt, Inc. v. Medipart, Inc.*, 976 F.2d 700, 707 n.6 (Fed. Cir. 1992) (citations omitted).

243. *See supra* Part I.A.

244. *See supra* Part II.A.3.

245. 363 F.3d 1336 (Fed. Cir. 2004).

246. *Id.* at 1339 (quoting Monsanto Technology Agreement).

247. *Id.* at 1342-43.

licensed product itself, the license “impose[d] a restriction on the use of the goods made by the licensed product.”²⁴⁸ Acknowledging that the peculiar facts presented an issue of first impression, the court concluded that the restriction was valid:

Our case law has not addressed in general terms the status of such restrictions placed on goods made by, yet not incorporating, the licensed good under the patent misuse doctrine. However, the Technology Agreement presents a unique set of facts in which licensing restrictions on the use of goods produced by the licensed product are not beyond the scope of the patent grant at issue: The licensed and patented product (the first-generation seeds) and the good made by the licensed product (the second-generation seeds) are nearly identical copies. Thus, given that we must presume that Monsanto’s ’435 patent reads on the first-generation seeds, it also reads on the second-generation seeds. *See* ’435 patent, col. 165, l. 12 (claiming “[a] seed of a glyphosate-tolerant plant”). Because the ’435 patent would read on all generations of soybeans produced, we hold that the restrictions in the Technology Agreement prohibiting the replanting of the second generation of ROUNDUP READY® soybeans do not extend Monsanto’s rights under the patent statute.²⁴⁹

This chain of reasoning is not self-evidently correct. The key point underlying the exhaustion doctrine is that a purchaser has acquired the patented product through authorization by the patentee. In the usual case, this authorization is through a sale.²⁵⁰ In *McFarling*, the defendant farmer did not buy the second-generation seeds, whose use the court determined to be infringement.²⁵¹ The second-generation seeds were nevertheless obtained by the farmer in an authorized fashion, by planting the seeds to which the farmer *did* have a license, as the court acknowledged.²⁵² Consequently, it does not follow from the fact that the patent at issue arguably covered the second-generation seeds that the farmer’s planting of those seeds was an infringement.

248. *Id.*

249. *Id.* at 1343 (footnote omitted).

250. *See* SCHECHTER & THOMAS, *supra* note 184, at 278.

251. *See* *McFarling*, 363 F.3d at 1341-43.

252. *Id.*

On the other hand, it seems clear that the possibility of replanting posed a very real challenge to Monsanto's patent protection.²⁵³ Repair of Mallinckrodt's and Lexmark's products could prolong only the life of each of those products, but propagation of Monsanto's seeds could produce an almost unlimited number of copies of the products. As the court acknowledged, the problem appeared to be a new one,²⁵⁴ and it deserved serious consideration for the issue it posed for patent policy. Indeed, Judge Gajarsa of the Federal Circuit argued in another case that self-replicating products should not be patentable at all.²⁵⁵

In light of the difficulty of the problem, it is troubling that the court in *McFarling* effectively allowed the patentee to solve the problem through contract.²⁵⁶ The circumstances can be viewed as similar to the "making" and "selling" discussions above²⁵⁷: The first question one should ask is whether the challenged conduct—the use of a good produced through acts licensed by the patentee—is in fact infringement, or whether it should be. If so, then the *McFarling* court's decision is perhaps appropriate. This seems an appropriate question for Congress, however, and not one for the Federal Circuit to decide in reliance on a restriction imposed by the patentee.

It is also important to note that the Federal Circuit's holding could have more far-reaching implications. For example, whether patent law should allow use restrictions not only on the licensed products themselves—in *McFarling*, the first-generation seed—but also on goods produced by permissible uses of the licensed products—in *McFarling*, the second-generation seed—may have implications for the controversial issues of reach-through royalties and patent claims.²⁵⁸ A reach-through royalty provision is one in which the

253. *See id.* at 1342-43.

254. *Id.* at 1343.

255. *See* SmithKline Beecham Corp. v. Apotex Corp., 365 F.3d 1306, 1331 (Fed. Cir. 2004) (Gajarsa, J., concurring) ("In short, patent claims drawn broadly enough to encompass products that spread, appear, and 'reproduce' through natural processes cover subject matter unpatentable under Section 101—and are therefore invalid.").

256. *See McFarling*, 363 F.3d at 1343.

257. *See supra* Parts III.A.1-2.

258. *See generally* Michael J. Stimson, *Damages for Infringement of Research Tool Patents: The Reasonableness of Reach Through Royalties*, 2003 STAN. TECH. L. REV. 3 (discussing the use of reach-through royalties to encourage patent innovation); Kimberlee A. Stafford, Comment, *Reach-Through Royalties in Biomedical Research Tool Patent Licensing: Implications of NIH Guidelines on Small Biotechnology Firms*, 9 LEWIS & CLARK L. REV. 699

patentee's royalties are based not only on the licensed product itself, but on other products produced with the licensed product.²⁵⁹ A reach-through claim is one that asserts protection not simply for the described invention itself but for products developed through its use.²⁶⁰ Reach-through royalties and claims have been used most commonly with chemical and biotechnological research tools.²⁶¹

Although the Federal Circuit has not yet decided a case on the validity of damages claims based on reach-through patent claims,²⁶² the reasoning of *McFarling* appears applicable. The nature of the infringement in *McFarling* was the violation of the use restriction on the second-generation seeds,²⁶³ whereas in a case of reach-through royalties the infringement would be the failure to pay royalties on the downstream product.²⁶⁴ In the latter case, the infringement would surely be as significant as that in *McFarling*. Additionally, *McFarling* relied on the claims' coverage of the second-generation seeds to find that the infringement claim was within Monsanto's patent rights.²⁶⁵ If reach-through claims covered the downstream product on which royalties were to be paid, the same result presumably would apply.

It is possible, of course, that the Federal Circuit might not follow this course should such a case arise. For example, the court might say that the critical point in *McFarling* was that the claims covered *both* the first-generation and second-generation seeds. There is support for such a reading in the court's observation that the claims

(2005) (discussing the controversy between the government and the biomedical field due to reach-through royalty provisions); PIERRE VÉRON & OLIVIER MOUSSA, PROTECTING THE RESULTS OF FUTURE RESEARCH: REACH-THROUGH CLAIMS IN EUROPEAN AND U.S. LAWS, http://www.veron.com/files/publications/Protecting_the_results_of_future_research.pdf (discussing the principles of reach-through claims).

259. See VÉRON & MOUSSA, *supra* note 258, at 13.

260. See *id.* at 2-3.

261. See *id.*

262. The court has held in one case that claims for methods of using unknown chemical compounds that could perhaps be identified using the techniques disclosed were invalid for lack of a sufficient written description. See *Univ. of Rochester v. G.D. Searle & Co.*, 358 F.3d 916 (Fed. Cir. 2004). Under the court's reasoning in that case, however, other reach-through claims could be valid. A federal district court has held that reach-through licensing was not patent misuse, at least where alternative licensing techniques were also available. *Bayer AG v. Housey Pharms., Inc.*, 228 F. Supp. 2d 467, 470-74 (D. Del. 2002).

263. *Monsanto Co. v. McFarling*, 363 F.3d 1336, 1339-41 (Fed. Cir. 2004).

264. See *generally* Stimson, *supra* note 258.

265. See *McFarling*, 363 F.3d at 1339.

“would read on all generations of soybeans produced.”²⁶⁶ Why that fact should be of legal significance is not clear, however, if the patentee has claims covering both products. In any event, the point is not that *McFarling* necessarily decided the reach-through issues; the point is that the court’s adoption of an ad hoc solution to the *McFarling* problem may have unintended consequences in other sorts of cases, especially when the court has not clearly defined the boundaries of its solution. For that reason, a more carefully considered approach would have been preferable.

B. Restrictions on Downstream Purchasers

As described above, both the Supreme Court and Europe’s TTBER have distinguished between use restrictions imposed on manufacturing licensees and those imposed on the ultimate purchasers of patented products.²⁶⁷ A variety of reasons support this distinction.²⁶⁸ Most fundamentally, several of the field-of-use cases discussed here involved patent infringement suits against parties who had not themselves entered into the license contract in which the use restriction was included.²⁶⁹ As a result, those parties would not necessarily know of the restrictions at issue, and the cost of obtaining such information could be significant, raising the cost of product distribution.²⁷⁰

Untroubled, U.S. courts take the view, derived from the Federal Circuit, that when a use restriction is violated, no valid license of the patent rights exists.²⁷¹ Consequently, the infringement suit against the downstream purchaser is equivalent to one against the

266. *See id.* at 1343.

267. *See supra* Parts I.A, I.D.

268. The discussion here focuses on concerns at the level of legal doctrine. These sorts of restrictions also present more fundamental, economy-wide concerns. *See* Peter C. Carstensen, *The New Feudalism: Post Sale Patent Licensing and the Destruction of the Dynamic Economy* 22-31 (2006) (unpublished manuscript, on file with author).

269. *See supra* Part II.B-C.

270. *See* James B. Kobak, Jr., *Exhaustion of Intellectual Property Rights and International Trade*, 5 GLOBAL ECON. J. 1, 1 (2005) (“The theory behind the [exhaustion] doctrine is that it enables the IP Owner to receive one fair reward for surrendering its right to withhold a product from the market but thereafter permits free disposition and movement of chattels; in this way, it is thought, IP rights will not unduly disrupt a modern and efficient system of distribution....”).

271. *See supra* Part II.B.2.

purchaser of an illegally manufactured product, and knowledge of infringement is not central to patent law.²⁷²

Even some of the courts that have been willing to enforce shrink-wrap licenses have been unwilling to allow the contract to create infringement suits against nonparties. For example, in *ProCD, Inc. v. Zeidenberg*,²⁷³ one of the most prominent shrink-wrap cases, Judge Easterbrook seemed to suggest that if the defendant had passed the software on to another, downstream user, no infringement suit could have been brought against that downstream user:

A copyright is a right against the world. Contracts, by contrast, generally affect only their parties; strangers may do as they please, so contracts do not create “exclusive rights.” Someone who found a copy of [the copyrighted, shrink wrap-licensed software] on the street would not be affected by the shrinkwrap license—though the federal copyright laws of their own force would limit the finder's ability to copy or transmit the application program.²⁷⁴

Of course, the parties in the present field-of-use cases may not be equivalent to someone finding an invention on the street. They might have been on notice of the patentee's efforts to impose restrictions on the use of the inventions. In fact, that was the theory on which the Supreme Court, in *General Talking Pictures*, allowed imposition of liability on a downstream purchaser.²⁷⁵ In that case, however, the violation of the terms of the license was by the manufacturing licensee, not the downstream purchaser,²⁷⁶ and it is not clear that the Supreme Court would have allowed a restriction that applied only to that downstream purchaser.²⁷⁷

The problem posed here is emphasized by the fact that the first buyers in several of these field-of-use cases did not violate the license terms.²⁷⁸ For example, the stores in which the toner car-

272. *See id.*

273. 86 F.3d 1447 (7th Cir. 1996).

274. *Id.* at 1454.

275. *Gen. Talking Pictures Corp. v. W. Elec. Co.*, 305 U.S. 124, 126 (1938).

276. *See id.* at 125-26.

277. Indeed, Justice Black would not have allowed liability on the purchaser even under the facts in the case. *See id.* at 132-33 (Black, J., dissenting).

278. *See supra* Part II.A.

tridges in *Lexmark* were sold did not refill the cartridges,²⁷⁹ nor did the grain sellers in *McFarling* and *Scruggs* replant seeds.²⁸⁰ Consequently, in those cases, valid sales occurred in compliance with the license terms, which would generally bring the exhaustion doctrine into play. By allowing infringement suits against downstream purchasers who were the first to fail to comply with the license terms, the courts have effectively allowed patent rights to be *revived* after a first sale that should have exhausted those rights.

The preceding sections have shown how the lower courts' treatment of field-of-use licenses have allowed patentees to transform permissible repair and resale into patent infringement. Even where the proper scope of infringement is not so clear, as with self-replicating products and restrictions on downstream purchases, the courts' reliance on use restrictions has prevented careful analysis of the policy issues. None of this shows, though, that there are not legitimate goals for use licensing. As the next Part shows, those goals can be achieved without unnecessarily expanding the scope of patent infringement.

IV. THE BENEFITS OF USE LICENSING

The examples of field-of-use licensing in the cases discussed here²⁸¹ appear to be directed at two goals. First, such licenses serve the basic purpose of intellectual property protection itself, which is the prevention of free riding on the creator's inventive efforts.²⁸² This is most evident in the *Monsanto* cases, in which the use restrictions presumably were intended to prevent reproduction of the patented seeds by farmers.²⁸³ Second, use licenses further patentee-controlled price discrimination. Several of the field-of-use licenses in these cases did not so much discriminate among different uses of the inventions as discriminate based on the number of uses the purchasers made of the patented products.²⁸⁴ The nature of this

279. See *supra* Part II.A.1.

280. See *supra* Part II.A.3.

281. See *supra* Part II.A.

282. See ROGER E. SCHECHTER & JOHN R. THOMAS, INTELLECTUAL PROPERTY: THE LAW OF COPYRIGHTS, PATENTS, AND TRADEMARKS § 13.4.1 (2003).

283. See *supra* Part II.A.3.

284. See *supra* Part II.A.

limitation was quite explicit in the “single use only” restriction of *Mallinckrodt*,²⁸⁵ but it was also the effect of the no-refilling restriction of *Lexmark*.²⁸⁶ In addition, the restriction in *Ottawa Plant Food* allowed Pioneer to price discriminate among different geographical territories.²⁸⁷

This Part questions the application of field-of-use licenses for these two goals. Although the goals may be valid, it is unclear that use licensing serves them or, in any event, that it does so in the least restrictive way. In fact, solutions are available to patentees that address each of these two problems more specifically. First, if a patentee engages in inventive activity in a secondary market and seeks to prevent free riding on that activity, it can obtain a patent on that specific activity. Second, if a patentee finds that potential purchasers are unable or unwilling to pay up front the requested price for its patented product, but the purchasers will use that product several times, the patentee can establish by contract—but not by patent law—a long-term, or even per-use, financing arrangement.

None of this is to say that there are not other legitimate applications for field-of-use licensing. Contractual provisions that truly restrict licensees to particular fields of use can serve the beneficial purposes often attributed to use licensing.²⁸⁸ But to serve those purposes a restriction should, as the TTBER Guidelines state, “be defined objectively by reference to identified and meaningful technical characteristics of the licensed product.”²⁸⁹ If U.S. courts confined their lenient treatment of use licensing to restrictions that met that test,²⁹⁰ the general approval of the restrictions could be appropriate.²⁹¹ The focus of this Article is on restrictions that do not

285. *Mallinckrodt, Inc. v. Medipart, Inc.*, 976 F.2d 700, 701 (Fed. Cir. 1992).

286. *See supra* Part II.A.1.

287. *See supra* Part II.A.2.

288. *See supra* note 1.

289. TTBER Guidelines, *supra* note 1, ¶ 180. It might also be legitimate for a field-of-use restriction to be defined by reference to economic markets. In *General Talking Pictures*, for example, the amplifiers were apparently the same whether they were used in home or commercial applications. But those applications presumably had very different market characteristics, *see supra* notes 2-3 and accompanying text.

290. As noted above, the courts have not adopted a definition of a field-of-use license. *See supra* Parts I.A-B, II.A.

291. Another approach would be to enumerate specifically the circumstances in which a violation of a use license would be patent infringement. A similar approach is taken by the

meet that test, and the sections below show that the legitimate goals of such restrictions can be accomplished in other ways.

A. *Free Riding*

1. *“Free Riding” in Downstream Markets*

A patentee might argue that any competitor in a secondary market that derives from the patented product is, by definition, free riding on that product. In fact, Lexmark’s attorney has made this exact argument with respect to the refilling of its toner cartridges.²⁹² Moreover, this argument appears to receive some support from a statement in the U.S. antitrust agencies’ Antitrust Guidelines for the Licensing of Intellectual Property: “The Agencies will not require the owner of intellectual property to create competition in its own technology.”²⁹³

Competition in a secondary market, however, is not necessarily competition in the technology of the patentee. The competition in the secondary market may take place with respect to features or services that are independent of the patented technology. The

European Community in trademark law:

The proprietor of a Community trade mark may invoke the rights conferred by that trade mark against a licensee who contravenes any provision in his licensing contract with regard to its duration, the form covered by the registration in which the trade mark may be used, the scope of the goods or services for which the licence is granted, the territory in which the trade mark may be affixed, or the quality of the goods manufactured or of the services provided by the licensee.

Council Regulation (EC) No 40/94 of 20 December 1993 on the Community trade mark, art. 22.2. (For this point I am indebted to Professor Annette Kur of the Max Planck Institute for Intellectual Property in Munich.)

It is important to note that under this section none of the types of license violations that a trademark owner could challenge as infringement would constitute permissible conduct in the absence of a license. Instead, each enumerated violation is a typical limit on the scope of a license. Furthermore, the reference to a provision regarding the “scope of the goods or services for which the licence is granted” describes a provision that is genuinely related to the *field* of use of the intellectual property. Nevertheless, the employment of a list of possible infringement violations would allow the application of use restrictions to extend beyond technically defined fields of use without resulting in the blanket approvals of recent U.S. decisions.

292. Personal Communication with Richard B. Ulmer, Jr., Counsel to Lexmark International, Inc., at Fordham Law School, New York, N.Y. (Nov. 18, 2005).

293. IP GUIDELINES, *supra* note 1, § 3.1.

question, then, is whether the patentee is entitled to restrict competition in those downstream markets regardless of whether the particular nature of that competition relates to the patented technology.²⁹⁴ In this respect, *Mallinckrodt's* test for the validity of a use restriction—asking whether the restriction “relates to subject matter within the scope of the patent claims”²⁹⁵—may be read to limit the patentee’s power to the restriction of competition that is related to the patentee’s *technology*, as distinguished from the patentee’s product in general. Any use restrictions that go beyond that limit should be impermissible.

The Supreme Court’s decision in *Eastman Kodak Co. v. Image Technical Services, Inc.* directly supports this view.²⁹⁶ In that case, Kodak denied independent servicers of its copiers access to copier parts, some of which were patented.²⁹⁷ Kodak argued that the servicers were free riding on its investments in designing the copiers.²⁹⁸ Kodak did not argue, however, that the servicers were *directly* free riding on its copier investments, because the owners of the copiers purchased them from Kodak. Furthermore, Kodak did not argue that the servicers were directly free riding in the parts market, because they sought to buy the parts from Kodak. Instead, Kodak argued that the servicers were *indirectly* free riding because, as the Court described the argument, “they have failed to enter the equipment and parts markets.”²⁹⁹ Rejecting this argument, the Court stated that “[t]his understanding of free riding has no support in our case law.”³⁰⁰ Kodak had a valid free riding argument if the independent servicers were free riding on Kodak’s investments in the *services* market, but simply competing in the secondary market did not constitute free riding on the primary market.

Drawing another European analogy, a similar approach is reflected in the European Commission’s motor vehicle block exemption regulation. The regulation exempts from antitrust

294. See generally Mark R. Patterson, *When Is Property Intellectual? The Leveraging Problem*, 73 S. CAL. L. REV. 1133 (2000) (providing a broader discussion of this general issue).

295. *Mallinckrodt, Inc. v. Medipart, Inc.*, 976 F.2d 700, 708 (Fed. Cir. 1992); see also *supra* notes 60-62 and accompanying text.

296. See 504 U.S. 451 (1992).

297. *Id.* at 458.

298. *Id.* at 483.

299. *Id.* at 485.

300. *Id.*

liability certain conduct by automobile manufacturers.³⁰¹ It excludes from the exemption, however, and thus retains liability for, a refusal by a manufacturer to provide either spare parts or technical information to independent operators that provide aftermarket repair or maintenance.³⁰² Thus, the exemption views “the market for repair and maintenance services”³⁰³ as one that is economically independent of the market for automobiles. Although the aftermarket is dependent on parts and information from the primary market, the use of those parts and that information is not impermissible free riding.³⁰⁴

In fact, the aftermarket activities against which the patentees in the field-of-use cases claim protection are often unrelated to the patentees’ inventive activities.³⁰⁵ That is most clear in *Ottawa Plant Food*, where the patent at issue was for corn seeds, yet the defendants’ activities were as resellers of those seeds.³⁰⁶ The patentee was therefore using its patent on seeds to restrain competition in seed distribution, an area in which the patentee had produced no evidence of innovation. The *Lexmark* inventions were also unrelated to the activity of the defendant in that case.³⁰⁷ Although Lexmark had a variety of patents on various aspects of toner cartridge technology, none of them was on an invention related to the refilling, or even the filling, of the cartridges.³⁰⁸ Hence, it does not appear that the refillers could be viewed as free riding on Lexmark’s inventions; instead, the refillers had created a secondary market in which Lexmark’s inventions played no role. In these instances, characterizing downstream users as “free riding” is misleading.

301. See Commission Regulation (EC) No. 1400/2002, On the Application of Article 81(3) of the Treaty to Categories of Vertical Agreements and Concerted Practices in the Motor Vehicle Sector, 2002 O.J. (L 203/30) art. 2.

302. See *id.* at art. 4.

303. *Id.* at art. 1(26).

304. See generally Commission Regulation (EC) No. 1400/2002, On the Application of Article 81(3) of the Treaty to Categories of Vertical Agreements and Concerted Practices in the Motor Vehicle Sector, 2002 O.J. (L 203/30).

305. A significant exception is found in the *Monsanto* cases. See *infra* Part IV.B.3.

306. See *supra* Part II.A.2.

307. See *supra* Part II.A.1.

308. See *id.*

2. *Patents Related to the Use at Issue*

As I have argued elsewhere,³⁰⁹ this analysis indicates that the free-riding argument is appropriate when the patentee's inventive activity relates to the secondary market. In *Kodak*, for example, if the independent service organizations had been using Kodak inventions that made servicing of the machines easier, one could reasonably have argued that Kodak was entitled to prevent such use. Consequently, it is important to examine the actual claims of the patents at issue in these cases, a task in which the courts seldom engage.

If a patentee believes that the use to which a purchaser will put the patentee's invention will infringe upon the patentee's rights, the patentee is always free to seek a patent on that use. For example, if Lexmark believed that it created an innovation that entitled it to exclude others from refilling its toner cartridges—such as an improved filling system—it could have described that innovation and sought patent protection for it. It could have done so by claiming either the system itself or the process of refilling that it made possible. And in *Ottawa Plant Food*, if Pioneer created some innovation in the seed distribution system from which it sought to exclude the defendant, it could have sought patent protection for the new system. In fact, this is the approach that one would expect a patentee to take to address free riding on its inventive effort.³¹⁰ If the patentee has not produced any innovation related to the uses it seeks to prohibit, then the patentee should not be permitted to restrict those uses.

It is true that patent law allows the patentee to exclude others from “using” its invention, whether the patentee seeks protection on a particular feature of the invention or not. The “uses” that patentees have sought to prevent in the recent field-of-use cases, however, were not really “uses” but instances of repairing and reselling the invention.³¹¹ That is, patentees restricted “uses” that

309. See *supra* note 294 and accompanying text.

310. Justice Black, for example, made the same point in *Aro I*: “Of course, if novelty should inhere in one of the parts as well as in the whole, then that novel ‘heart’ or ‘core’ can be separately patented and separately protected.” *Aro Mfg. Co. v. Convertible Top Replacement Co.* (*Aro I*), 365 U.S. 336, 361 (1961) (Black, J., concurring).

311. See *supra* Parts III.A.1-2.

patent law previously determined the patentee could not restrict. To bring those uses back within the scope of patent law, the patentee should be required to demonstrate its specific entitlement to them via a specific patent.

Mallinckrodt illustrates how far patentees can be from meeting this requirement. The inventions in *Mallinckrodt* included aerosol nebulizers,³¹² a manifold for transmitting the aerosol to a patient,³¹³ and the combination of nebulizer, manifold, and shielding box.³¹⁴ The district court in *Mallinckrodt* pointed out that the defendant, Medipart, did not even disassemble the nebulizer-manifold combinations that it received from hospitals, but simply sent them to be radiation-sterilized and then packaged with new unpatented components before returning them to the hospitals.³¹⁵ The district court also made clear that the radiation sterilization—the only “use” to which Medipart put the patented inventions—was not the subject of any of the patents at issue: “Neither the specifications nor the claims of any of the patents in suit state that the nebulizer and/or manifold are for single use only or must be disposed of. Nor do they claim that either the manifold or the nebulizer are clean or disinfected.”³¹⁶ Thus, *Mallinckrodt* apparently lacked patent protection related to the “use” to which Medipart put the *Mallinckrodt* inventions.³¹⁷

In this respect, *Mallinckrodt* may be contrasted with another Federal Circuit case, *Jazz Photo Corp. v. International Trade*

312. U.S. Patent No. 4,456,179 (filed June 26, 1984); U.S. Patent No. 4,251,033 (filed Feb. 17, 1981); U.S. Patent No. 4,116,387 (filed Sept. 26, 1978).

313. U.S. Patent No. 4,529,003 (filed July 16, 1985).

314. U.S. Patent No. 4,782,828 (filed Nov. 8, 1988).

315. See *Mallinckrodt, Inc. v. Medipart, Inc.*, No. 89-C-4524, 1990 U.S. Dist. LEXIS 1974, at *2-4 (N.D. Ill. Feb. 16, 1990), *rev'd*, 976 F.2d 700 (Fed. Cir. 1992).

316. *Id.* at *2.

317. Actually, one of the patents that *Mallinckrodt* asserted in the case describes the invention as designed in part to facilitate easier disposal of the used radioactive nebulizer. See *Mallinckrodt*, 976 F.2d at 702. Although the alleged infringer did not engage in disposal of the nebulizer, but rather sterilized it for reuse, *id.*, one could perhaps view those two practices as competitors in the post-use nebulizer servicing market. Medipart might argue in response that as an alternative to disposal, reusers cannot free ride on features of the invention designed to facilitate disposal. But it is possible that those same features make transportation of the nebulizer to Medipart more feasible, which could be viewed as free riding. This issue need not be argued extensively here, but this is the sort of inquiry that should be conducted to determine whether a prohibited use “relates to subject matter within the scope of the patent claims.” *Id.* at 708.

Commission.³¹⁸ The Fuji patents at issue in *Jazz Photo* related to single-use cameras that Jazz Photo had refurbished by putting new film in the used camera casings, or “lens-fitted film packages” (LFFPs).³¹⁹ Perhaps questionably, the court concluded that a multi-step process for replacement of the film constituted permissible repair rather than impermissible reconstruction.³²⁰ Putting aside possible shortcomings in the repair conclusion, however, one of the patents at issue included claims directed specifically at the loading of film into the cameras.³²¹ The district court specifically found these claims were infringed, a conclusion reversed by the Federal Circuit on the ground that the “defense of repair is applicable to process claims, as well as to apparatus claims, when the patented process was used in the United States and the patent right has been exhausted for the articles produced thereby.”³²²

It is unclear that this conclusion is correct. The court stated that “[w]hen a patentee sells a device without condition, it parts with the right to enforce any patent that the parties might reasonably have contemplated would interfere with the use of the purchased device.”³²³ But this principle need not require that the exhaustion doctrine apply to all processes that could be used to *produce* a product sold. For example, it seems unlikely that buyers of single-use cameras expect to be able to refill them with new film. The

318. 264 F.3d 1094 (Fed. Cir. 2001).

319. *Id.* at 1099-100.

320. *Id.* at 1106-07. The court’s conclusion seems questionable because the amount of work performed in the refurbishment was considerable, both quantitatively and qualitatively:

We conclude that for used cameras whose first sale was in the United States with the patentee’s authorization, and for which the respondents permitted verification of their representations that their activities were limited to the steps of (1) removing the cardboard cover, (2) cutting open the plastic casing, (3) inserting new film and a container to receive the film, (4) replacing the winding wheel for certain cameras, (5) replacing the battery for flash cameras, (6) resetting the counter, (7) resealing the outer case, and (8) adding a new cardboard cover, the totality of these procedures does not satisfy the standards required by precedent for prohibited reconstruction; precedent requires, as we shall discuss, that the described activities be deemed to be permissible repair.

Id. at 1098-99. It was not clear whether all the respondents had used this process. For those that had not, or for which the process used was unclear, the court let stand the I.T.C.’s reconstruction decision. *Id.* at 1110-11.

321. *See id.* at 1108-09 (citing U.S. Patent No. 4,972,649) (filed Nov. 27, 1990).

322. *Id.* at 1108 (citation omitted).

323. *Id.* at 1108-09 (citing *Hewlett-Packard Co. v. Repeat-o-Type Stencil Mfg. Corp.*, 123 F.3d 1445, 1455 (Fed. Cir. 1997)).

court's treatment, however, correctly suggests that it is not actual expectations that determine exhaustion but the contours of the repair-reconstruction dichotomy.³²⁴

Even so, the court appears to have misstated the repair-reconstruction rule. The courts generally have indicated that if the act of repair involves the use of a patented replacement part, the repair is impermissible. For example, in *Aro I*, the Supreme Court characterized the question as “whether the replacement of an *unpatented* part, in a patented combination, that has worn out, been broken or otherwise spent, is permissible ‘repair’ or infringing ‘reconstruction.’”³²⁵ In the same way that the replacement of a patented replacement part would overstep the repair doctrine (unless the part were obtained from the patentee), use of a patented repair process also seems impermissible.

Many repair processes, however, may not be patentable because they would be obvious. Indeed, the process claims in *Jazz Photo* make the obviousness challenges in that case seem warranted:

In the method of claim 1, the film is wound from the cartridge onto a roll in a darkroom; both the film roll and the empty cartridge are then inserted into the LFFP and the casing is sealed. In the method of claim 9, a film cartridge is placed in the LFFP and the film leader is attached to a spool in the unexposed film chamber; the casing is then sealed, and an external apparatus winds the film into the unexposed film chamber.³²⁶

Yet in *Jazz Photo*, the administrative law judge, the Commission, and the court all concluded that the infringers' burden of showing invalidity had not been met.³²⁷ Given that conclusion—assuming that the film-loading method was in fact new and nonobvious—it is not clear that repairers like *Jazz Photo* should be able to use the process without permission from the patentee. This requirement would not prevent repair of the products in general, but would prevent only use of that particular process for repair. In sum, just as new uses of unpatented products are patentable, so there should

324. *See id.* at 1105.

325. *Aro Mfg. Co. v. Convertible Top Replacement Co. (Aro I)*, 365 U.S. 336, 342 (1961) (emphasis added).

326. *Jazz Photo*, 264 F.3d at 1108 (citing U.S. Patent No. 4,972,649) (filed Nov. 27, 1990).

327. *Id.* at 1101-02.

be no obstacle to patenting a *new* method of repairing a patented product.

B. Price Discrimination and Financing

The price discrimination that results from the use licensing in these cases may serve either of two purposes. First, it may increase the patentee's profits, as price discrimination generally does. Whether this goal is valid is not entirely clear, especially when the price discrimination is accomplished through arrangements affecting distinct markets related to the patented product. Second, the price discrimination may provide a means for buyers to pay for the patented products over the life of the product, either with or without increasing the patentee's profits. In this context, although the advantages of such a contractual arrangement are evident, they need not be enforceable through patent law.

1. Price Discrimination in Related Markets

The permissible scope of price discrimination in patented products is not entirely clear. In the United States, it is generally accepted that "there is no antitrust prohibition against a patent owner's using price discrimination to maximize his income from the patent."³²⁸ Nevertheless, this statement can be interpreted too broadly. Tying arrangements are often used to price discriminate, yet use of them is impermissible if the patentee has market power.³²⁹ Furthermore, where the exhaustion doctrine has been implicated, the Supreme Court has rejected other patent infringement suits that facilitated price discrimination even when no unpatented products were involved. For example, the Court has not allowed patentees to enforce territorial restrictions after the first sale of the product.³³⁰

328. *USM Corp. v. SPS Techs., Inc.*, 694 F.2d 505, 512 (7th Cir. 1982).

329. *See* 35 U.S.C. § 271(d)(5) (2006); *Jefferson Parish Hosp. Dist. No. 2 v. Hyde*, 466 U.S. 2, 12-14 (1984).

330. Several early Supreme Court cases concerned purchases of patented goods within the territory of one licensee and resales of those goods in the territory of another licensee. The goal of the geographic allocation of territories was presumably price discrimination (though it could have been the prevention of free riding, which is discussed above), yet the Supreme Court repeatedly rejected infringement suits in this context. *See, e.g.*, *Keeler v. Standard*

Although the courts have not clarified this difference in the treatment of alternative price discrimination techniques, one can perhaps conclude that there is no prohibition on price discrimination that is accomplished directly by charging different prices to different purchasers; on the other hand, a price discrimination goal will not save an otherwise impermissible restriction, such as tying. If that is the correct reading of the cases, then the use restrictions at issue in this Article seem unlikely to be saved by their enablement of price discrimination by patentees. Because they enable price discrimination by effectively redefining the limits of infringement,³³¹ they go well beyond the direct forms of price discrimination that the Supreme Court has approved.

Moreover, the effect of these restrictions is to use the patent to restrain competition in a second market, much as with tying restrictions. This effect is most evident in *Ottawa*, where the restriction restrained competition in the downstream dealer market in which the defendant resold the seed.³³² In both *Mallinckrodt* and *Lexmark*, however, the restrictions also restrained competition, or potential competition, in downstream markets for reconditioning services.³³³ Although there was no formal tie in these cases, the similar effect of the use restrictions suggests that the mere fact that the restrictions allow price discrimination is not sufficient to justify them.

2. Price Discrimination Through Contract

Importantly, though, by repairing the patented products, the alleged infringers in the reconditioning cases prevented the patentees from making additional sales of the products. This prevention of additional sales made it more difficult for the

Folding Bed Co., 157 U.S. 659, 672 (1895); *Adams v. Burke*, 84 U.S. (17 Wall.) 453, 456-57 (1873).

The Supreme Court has permitted patentees to impose pricing restrictions on manufacturing licensees where necessary to protect the patentee's profits, *United States v. Gen. Elec. Co.*, 272 U.S. 476, 491 (1926), but it has condemned resale price maintenance for patented goods in other contexts. See, e.g., *Straus v. Victor Talking Mach. Co.*, 243 U.S. 490, 501 (1917).

331. See *supra* Part II.A.

332. See *supra* Part II.A.2.

333. See *supra* Parts I.B, II.A.1.

patentees to price discriminate based on intensity of use. As a result, the overall financial return of the patentees might have decreased, and lower returns possibly could lessen patentees' incentives for invention.

It is hard to see, however, why this result should be viewed as problematic in itself.³³⁴ A patent does not entitle the patentee to profits,³³⁵ or even to a particular pricing technique, but only to exclusion of its competitors, and that exclusion is limited by the other rules of patent and competition law. A patentee therefore cannot defend a tying arrangement by arguing that it needs to use the tying arrangement to keep up its profits.³³⁶ In any event, it is unclear for most of these inventions that the patentee would be unable to price them profitably, even if reuse of the products were not possible. Patentees sell many reusable products without the sorts of license restrictions at issue in these field-of-use cases and, except in exceptional cases,³³⁷ there is no indication that it would be impossible to price the products at issue in the cases discussed in this Article in such a way as to make their sales profitable.

Moreover, even if a single sale would be difficult, there is no obstacle to a patentee's use of a long-term financing arrangement or some other sort of contractual solution. Specifically, a patentee could achieve through contract an effect identical to the use restrictions involved in the cases discussed above, but it would be unable to enforce the restriction through patent law. The absence of patent protection would mean that patentees would be limited to contract remedies for violations of the contracts, but those remedies

334. See Stern, *Post-Sale*, *supra* note 25, at 11-12 ("Without getting bogged down in the rights and wrongs of each side's possible arguments, one may conclude that presence of a wealth transfer effect need not be outcome-determinative."); see also *id.* at 29-31 (discussing the wealth transfer argument).

335. See *In re Kirk*, 376 F.2d 936, 963 (C.C.P.A. 1967) (Rich, J., dissenting) ("The basic proposition to patentees is: *if* your invention has market value and *if* you can exploit it with profit, that profit will be secured to the extent that you may have the right to exclude others from exploiting your invention. Whether that right has value is, of course, entirely dependent on whether the invention has value." (emphasis added)).

336. The tying of unpatented to patented products remains per se illegal if the patentee has power in the market for the patented product. See *Ill. Tool Works, Inc. v. Indep. Ink, Inc.*, 547 U.S. 28, 36-37 (2006).

337. See *infra* Part IV.B.3.

do not appear to be insufficient to protect the patentees' legitimate interests in these areas (again, except in exceptional cases³³⁸).

The boundaries on the patentees' contractual interests would be policed by the limits placed on contractual restraints by competition law, but that is entirely appropriate. The restrictions discussed above generally involve restrictions on downstream markets, and it is competition law, not patent law, that has developed a body of doctrine to police market relationships.³³⁹ Moreover, competition law, unlike patent law, can weigh the benefits to patentees of contractual restrictions against the costs to consumers.³⁴⁰

This approach is more consistent with the U.S. antitrust agencies' approach than is *Mallinckrodt's*. The IP Guidelines state that the agencies generally apply the rule of reason, rather than the per se rule, to licensing arrangements.³⁴¹ Although the Federal Circuit in

338. *See id.*

339. Restraints involving different market levels are vertical restraints, and are generally judged under the rule of reason. *See generally* *Leegin Creative Leather Prods., Inc. v. PSKS, Inc.*, 127 S. Ct. 2705, at *38-39 (2007); *Continental T.V., Inc. v. GTE Sylvania, Inc.*, 433 U.S. 36, 54-57 (1977).

340. Antitrust law's rule of reason requires a balance of procompetitive and anticompetitive effects, but a patent infringement suit requires no showing that the incentive benefits of the patent protection at issue outweigh the costs of the statutory monopoly.

This point applies even more strongly because the patentee will not necessarily know to what use its invention will be put. In *Mallinckrodt*, the "single use only" restriction probably was imposed in part because of the health and safety concerns raised by the reuse of medical equipment. *See Mallinckrodt Inc. v. Medipart Inc.*, 976 F.2d 700, 708-09 (Fed. Cir. 1992) (citing cases that relied on safety concerns). But the patentee will not generally know whether such concerns exist for a particular purchaser.

For example, the author of this Article recently purchased a kit for cleaning the print heads of an inkjet printer, and the kit included a syringe for use with the cleaning fluid. The syringe, like the nebulizer in *Mallinckrodt*, came with a "single use only" restriction. Despite that restriction, the manufacturer presumably had no objection to the reuse of the syringe in a non-medical application. Nevertheless, under *Mallinckrodt*, the reuse of the syringe, if determined to be "within the patent grant," would be patent infringement, and there would be no room for an argument that the restriction was unreasonable as applied to the author in these circumstances.

In fact, there was no indication that this particular syringe was patented. That only emphasizes, however, the arbitrary nature of the current treatment of use licensing. If the syringe is unpatented, the manufacturer can probably not enforce its restriction, because the notice does not create a valid contract. *See supra* Part II.B.1. It is unlikely that any applicable health regulations would afford the manufacturer a private right of action. But if the syringe is patented, the manufacturer could enforce its restriction through a suit for patent infringement, regardless of the nature of its invention and its relationship to use of the product.

341. *See* IP GUIDELINES, *supra* note 1, at 16.

Mallinckrodt held out the possibility that the rule of reason would apply to field-of-use licenses that are not within the patent grant, its broad interpretation of the range of licenses that are within the patent grant effectively eliminated that prospect.³⁴² As a result, the *Mallinckrodt* approach has resulted in per se legality for field-of-use restrictions, and the recent *Scruggs* case apparently went further by explicitly adopting a rule of per se legality.³⁴³ Consequently, the current approach circumvents the competitive analysis called for by the IP Guidelines, instead of providing a considered alternative.

Confining the patentee's remedies to those available in contract law also receives some conceptual support from the scope of the EC's TTBER. As described above,³⁴⁴ most of the field-of-use restrictions discussed in this Article would not be treated as technology transfers under the TTBER because, in the sense required by the TTBER, the restrictions are not really uses of the patentee's technology at all. The approach of the TTBER is similar to that of the U.S. Supreme Court, as interpreted by the district court in *Mallinckrodt*,³⁴⁵ which would have given the restriction in that case no special protection from patent law. Although the Federal Circuit rejected this approach on appeal in *Mallinckrodt*,³⁴⁶ the better approach would limit the domain of these restrictions to contract law.

3. *Exceptional Cases Requiring Patent Protection*

The seeds and replanting restrictions at issue in *McFarling*³⁴⁷ and *Scruggs*³⁴⁸ might be an exception to the sufficiency of contract law. Both cases imposed restrictions on the ability of farmers to save second-generation seed harvested from planting the first-generation patented seed.³⁴⁹ The patentee's concern seems valid, in that seeds do not just reproduce themselves once but multiply. In theory, therefore, the sale of one seed could enable the purchaser to produce

342. See *supra* Part II.A.

343. See *supra* Part II.A.3.

344. See *supra* Part I.D.

345. See *supra* text accompanying notes 43-44.

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

347. *Monsanto Co. v. McFarling*, 363 F.3d 1336 (Fed. Cir. 2004).

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

349. See *supra* Part II.A.3.

an unlimited number of additional seeds. This poses a unique problem for the patentee, and one that is not easily solved by contract.

Yet the very uniqueness of the problem suggests that it should not be addressed by a general rule allowing patentees to define the scope of infringement by contract. Instead, it seems that if these inventions pose a particular incentive problem, the law should address that specific problem and tailor a solution addressed to it. In this case, congressional action would be the preferable choice.³⁵⁰ In the recent past, Congress has modified patent laws to respond to the problems of particular technologies,³⁵¹ and similar action may be desirable here.

In the meantime, however, the courts may feel called upon to develop their own solutions. Arguably, this is what the district court in *Scruggs* attempted to accomplish with its initial decision on a preliminary injunction, in which it allowed the use restriction simply because it “was the only reasonable alternative available to it if it hoped to garner a reasonable return on its sizeable investment while making the technology available for commercial use at a reasonable price to consumers.”³⁵² Aside from the courts, commentators such as Richard Stern have proposed a similar approach as a general replacement for *Mallinckrodt*.³⁵³

The problem is that it is difficult to evaluate claims that a particular licensing approach is essential to “garner a reasonable return”³⁵⁴ on the patentee’s inventive activity. The difficulty seems sufficient to counsel against this approach as a general solution, especially given the alternatives available to patentees. For example, although the *Monsanto* cases are offered here as an example of when such a licensing approach may be necessary,

350. Cf. Stern, *Post-Sale*, *supra* note 25, at 36 (“Even assuming (as we may for the moment) that the *Mallinckrodt* doctrine is wiser policy than the exhaustion doctrine, it is troublesome that the determination and corrective action here were judicial rather than legislative.”).

351. See Biotechnology Process Patent Revision, Pub. L. No. 104-41, 109 Stat. 351 (codified as amended at 35 U.S.C. § 103(b) (2006)) (updating biotechnology patent process); 35 U.S.C. § 273 (2006) (allowing defense to patent infringement for use that pre-dated patent filing by one year).

352. *Scruggs*, 249 F. Supp. 2d at 753; see also *supra* text accompanying note 137.

353. See Stern, *Post-Sale*, *supra* note 25, at 36-39.

354. *Scruggs*, 249 F. Supp. 2d at 753.

Monsanto in fact uses a different licensing technique that allows seed saving in countries other than the United States.³⁵⁵

Of course, it is possible that Monsanto can do so precisely because of the returns it receives by prohibiting seed saving in the United States, but the information that would allow evaluation of that possibility, if it exists at all, is in the possession of Monsanto. Hence, even if this approach were adopted for exceptional cases, the placement of the burdens of production and persuasion in such cases would be critical. The U.S. patent system offers little precedent for such an ad hoc evaluation of economic effects, but again there is a European analog. Traditionally, the European courts vigorously defended exhaustion principles, at least where territorial restrictions and the free movement of goods were at issue.³⁵⁶ In the *GlaxoSmithKline* judgment of September 2006,³⁵⁷ however, the Court of First Instance upheld GlaxoSmithKline's use of contractual price differentials to discourage parallel trade in pharmaceuticals.³⁵⁸ The court held that the Commission failed to give sufficient consideration to efficiency gains, in the form of innovation, that could be made possible by the national partitioning of markets.³⁵⁹

For present purposes, the key point from *GlaxoSmithKline* is that it calls for an explicit balancing of innovation incentives against the usual patent exhaustion principles. Although the court did not make

355. In other countries, Monsanto allows seed saving, but requires farmers to pay a technology fee every year. Reply Brief of Appellants at 21-22, *Monsanto Co. v. Scruggs*, Nos. 04-1532, 05-1120, 05-1121 (Fed. Cir. Sept. 26, 2005). Thus, it could be argued that this alternative technique still imposes a use restriction, albeit one that does not require additional purchases, as does Monsanto's policy in the United States.

356. See, e.g., Joined Cases C-267/95 & C-268/95, *Merck & Co., Inc. v. Primecrown Ltd. & Beecham Group plc v. Europharm of Worthing Ltd.*, 1996 E.C.R. I-06285, 1996 ECJ CELEX LEXIS 11067.

357. Case T-168/01, *GlaxoSmithKline Servs. Unltd. v. Comm'n* (27 Sept. 2006), available at <http://curia.europa.eu/jurisp/cgi-bin/form.pl?lang=EN&Submit=rechercher&numaff=T-168/01>.

358. *GlaxoSmithKline* is not entirely an aberration. In the ECJ's decisions on rental rights for videorecordings, the court has permitted copyright owners to prohibit the rentals in one country of videorecordings purchased in another. The court has emphasized the importance of a derogation from the exhaustion principle to the extent that it is necessary to ensure that the videorecording owners were able to recover "remuneration ... which secures for them a satisfactory share of the rental market." Case C-61/97, *Foreningen af danske Videogramdistributører v. Laserdisken*, 1998 E.C.R. I-05171, ¶ 12; see Case 158/86, *Warner Bros. Inc. v. Christiansen*, 1988 E.C.R. 02605.

359. *GlaxoSmithKline*, *supra* note 357 ¶¶ 294-303.

entirely clear how that balancing was to be performed, it imposed on the Commission the burdens of evaluating the prospective innovation benefits and of balancing those benefits against the harms to competition of the territorial partitioning.³⁶⁰ The court also emphasized the specific nature of the problems in the pharmaceutical market.³⁶¹ Whether this model is applicable to specific problems in U.S. patent law, such as those of self-replicating seeds, is unclear. What seems certain is that allowing patentees to devise their own solutions through contractual use restrictions is not likely to lead to the best solutions.

CONCLUSION

There is widespread concern, at least in the United States, that intellectual property protections have been extended too far.³⁶² This concern has focused primarily on contractual and statutory limitations on the use of copyrighted materials³⁶³ and on the quality of patent examination, which may lead to the issuing of many questionable patents. The field-of-use licensing cases from the United States discussed in this Article present a combination of these problems. Like contractual extensions of copyright, the use-licensing cases allow intellectual property owners to extend their protection into areas not intended by the legislature, such as product distribution.³⁶⁴ And like questionable patents, use licensing can extend protection into areas that are unrelated to the patentee's inventive contribution.³⁶⁵

Consequently, this Article calls for closer scrutiny of field-of-use licensing with respect to both its contractual and patent law elements. As with copyright, careful examination of the transaction that is claimed to have ceded the purchaser's rights is necessary to determine if a contract has been formed. More fundamentally, it is critical to determine, even if there is a contract, whether the

360. *Id.* ¶¶ 241, 301, 304.

361. *Id.*

362. *See, e.g.,* Harry First, *Controlling the Intellectual Property Grab: Protect Innovation, Not Innovators*, 38 RUTGERS L.J. 365 (2007).

363. *See supra* text accompanying notes 15-24.

364. *See supra* Part II.A.2.

365. *See supra* Parts III.A.1-2.

challenged conduct falls within the statutory definitions of patent infringement. If not, the patentee may have a breach of contract action. No contract, however, can transform permitted conduct into patent infringement. Several U.S. courts have blended contractual and patent law in a way that prevented careful analysis of either. More careful scrutiny in both areas can restore appropriate limits to patent protection.