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Post-Sale Restraints via Patent Licensing: A “Seedcentric” Perspective

Peter Carstensen*

The use of post-sale restraints on buyers of patented goods is an increasingly common strategy of patent holders. The seller attaches a notice to the patented good or a good containing a patented component purporting to limit scope of what the buyer has bought and imposing explicit restraints on buyers’ freedom to resell the product or take other actions. The patent community has sought to justify and explain these post-sale restraints based on an analogy to the right of real property owners to encumber such property with covenants that restrict future owners. The key claim is that the patent owner has the right to divide the interests in the goods being sold and declare that only some rights were transferred. This conception provides a basis to bind not only the party in privity but all others who come, or might come, into possession of this property. Interestingly, it appears that only those with notice of the restraint can be bound. This suggests once again the contractual origins of this claim.

* Professor of Law, University of Wisconsin Law School. This paper grows out of the very useful discussion of patent licensing held at Fordham Law School’s annual Intellectual Property, Media & Entertainment Law Journal symposium in November 2005. John Richards et al., Panel I: Monsanto v. Scruggs: The Scope of Downstream Licensing Restrictions, 16 FORDHAM INTELL. PROP. MEDIA & ENT. L.J. 1025 (2006). In addition, I have drawn on comments made in two related presentations—one at New York University Law School and one to the Antitrust Law and Economics Seminar at the University of Wisconsin Law School. Because many of the attendees at these various presentations expressed strong reservations about the ideas presented, I found those opportunities very helpful in testing and clarifying my analysis. As an expert for the defendants, I was involved in two of the cases referenced or discussed in this article: Pioneer Hi-Bred International, Inc. v. Ottawa Plant Food, Inc., 283 F. Supp. 2d 1018 (N.D. Iowa, 2003), and Monsanto Co. v. Scruggs, 342 F. Supp. 2d 568 (N.D. Miss. 2004). The analysis presented, however, relies entirely on publicly available materials including the public filings in those cases.
This expanded right to restrain use and resale destroys the vitality of the first sale doctrine in patent law, which was first announced in 1873.\footnote{See Adams v. Burke, 84 U.S. 453 (1873).} That doctrine held that the rights of the patent holder expired at the point when the patented good was sold. But the first sale doctrine only applied to a property right conception and never spoke to the right to enter into contractual restraints linked to the sale of patented property. Indeed, such restraints are in fact commonplace in a variety of sales not involving patents. In this alternative conception, the buyer by buying is said to agree to those limits. Indeed, such agreements are now often inferred if the purchaser has actual or constructive notice of the limits.\footnote{See ProCD, Inc. v. Zeidenberg, 86 F.3d 1447 (7th Cir. 1996).} If the buyer breaches that contract including making sales or transfers that it had agreed not to make, the seller has a variety of contract remedies that it can invoke against both the seller and any buyer who induced a breach of the contract.

A careful reading of the Federal Circuit’s opinion that created the modern foundation for the expansion of post-sale restraints shows that it derived the right to engage in such restraints from the contractual model and not from any inherent patent right.\footnote{See Mallinckrodt, Inc. v. Medipart, Inc., 976 F.2d 700 (Fed. Cir. 1992).} Indeed, the legal conceptual label is less relevant than the functional point, drawn from contract, that the seller must have a legitimate justification for the restraint. Yet district courts, and the Federal Circuit itself, have lost sight of that crucial analytic point and its significance for the validity of such restraints.\footnote{See, e.g., Monsanto Co. v. McFarling, 363 F.3d 1336 (Fed. Cir 2004); Pioneer Hi-Bred Int’l, Inc. v. Ottawa Plant Food, Inc., 283 F. Supp. 2d 1018 (N.D. Iowa, 2003); Monsanto Co. v. Scruggs, 342 F. Supp. 2d 568 (N.D. Miss. 2004) (currently on appeal to the Federal Circuit).} The expansive conception of this right to restrain buyers has lead courts to insulate unjustified exclusionary and exploitative conduct by sellers who happen to have patent rights from critical review on the merits except in a extreme circumstances.\footnote{See Monsanto Co. v. Baumgardner, No. 04-708 (E.D. Mo. Mar. 29, 2005) (unreported opinion, on file with the author).}

Broadly stated, the thesis of this Comment is all post-sale restraints are “contractual” in nature and therefore subject to
review under both contract law and antitrust law. Both legal regimes condemn unnecessary restraints on the freedom of the buyer. But both also recognize that a wide variety of post-sale restraints can be lawful. In general, legality turns on whether there is some legitimate venture between the parties or some feature of the transaction that warrants the limit on post-sale competition. This “ancillary restraint” analysis applies to both contract and antitrust law.

When a patented product is sold, there is a further question of whether in some limited circumstance the interest of the patent holder in exploiting its rights could justify an otherwise unlawful restraint. Given the long standing first sale doctrine, it is plausible that absent an express legislative authorization, no such right exists. But if such a right were inferred from the overall phrasing of the patent code, the patent holder should not have unlimited discretion to select among the restraints it might employ. Instead, given the general reliance on the open market, any post-sale restraint intended to exploit a legitimate patent interest should be the least intrusive, reasonably fitted to protecting the narrowly defined patent interest of the owner. Moreover, the courts in inferring any right to impose post-sale restraints that only function to exploit patent rights need to delineate the scope of such rights with particular attention to the underlying goals of patent law. Those goals are to promote innovation in the “useful arts” with the minimum exploitation of the public needed to call forth innovation and with no more disruption of the overall economy than is necessary to achieve that goal.

The use of patent rights by owners of patents on seeds or traits within seeds provides an illuminating set of contexts within which to examine these issues. Over the last two decades the seed industry has developed a great number of patented genetic modifications to key crops. In the case of hybrid seeds, the resulting plants will not produce seeds that are “true” to type. So, the patent holder faces no risk of “misappropriation” of its patented genetics. On the other hand, other seeds are the result of inbreeding and the resulting plants produce seeds that are true copies of the original. The buyer of such seeds can reproduce copies at will and absent some constraint can either re-plant or sell
the seeds. This comment is “seedcentric” in its focus because there are several examples of the use of post-sale restraints on seeds that illustrate the range of goals that such requirements can serve. The issues and analysis presented here have, however, much broader application. They go to the heart of the authorization of patent holders to impose post-sale restraints on the operation of the competitive market. The ultimate hypothetical would ask whether a notice posted on a new car can restrain the buyer from reselling the car except with the manufacturer’s consent.\footnote{Books published prior to the imposition of the first sale doctrine in copyright actually had on the cover page such a restraint. It was clearly intended to weaken or destroy the market in used books.}

The Discussion starts, in Part I, with a proposed framework for understanding the post-sale rights of sellers of goods. This framework rests on the key premise that naked restraints on alienation are, like all other naked restraints, inefficient and economically undesirable in general. The framework rests on the lengthy experience of open markets that inherent rights (property type claims) are unnecessary to providing a legal basis to protect most legitimate post-sale interests of the seller. The addition of patent rights does not change this calculus except in a very limited situation. The policy questions that courts ought to ask in that context are 1) whether they can re-write the patent laws to expand their coverage, and 2) if so, how expansive a right ought to be granted. Part II applies this framework, first, to the case that reasserted the right to post-sale restraints for patented goods and then to three cases involving seed company use of expansive, post-sale restraints on the buyer’s freedom of action. Part III concludes the analysis by re-examining the problem of post-sale restraints in the context of patented goods.

I. A CONTRACTUAL-INHERENT RIGHT MODEL OF PATENT RIGHTS

In ordinary commerce, when a good is sold the buyer takes full and complete possession, dominion, and control of the good. This includes the right to resell it and to use it in any way that the buyer sees fit. There is a powerful economic logic behind such a policy. If the seller can limit the rights transferred, this creates a serious
inhibition on the market. Subsequent buyers require notice of these limits and a registry would be needed to let third parties ascertain what rights they can or might acquire from such a seller. The original buyer must also refer to the limits in the purchase document to determine what use it can or may make of the good that it has purchased. In contrast, warranties, and other similar post-sale obligations are the result of contracts that focus on specific commitments by the seller to the buyer. The market for goods would be seriously undermined and transaction costs driven up greatly if sellers were allowed to limit the rights sold as a matter of right.

Of course, there are a number of situations in which the owner of goods will lease or rent those goods to others. The prototypical situation gives the owner substantial obligations for the property and right to its return in good working order. As the “lease” becomes a device that manipulates title and other formal indicia, but confers on the possessor the effective full right of use, a functional analysis would label that a sale even if the tax or corporate accounting laws might give it a different name. It should, nevertheless, be acknowledged that there are likely to be some boundary problems between the renting or leasing of property and its sale. In general that distinction makes no difference because in either case any restraint on the user/buyer’s use of that property is a matter of contract and so subject to both the limits of contract law itself as well as those of antitrust law. In fact, the Clayton Act’s section 3 expressly addresses such restraints

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7 In the case of real property, title recording, a costly and complex process, provides the basis on which buyers or third parties, e.g., lenders, can ascertain the nature of the interests of the nominal “owner.” While there are procedures for recording liens and judgments, the burden and expense of expanding this recording process to encompass a comprehensive system of fractured interests in goods would be overwhelming.

8 This was the core rational for the Supreme Court decision in *Dr. Miles Medical Co. v. John D. Park & Sons Co.*, 220 U.S. 373 (1911) that is popularly thought to have condemned all resale price maintenance. In fact, the Court rejected Dr. Miles’ claim of an inherent right to control the resale of his patented medicines but acknowledged that such restraints would be lawful if in furtherance of a legitimate objective. *Id.* at 400–06. But the pleadings showed that Dr. Miles only sought to create and enforce a retailer’s cartel. *Id.* at 407. See Peter Carstensen, *The Competitive Dynamics of Distribution Restraints: The Efficiency Hypothesis Versus the Rent Seeking Alternatives*, 69 ANTITRUST L.J. 569 (2001).
and condemns them whenever they may “substantially lessen competition or tend to create a monopoly.”

Thus, when the owner of a good, whether patented or unpatented, parts with the possession and control over that good, its right to restrain the new possessor stems from contract law and not from some inherent right. This suggests that when a patent holder sells a good, it too should be constrained with respect to post-sale rights to those it establishes via a lawful contract with the buyer. Thus, the post-sale restraint involving a patented good should, in general, be treated like any other contract. It does not implicate the patent or patent right. Its validity is contingent on there being a valid basis for the contract itself. This also implies that the contract defines who is bound by such a restraint.

The doctrine of exhaustion of patent rights (the first sale doctrine) has existed for more than 130 years. But its dimensions remain unclear. The basic problem is that in a few limited post-sale contexts, an unrestrained buyer may invade the inherent rights of the patent owner in ways that only a restraint on buyer conduct can control. Such a restraint only serves to increase the patent owner’s reward beyond that which it could derive from the sale directly. In many other situations, the patent owner and the buyer have a legitimate joint interest in some aspect of the transaction that warrants some further contractual restraint. Current law has muddled these two concepts with the result that the inherent right claim has come to dominant the contractual right theory when patents are involved. This is understandable given the

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13 Cf., Dawson Chemical Co. v. Rohm & Haas Co., 448 U.S. 176 (1980) (patent covered process applying generally available chemical for which there was no other commercial use; patent holder given the right to bar others from sale of chemical as contributing to infringement by the buyer).
greater rights that a patent owner has whenever the dispute can be cast as one involving invasion of inherent rights.

Post-sale contracts involve a large number of transactions. Warranty and other service commitments are obvious examples. But the business considerations can be much more complex. The producer and buyer of the good may want to enter into a joint venture to distribute the good in particular areas or to particular classes of consumers. In such a transaction, both the buyer and seller face risks of opportunism from the other party. Hence, mutual restraints may be appropriate. The seller may have concerns about free-riding and the failure of the buyer to incur the costs necessary to develop and serve the target market while the buyer may be concerned that it will be unable to recover its costs in developing that market if the seller is free to sell to others who might make entry after the market is developed. Patent law is particularly sensitive to these interests recognizing both territorial and field of use licenses. Such agreements make economic sense whenever the licensee is incurring risks and making investments to develop the market for the patented good.

In contrast, in a few instances the only interest of the patent holder is to exclude post-sale activity that arguably involves the buyer’s own use of the patent but which also involves the replication of the patented good. This also can occur in the context of copyrighted goods. In such cases, on the one hand the rights owner has in fact sold the good but at the same time faces the problem of replication in ways that increase the value of the good to the possessor. It would be an obvious case of infringement if the possessor sells the duplicated good to others. That deprives the patent owner of a sale or royalty on a sale. The harder case occurs only when the buyer replicates the product for its own use. Here the question is whether the buyer has not inherently acquired that right when it buys the good. As the Supreme Court observed: “the patentee . . . receives the consideration for its use and he parts with the right to restrict that use.”

14 Computer software is easily copied and so a buyer can replicate its initial purchase for its own use. Arguably, a copyright based right to restrict such copying for one’s own use acts to protect the right to sell multiple copies.
15 Adams, 84 U.S. at 456.
In looking at this problem, it is important to have criteria for judging the scope of any right being asserted. Professor Jim Chen has recently suggested that the touchstone for interpreting the scope of rights conferred by specific statutes involving innovation and the creative arts is the underlying constitutional provision.\textsuperscript{16} It establishes the goal of patent law as “Progress of Science and the useful Arts.”\textsuperscript{17} In application, this goal would suggest that only narrowly focused rights should exist in the post-sale world with respect to the use made by a buyer. Indeed, absent congressional authorization one might argue that no such rights should exist. It is Congress and not the courts that should define the rights that it wishes to grant in order to stimulate innovation. Thus, like any other grant to exploit the public, the patent laws should be narrowly construed.\textsuperscript{18}

In sum, the general framework is that post-sale, a patent holder should have all the rights to enter into contracts with the buyer that any other seller has. Contract law defines the scope and limits of such rights with antitrust law providing a further outer boundary where there is a creditable threat to the competitive process. Patent rights as such have no bearing on this framework. Only in the very limited case where the buyer has obtained some apparent ability to replicate the invention for its own internal use should the law even consider whether the patent owner’s interest in naked exploitation should provide a basis to restrict the buyer’s freedom. Assuming the courts have the authority, sua sponte, to create such a right, the question is what limit should exist on the privilege of restraining the buyer’s freedom? The right being protected provides a measure of the appropriate restraint—it should be no more restrictive than necessary to protect the legitimate interest of the


\textsuperscript{17} U.S. \textit{CONST.} art I, § 8, cl. 8. Although I have heard the suggestion that this provision was in fact reconsidered and rejected at the constitutional convention and only remained in the published draft as a result of a printer’s error, there is, so far as I can tell, no basis for such a claim.

\textsuperscript{18} “Intellectual property” is a label that conceals a central “public choice” problem. The only rights that exist are those given by law. Such rights are therefore a target for special interest groups seeking to maximize their wealth. For this reason alone, courts should construe all such legislatively created rights strictly to minimize the adverse effect of such “rent seeking” behavior.
patent holder in its patent rights. This in turn does require the courts to be more explicit about the scope of the right to exploit buyers that patent holders should have.

II. THE CASES

This part focuses on the foundation case that subsequent courts regard as reestablishing the right of patent holders to impose post sale restraints as an inherent part of the sale of patented goods, and three seed related cases that reflect a range of circumstances in which patentees sought to apply the doctrine. In each instance, the focus of the analysis is on the merits of the restraints in terms of the public interests in open markets and the protection of the legitimate interests of patent owners.

A. The Foundation Decision—Mallinckrodt

The modern foundation case said to recognize the expanded rights of patent holders to use license restrictions in the post-sale context is Mallinckrodt v. Medipart. The patent holder claimed that although it “sold” the product, buyers had to agree to dispose of it or return it to the patent holder after a single use. The alleged infringer had obtained these products from the buyers and refilled them so that they could be reused.

The core of the Mallinckrodt court’s justification for the restriction on reuse was that there were public safety and product liability reasons for it. Specifically the product involved the use of radioactive materials, and the claim was that the reuse might result in serious harms if the specific device was not properly recharged as well as potential product liability for the patent holder-manufacturer. The patent holder asserted that the defendant had induced patent infringement by the buyers. Moreover, it characterized its contractual restriction as a “field of use” restriction authorized by patent law.
The Federal Circuit upheld the restriction relying on a mixture of old patent decisions and the Supreme Court’s *Sylvania* decision that had expanded the right of manufacturers to restrict distribution of their products. The central rational was that: “Patent holders should not be in a worse position, by virtue of the patent right to exclude, than owners of other property used in trade.” The opinion also cited to *Tripoli v. Wella*, a case the Supreme Court had cited with approval in *Sylvania*. *Tripoli* had upheld a resale restraint on a hair product intended for professional use only because of its potential risks in the hands of ordinary consumers. The rationale for that decision had been that the contractual restraint allowed the manufacturer to sell the product at a reduced price because of the reduction in the risk of product liability claims. Thus, the Federal Circuit’s rationale in *Mallinckrodt* is identical to that which the producer of an unpatented product could assert with respect to a cost saving restraint on opportunistic resale of the product. The central issue in such a case is whether the claim is factually valid or simply a pretextual claim.

An alternative hypothesis for *Mallinckrodt*’s restraint is that it sought to increase revenue by eliminating the potential for reuse by the buyer. This explanation would mean that the patent holder has claimed the right to compel buyers to buy new goods each time they needed to have the product even though these buyers already had purchased products that were in fact reusable. If ordinary contract law applied, and if Mallinckrodt had market power in the

22 *Id.* at 705–07 (citing Continental T.V., Inc. v. GTE Sylvania, Inc., 433 U.S. 36 (1977)).
23 *Id.* at 708.
25 *Id.*
26 *Id.*
27 *See, e.g.*, Eiberger v. Sony Corp. of America, 622 F.2d 1068 (2d Cir. 1980); Polygram Holding, Inc. v. FTC, 416 F.3d 29 (D.C. Cir. 2005). *See also* Northwest Wholesale Stationers, Inc. v. Pacific Stationery & Printing Co., 472 U.S. 284, 297 n.7 (1985) (group refusal to deal based on membership rules of a legitimate joint venture is not per se illegal absent a showing that the refusal was pretextual).
28 There is a technical issue here as to whether the reuse constituted “repair” of the product or reconstruction. Patent law permits the buyer to repair but not to reconstruct. The opinion evades this issue by reference to the limited license and asserts that the limitation necessarily deprives the buyer of the right to repair the product. *See* Mallinckrodt, Inc. v. Medipart, Inc., 976 F.2d. 700, 709 (Fed. Cir. 1992).
market for these devices, then at least arguably its use of this contract term would be an unlawful exploitation of its dominance of that market.\textsuperscript{29} Indeed, the contract term itself, if only to serve this purpose, might be invalid under basic contract law. It interferes with the rights of a buyer after the seller has parted with title, dominion and control over the product. Moreover, it would clearly conflict with the command of \textit{Burke v. Adams}.

The Federal Circuit did not decide that Mallinckrodt’s legitimate justification was factually valid. It only rejected the trial court’s “per se” condemnation of the restraint based on the first sale doctrine. It remanded the case for further proceedings at which, presumably, the issue would be whether the evidence supported Mallinckrodt’s claimed justification.\textsuperscript{30} Thus, the foundation case despite its invocation of patent law and rights appears to rest on a conventional contract analysis that would apply regardless of the existence of patent and which would be subject to antitrust law to the extent that the restraint was unreasonable. Unfortunately, no further proceedings were reported.

In sum, the \textit{Mallinckrodt} decision rested on the recognition that a patent holder has the same rights to contract with buyers that any other seller has. The only patent aspect of the case was that Mallinckrodt has the right to claim that inducing breach of the contract is contributory infringement. This does not change the underlying character of the case: Mallinckrodt was contending it had a valid contract restricting its customers from reusing the equipment; the defendant’s position was that the agreement was

\textsuperscript{29} Such a restraint is similar to tying in that the buyer is required to take something additional—a new product each time there is the need to reuse the product. It reflects the use of market power in the product line to compel the buyer to accept a higher effective price for the good than would exist in a workably competitive market. Thus, such a practice involves the prima facie use of market power and distorts the choices of buyers as well as limiting the market for services associated with the reuse of the patented good. Thus, such a restraint interferes with the competition on the merits. Absent a non-exploitative justification for such a restraint, it should be condemned as a naked restraint on competition.

\textsuperscript{30} 84 U.S. 453 (1873). One of the many anomalies of antitrust law is the courts rarely concern themselves with details such as identifying the party with the burden of pleading or offering evidence on an issue even though it should be obvious that the assignment of such obligations might facilitate the conduct of cases.
invalid. If in fact the explanation for the agreement was that it impaired the rights of the buyer to make use of the goods purchased for the economic benefit of the seller, then such a restraint in a contract of sale would be invalid as an unreasonable restraint on alienation. On the other hand, if Mallinckrodt’s explanation that the reason for the restraint was both to protect public health and reduce the cost of the product because the limitation avoided very substantial insurance/risk expenses was established, then the restraint would be valid regardless of the presence or absence of a patent. On remand, the focus of the litigation would be on the merits of the justification for the restraint. This would properly limit the authorization for post-sale restraints to situations where any seller could lawfully impose a restraint.

B. Baumgardner—Choice of Forum as an Element of the Patent License

Monsanto owns patents to genetic characteristics that make plants resistant to glyphosate, a powerful, broad spectrum herbicide. If a farmer plants such seeds, she can then spray glyphosate over the top of the crop, eliminate weeds, and avoid more costly methods of protecting the crop from weeds. Monsanto follows a number of substantive practices that seek to exploit the economic value of this trait. It licenses a number of seed companies to include the trait in their seeds, but requires that each ultimate buyer of seed must agree to a “technology license” and pay a license fee. For many years, Monsanto insisted that the fee be separately billed to the farmers, but eventually allowed the seed companies to combine the fee into the overall price of the product. The technology license imposes important restraints on the buyer. The most notable is that the farmer can not save and replant the seeds derived from the farmer’s own crop. The merits of this restraint are the subject of various lawsuits and will be discussed subsequently in connection with the McFarling decision.

Among other elements of this license is a forum selection clause. The forum selected is that of the Federal District Court in St. Louis, Missouri where Monsanto’s headquarters are located. The clause both authorizes Monsanto to bring any proceeding for
breach of the license in that forum and requires the licensee to use that forum if it wants to contest any aspect of the license. Such forum selection clauses are frequent features of contracts whether or not the contract involves a patented product or some other goods. Different jurisdictions give greater or lesser deference to such clauses.

A group of farmers who had purchased seeds with the Monsanto traits and who had therefore signed the technology license commenced class action law suits against Monsanto in various state courts. The cases charged a variety of violations of state antitrust law. Monsanto then filed its own lawsuit in the federal court in St. Louis contending that the farmer plaintiffs had violated the technology license by violating the forum selection clause. It followed, Monsanto contended, that the licenses allowing the farmers to plant crops with Monsanto traits were void and so the farmers were infringing Monsanto’s patent. Monsanto demanded that the court enjoin the farmers from continuing to raise those crops and award it damages for their infringement.\(^ {31}\)

In a carefully reasoned opinion the District Court rejected Monsanto’s claim that a forum selection clause was part of a patent license.\(^ {32}\) The opinion recognized that forum selection could be an appropriate element of a contract of sale at least under the laws of some jurisdictions, but it refused to allow Monsanto to convert the right to make such a contract into a right to treat its breach as a voiding of the underlying transaction by which the patented genetic trait was sold to the farmer. In addition, applying the law of Missouri, the court held that if the contract term involved a penalty of forfeiture of the right to use the patented goods, that would be unconscionable. This left Monsanto with its basic contract claim to have the various cases transferred to the federal court in Missouri to the extent that the law of the forum states would recognize and enforce such a right.\(^ {33}\)


\(^{32}\) Id. Curiously, the opinion, a copy on file with the author, is no longer available on the district court web site nor is it reported in the WestLaw case index.

\(^{33}\) Ultimately, the plaintiffs decided to consolidate their cases against Monsanto in the federal court in St. Louis. They have filed amended complaints that charge both state and
This decision is a good illustration of the application of the contract principle in the context of post-sale restraints. Here the restraint was on the forum in which any dispute would be resolved. There are plausible arguments for adoption of such restraints as an incident to a sale although there are also some powerful counter arguments. The central point is that such a provision has nothing to do with any unique aspect of the patent on the underlying product. Rather, the issue is whether the contractual restraint is a lawful one under the law of the state in which the sale was made.

C. Ottawa—Contractual Price Discrimination

In Pioneer Hybrid Seed v. Ottawa a major corn seed producer obtained patents on some of the genetic material in its hybrid seeds and placed a notice on the bags that restricted the buyer’s use to planting the seed or using it for animal feed. The intended implication of this restriction was that a buyer could not resell the seed. Ottawa was in the business of supplying its customers with a variety of seed and agricultural chemicals. It would, among other things, seek out farmers or dealers who had excess Pioneer seed or who would be willing to buy such seed from Pioneer at Pioneer’s price and then resell it to Ottawa for re-sale to other farmers. Because hybrid seed can not reproduce itself, there was no danger of Ottawa using the seed to create duplicates, it was only in the business of buying and reselling a commodity that happened to contain components that were patented.

Such transactions are plausible economically under two possible business contexts. First, if Pioneer had misallocated its seed inventories resulting in inadequate supply in a region and was unable to shift seed inventories efficiently, then an independent reseller would be able to engage in arbitrage—buying in one market and reselling in another. Indeed, it may well be difficult and costly for a large organization such as Pioneer to identify where unmet demand existed and then move modest quantities of seed from one location to another. Its dealers would have to report federal antitrust law violations. Schoenbaum v. E.I. DuPont de Nemours & Co., No. 4:05-CV-01108-ERW (E.D. Mo. 2005).

34 283 F. Supp. 2d 1018 (N. D. Iowa 2003).
that they had excess demand for specific types of seed for Pioneer to locate such seed in the hands of other dealers and work out the logistics of transfer including both the physical and financial details. Hence, an independent business that started with orders from farmers seeking particular seeds could be more efficient in locating and reselling such seed.

Second, if Pioneer gave volume buyers substantial discounts, there would be an incentive for such a buyer to buy the minimum necessary to get the lowest price if it could resell its surplus to a buyer that could in turn resell it to other farmers. The second set of farmers would have been low volume direct buyers who would otherwise have paid a higher price for seed. The independent seed merchant must, of course, take the risk of buying and reselling. For this kind of arbitrage to be economically viable, Pioneer must offer reasonably substantial volume discounts. Such discounts would have to exceed the cost savings arising from volume sales because the independent re-seller will have to incur the expenses of moving relatively small lots of seed to various buyers. Only if the price differential between large and low volume sales were substantial would it pay a third party to incur the costs and risks associated with such transactions.

There are several reasons why, absent arbitrage among high and low volume buyers, a seller would favor large buyers with high discounts. Such buyers are likely to be more sophisticated and so less likely to buy seed based solely on brand name or company reputation. Instead, they are likely to identify the alternative seeds that would best serve their interests and then seek to get as competitive a price as possible. Major buyers are also opinion leaders in their communities. Hence, ensuring that such buyers are using a company’s product is likely to induce other, lower volume buyers to follow suit. These considerations suggest that it is unlikely that the producer will eliminate discounts for volume buyers. Instead, facing successful arbitrage it will be compelled to reduce the price of smaller quantities of seed until the difference is such that it ceases to be attractive for independent resellers to engage in arbitrage based on price differences.

Both types of arbitrage improve market efficiency. In the case of transfer of seed to meet actual demand, the independent dealer
can only do this profitably if it is more efficient than Pioneer. Hence, this lowers the social cost of getting the goods to the customers who desire them. Meanwhile, Pioneer has collected the full royalty it sought and has avoided all other transaction costs. In the case of arbitrage between high and low volume buyers, there is also an efficiency gain from society’s perspective. Seed is moving to those who desire it at a lower price which will result in a larger volume of sales as low volume buyers are able to plant more of the more desirable crop. Pioneer has not limited the volume it will sell to any particular buyer and so in effect has recognized that it is willing to make large volume sales at that price. What it seeks to do is to extract extra income from the low volume buyer with relatively inelastic demand. This is a purely exploitative maneuver.

Basically, Pioneer asserted that it had the inherent right under patent law to restrict the buyer’s use of the seed. It made no claim that these restrictions avoided risks of product liability or consumer harm. Furthermore, given the nature of hybrid seed it had no basis to claim that buyers who did not plant would be able to reproduce its patented goods and sell them to third parties. Pioneer did assert that the arbitrage of seed disrupted its distribution system and interfered with its differential pricing scheme. But it did not claim that there was some particular efficiency or economic justification to its system that required the limitation on resale. Essentially, it was asserting that it had the right to exploit its low volume customers by use of the re-sale restraint. Moreover, it implicitly took the position that the inefficiency in its distribution system that produced misallocation of seed was a necessary element to its price discrimination scheme.

Based on its expansive reading of Mallinckrodt, the District Court granted summary judgment to Pioneer holding that Ottawa had infringed the patent restriction by both buying and then reselling the seed. This holding rested expressly on the assertion

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36 283 F. Supp. 2d at 1031–35.
that the patent holder could “sell” only a limited interest in a good having patented components. Thus, the notice on the bag disclosed to the buyer that the buyer obtained only the rights conferred by the notice and no others. But the same result would follow if a seller can by contract restrict the resale of its goods.

The most plausible business explanation for Pioneer’s restrictions was to facilitate price discrimination among buyers of its seeds. While price variance to the final customer is not illegal in itself, when the enterprise seeking to discriminate must get agreement from its customers not to resell the product, there is an obvious contract in restraint of trade. As a matter of contract law, it is at least questionable whether the seller of a good can impose a resale restraint when the only justification is that the seller wants to charge others a higher price.

As a matter of antitrust law, the initial question is whether there is a legitimate business justification for such a price discriminatory scheme. In a recent decision, the Supreme Court has hinted that its historic opposition to price discrimination may be weakening. Certainly, imposing higher prices on small buyers than would occur in an open market without any claim of special services or other gains to the buyer would seem to go beyond the outer limits

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37 At the same time, the district court held that there should be a trial on damages and pointed out that the defendant’s experts had suggested that the patent owner had not lost any patent royalty because all its sales had been voluntary ones for which it had received the price it requested. Hence, the defendant argued there was no basis to find that the patent owner had suffered any loss of its patent revenue entitlement. See id. at 1052–54.

38 Under the Robinson-Patman Act, 15 U.S.C. § 13(a) (2000), this discrimination would be unlawful if the price differences were imposed on distributors in competition with each other. Because the disfavored farmers are seen as final buyers, even though they sell their corn crop in competition with the favored buyers, they have no basis to complain about the fact that they paid a higher price for seed than was cost justified.

39 See Ill. Tool Works, Inc. v. Indep. Ink, Inc., 126 S. Ct. 1281, 1292 (2006) (“it is generally recognized that [price discrimination] also occurs in fully competitive markets . . . ”). Previously, the Court had indicated that price discrimination was inherently objectionable. See U.S. Steel Corp. v. Fortner Enterprises, Inc., 429 U.S. 610 (1977). In context, the Court may only have meant that price discrimination does not of itself prove market power, a necessary element in unlawful tying. Moreover, Richard Posner, a leader of the Chicago School of antitrust law and economics has recently declared that price discrimination is in fact very problematic in terms of its economic impact. Richard Posner, Vertical Restraints and Antitrust Policy, 72 U. CHI. L. REV. 229, 235–37 (2005).
of such toleration. Thus, given the lack of any non-exploitative explanation for the price differential, it seems more like that this restraint on the buyer’s freedom to use or resell the seed would be classified as a naked limit on competition and so per se unlawful.

Pioneer’s price discrimination facilitating restraints were lawful, therefore, only because its patents conferred a right that the law otherwise condemns. Moreover, the grant of right to Pioneer allowed it to extract from its low volume customers higher prices than would have been possible in an unrestrained market for such goods. It achieves this result not based on the value of its patented product because it was willing to sell that product in volume at lower prices or leave it in inventory in areas where demand was too low. The central question here is whether the interest in promoting innovation justifies this kind of inefficient, exploitation of sub-sets of buyers.

D. McFarling—No Replanting of Patented Seed

Monsanto licensed various seed companies to use its patented genetic material that made soybeans, corn and cotton resistant to glyphosate herbicide. This initial license required that the licensee in turn impose a “technology agreement” on the farmers buying the seed that included a ban on replanting the seeds gathered from the crop. Moreover, at the time of the McFarling case, farmers paid a separate “technology” fee to Monsanto along with the price of the seed itself. This created a direct contractual relationship between the ultimate buyer and Monsanto giving Monsanto formal privity of contract with the farmer buyers. Thus, Monsanto purported to reach through the licensor to the user of its technology that created herbicide resistant crops to command that the farmers be given only the right to plant a single crop with the seed. Hence, farmers were compelled to buy new seed each year if they wanted the benefit of the resistance to herbicide.

Monsanto spent a great deal of money enforcing this restraint. The patent right based argument for the replant limit is that both cotton and soybeans produce seeds that exactly reproduce the plant. Therefore, allowing a farmer to save and replant such seeds would give the benefit of the patented characteristic without paying for that right. The counter argument is that the farmer
bought the seed and that includes the capacity of the seed to reproduce itself. If a farmer sold such seed, the case of patent infringement would seem convincing because in that case the seller was directly depriving the patent holder of the right to claim a license fee.

Thus, Monsanto had two concerns. First, the farmer might replant the seed, and second, the farmer might sell the seed. However, its no-replant restriction does more than require payment for saved seed used or sold for replanting. It prohibits replanting altogether and thereby requires the farmer to buy new seed for his own land and not compete with seed companies in the sale of seed that is a good substitute for the seed companies’ own seed. Hence, the focus of protection is on the seed producer and not the collection of royalties whenever the patented trait is either used (replanting) or sold. The question is what rights should Monsanto retain with respect to the post-sale use by the buyer of the seeds purchased?

The comparative economics of the situation are roughly these. New seed prices based on the higher value put on certified seed (guaranteed quality from a seed company) might be $17 a bag plus a patent license fee charged by the patent owner ($8) for a total cost of, hypothetically, $25 a bag for certified soybean seed. If a farmer saves seed, the opportunity cost is the price of such seed sold for processing, say $6 a bag. In addition, the farmer has to have the seed cleaned and tested by a seed cleaner in order to be assured that the seed will be readily usable for planting—this might add another $2 to the cost. If the farmer also pays the patent owner the license fee for each bag used in re-planting, the total costs would be, on these hypothetical figures, about $16 a bag or a saving of about $9 per bag. Thus, the specific form of the license involved in this situation increases the buyer’s costs by 36% over the hypothetical alternative. Moreover, the patent holder gets no more from its more costly system than from the less costly one.

40 In the case of cotton, it appears that cleaning is an absolute necessity for use while in the case of soybeans it is highly recommended and usual.
The beneficiaries are the seed company licensees who do not have to compete with saved seed.\textsuperscript{41}

If the farmer sells the seed, presumably the price will be less than certified seed since the farmer selling “brown bag” seed can not provide the same level of assurance of quality. The central point is that saved seed provides a cap on the pricing freedom of sellers of certified (new) seed. That cap relates to the price of the seed as seed. As such it is independent of the price of the trait components for which a separate price can or might be charged. If the goal of the patent law were to protect the interest of patent owners and if the law were to take an expansive view of that right, i.e., that the patent owner is entitled to claim separate compensation for each reuse of its genetic trait by the buyer, then the right of the patent holder would extend no further than claiming compensation for seed saved and either replanted or sold. After all, the patent holder had already made the prior decision to sell the patented trait embedded in a seed that would reproduce. Hence, the patent holder has already waived any right to absolutely refuse others the right to use or benefit from the invention. The central issue is the scope of discretion given to the patent holder in seeking to collect from buyers who either reuse or sell the results of the use of the patented good.

Despite the obvious exploitation of buyers by this form of license, the Federal Circuit found no objection to it.\textsuperscript{42} In the case, it appeared that the farmer had not sold any of the saved seed, but only saved and replanted seeds originally purchased from Monsanto or one of its licensees. The court did object to the liquidated damages element of the license. Thus, demonstrating that such licenses are more like contracts whose terms can be reviewed on their merits. Instead of a very punitive measure of damages, the court ordered that there be a focused inquiry into

\textsuperscript{41} The seed cleaner can perform a role very similar to the new seed producer in collecting the license fee. Indeed, in the UK, this is currently done. Moreover, whether or not the farmer is subject to a no-replant or a pay the fee to replant policy, the patent holder will have a substantial policing cost especially if the license fee is substantial. There is no good reason to believe that the no-replant policy involves appreciably different policing costs than would a “fee for replant” policy.

\textsuperscript{42} Monsanto Co. v. McFarling, 363 F.3d 1336 (Fed. Cir. 2004).
Monsanto’s actual damages. Other cases involving this restrictive license are pending in the Federal Circuit and in state courts.

Once again one might ask what is the justification for this restriction. Generally, as noted, a patent holder can make a plausible argument that it is being deprived of its entitlement to compensation for the use of its patented good. Having sold the good, it can not plausibly argue that it does not intend to make such sales in the future. From this perspective, it is using its right to exclude to claim a right to be compensated for the quantity saved and replanted arising from a lawful purchase of seed. Nothing in the patent law as written specifically authorizes a patent holder to impose a post-sale claim of this sort. Only by reading such a right into the statute can the courts impose any obligation on the farmer saving seed.

Assuming that the courts can imply such a right, it is important to look at the specific restriction imposed. In the case of seeds, the no-replant policy serves the interest of the patent licensees by eliminating saved seed competition, and not the narrowly defined interest of the patent holder. Moreover, the seed companies would have a substantial incentive to standardize on the Monsanto genetic system and not encourage the development of any of the other systems available. Competition among patented technologies would be likely to produce—and indeed in other genetic areas has produced—a substantial reduction in prices. Similarly, a no-replant policy would be among the additional restraints that would be likely to be competed away.

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43 Id. at 1344–52
44 Monsanto Co. v. Scruggs, 342 F. Supp. 2d 568 (N.D. Miss. 2004) (currently on appeal to the Federal Circuit) (similar facts as McFarling with respect to no-replant claim; challenges to the validity of the patents themselves and claims of patent misuse and antitrust violations); Complaint, Larsen v. Pioneer Hi-Bred Int’l, Inc., CA No. LACV032776 (Dallas County, Dist. Ct., Iowa) (alleged conspiracy among seed companies to use the license provision to eliminate competition).
45 It would appear that a more creditable case might be made that sale of saved seed constitutes infringement of the patent since the seller is now directly profiting from the sale of a good containing the patented element.
Today, the only commercially viable type of herbicide resistant genetic system is Monsanto’s. Moreover, it is now present in over 80% of the soybeans used as seeds. This means that Monsanto through the expanded licensing rights recognized in *McFarling* can also control any additional genetic changes in those seed stocks through its conditional licenses.\(^{47}\) Indeed, the rationale of the *McFarling* decision would permit Monsanto to impose limits on the marketing of soybeans themselves. For example, it could require that farmers sell only to a buyer that Monsanto had licensed. This would allow Monsanto to tax the sale value of the crop as well.\(^{48}\) Already, Monsanto is appropriating most of the wealth created by its genetic innovation and under *McFarling* might seek to appropriate the wealth of the farmers as well.\(^{49}\)

III. POST-SALE RESTRICTIVE LICENSING—AN INHERENT RIGHT?

The initial position of the Federal Circuit in *Mallinckrodt* was that patent holders should have rights comparable to those of any other producer of a product.\(^{50}\) This included the right to sell the product subject to contractual limits on the buyer’s freedom. Such limitations would therefore be reviewable under both contract and antitrust law for their legality and reasonableness. However, a gradual transformation has occurred in which a right comparable to that recognized generally in vertical distribution law has moved toward an inherent and unreviewable right of the patent holder. This transformation rests on a failure to distinguish between the general interest of a producer in restraints that further its legitimate business interests and a specific claim that the restraint is essential to protecting an economic interest of the patent holder in exploiting

\(^{47}\) Whether and how much Monsanto has actually limited the development or addition of other characteristics to seed stock with its genetic material is not established on the public record so far as I know.


The four cases profiled in Part II illustrate the range of issues and are suggestive of the need to make a careful distinction between the two bases for restraint as well as developing criteria for judging the merits of any restraint that rests on exploitation.

The *Baumgardner* decision is a good application of *Mallinckrodt* in that it focused on the restraint as a contractual agreement that might or might not be lawful.\textsuperscript{51} The issue is whether the law of contract of the state in which that contract was made permits the kind of forum selection clause that was employed. As in *Mallinckrodt* the key question turns on the issue of contractual validity. Such agreements may reduce and facilitate the enforcement of patent rights, but that is not a unique function to such agreements. Rather, they are used generally in business transactions and the law speaks generally to their validity or invalidity. Upholding or rejecting the validity of that clause has no direct effect on the validity of the patent or the rights of the patent holder in respect to the patent. As such, the restraint is not a functional incident of the patent but rather an incident of the sale of goods having patented components.

The *Ottawa* case offers the first kind of distinction.\textsuperscript{52} Here, as suggested earlier, the restraints on resale serve no legitimate interest in efficient marketing of the seed itself nor do they protect any interest in the patented goods themselves. Indeed, to the extent that resale moves seed from areas of surplus to areas of need, the results are both efficient and serve the economic interest of the patent holder. Blocking such transactions makes sense only because it facilitates price discrimination among buyers in which the goal is to exploit low volume buyers by charging them a higher price than a standard commodity market would support. Such exploitation can be justified as a patent right if, as Professor Chen has argued, the constitutional goal is to maximize the revenue for patent holders. But the law has been clear that in fact maximization is subject to a variety of constraints concerning the method of exploitation. Indeed, the goal of further innovation

\textsuperscript{51} Monsanto Co. v. Baumgardner, No. 04-708 (E.D. Mo. Mar. 29, 2005) (unreported opinion, on file with the author).

should focus on the least cost to society necessary to obtain the desired level of innovation. Moreover, there is an implicit and questionable assumption that precise levels of revenue have a direction causal correlation with innovative efforts.

The central policy question becomes whether there is any general justification for the kind of price discrimination observed in *Ottawa* that should authorize patent holders to engage in such exploitive conduct when it would be unlawful for other businesses to engage in the same conduct. In assessing that issue, one concern should be that the patent holder is discriminating against one set of buyers and in favor of another. That is, it is tipping the economic balance in downstream markets such that the low volume buyer is “subsidizing” the high volume buyer beyond the level that an efficient market in seed would permit. Further, the producer has in fact stood willing to sell its product at the lower price to the volume buyer which in itself suggests that the patent holder was satisfied with that price. Indeed, arbitrage will result in an increased volume of sales for the patent holder thus restoring to it some part of the lost profits from its lower volume, but higher priced sales. Lastly, as the opportunity to exploit existing rights expands the incentive to allocate resources to developing more sophisticated exploitation systems rather than to increased innovation is a real possibility.

The foregoing considerations argue strongly against allowing a patent holder to engage in price discrimination through the use of post-sale restraints on the freedom of a buyer to resell the product. This would not, as noted several times, eliminate all price differences where there are cost factors that allow differential prices within or among market areas or types of buyers. What is being suggested is that only those price differences that arise from the markets for the goods can be exploited to the benefit of the patent holder. There is no good policy reason to impose on some sub-set of buyers a special obligation to reward the patent holder.  

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53 It merits renewed emphasis that the analysis is different if the licensee is developing a market or sub-market for the patent holder and there are risks of arbitrage or "free-riding" that would undercut such a joint enterprise. In those situations, territorial or customer restraints facilitating price differences could be lawful, if reasonably necessary.
Seeds that reproduce themselves as in the McFarling case present a more difficult challenge.\footnote{Monsanto Co. v. McFarling, 363 F.3d 1336 (Fed. Cir 2004).} Here the patent holder can more plausibly argue that the buyer gets the benefit of replicating the patented trait in the absence of some restraint. On the other hand, the buyer of such seed only gets the benefit of that inherent characteristic. So the restraint on saving seed directly conflicts with the basic technological facts. Certainly, if the farmer sells such seed to another farmer, that would constitute a loss to the patent holder of either a sale or royalty on a sale. Such sales would constitute infringement. But when the farmer simply saves and replants the seed, the question is what rights does a buyer acquire when buying a commodity that is known to reproduce itself.

One answer is that it is for Congress and not the courts to decide what rights the patent holder should have in such cases. After all, the patent holder has chosen to sell the product rather than insist on its right of exclusivity. In other contexts such as performance of music\footnote{See 17 U.S.C. § 115 (2000) (authorizing recording on songs if anyone has already recorded the song upon payment of a set royalty).} and the saving of seed protected by the Plant Variety Protection Act of 1970 (PVPA),\footnote{Pub. L. No. 91-577, 84 Stat. 1542 (1970) (codified as amended in scattered sections of 7 U.S.C.).} Congress has chosen either to impose a compulsory license with a set royalty (recordings of music) or to authorize the continued use of the product by the buyer even though the buyer as duplicated the product (the PVPA). On this basis, it should be clear that if Congress were to address this issue, its resolution may well involve some kind of sharing of rights. Absent specific instruction from Congress, therefore, the courts cannot be sure what rights should be granted and so should not presume to write such legislation.\footnote{There is also a strategic reason for this approach. Seed companies would have strong incentives to lobby Congress for a clarification of their rights. Such concentrated and well organized interests are likely to have considerable influence on the legislative process. At the same time, other stakeholders are more likely to have the capacity to respond to such legislative initiatives in a way that is not feasible if they must seek legislative reversal of a sweeping judicial grant of rights. In this latter case, the powerful,}
Although the foregoing might be the most logical way to proceed, the courts and particularly the Federal Circuit appear reluctant to see patent holders deprived to what the judges think are their general entitlements. The McFarling case is a good example of this sympathy and its basis in the perception that the farmer has acted unfairly to deprive the patent holder of its royalty. Thus stated, the scope of the entitlement that provides the basis for any restraint becomes clear. The patent holder has already voluntarily parted with the patented good. Its only remaining interest as a patent holder is to be compensated for the use made of the good.

The issue becomes the scope of the contractual restraint that might be imposed to protect that interest. As the analysis of the Monsanto no replant policy has shown, all seed companies stand to gain as result of the policy. This goes beyond the narrow interest of Monsanto in seeking compensation for saved seed. Indeed, the policy at least implicitly offers all seed companies the opportunity to avoid technological competition if they standardize on Monsanto’s herbicide resistant trait. Their interest in maintaining the price of seed and increasing their sales volume as a direct result of eliminating the saving of seed creates powerful incentives to join the Monsanto program and avoid technological competition because such competition is likely to lead to both price cutting and the waving of onerous conditions such as the ban on saving seed.

This analysis suggests that the guiding principle in examining such post-sale restraints on replication is whether they are narrowly tailored to protect the interest of a patent holder as a patent holder. If, however, the no replant policy is more restrictive than necessary to achieve that goal, it would impose unnecessary costs on the buyers and create avoidable risks to the overall process of innovation because of its incentives. In the case of saved seed, there is evidence that less restrictive alternatives exist that could be used. In particular, farmers wanting to replant saved seed can pay a royalty directly to Monsanto for that right based on the amount of seed they save and replant. Indeed, as noted earlier,

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58 363 F.3d 1336.
most farmers wanting to save seed will use a seed cleaning service to clean and test the seed. Such a service can provide a more centralized point to collect any fees. This is the practice in the United Kingdom already. So it is not merely a hypothetical response.

The more general conclusion is that if the courts are going to fashion expansions of patent rights, they should do so guided by a careful definition of the right that inheres in the patent holder and then examine the means used to enforce that right to see whether it is no more invasive than reasonably necessary to protect the right. To go beyond that narrow authorization in the post-sale context is to allow the patent holder to use the patent right to frustrate the workings of the market to the detriment of buyers and to the overall process of innovation.

CONCLUSION

The problem of post-sale restraints is one part of a much larger set of issues concerning the appropriate scope and nature of the patent system. There are more fundamental questions about the kinds of “inventions” being patented as well as the uses being made of patents in various contexts. The ultimate plea of this Article is that it is time for those who oversee the patent system both in the courts and in Congress to recognize that the grant of patent rights confers the opportunity to tax the economy. As such, it is essential that any taxation be reasonably related to the goals of public policy and not just private avarice. It is therefore fitting to close with Judge Easterbrook’s comment on another statute that granted rights to exploit the public:

When special interests claim that they have obtained favors from Congress, a court should ask to see the bill of sale. Special interest laws do not have “spirits,” and it is inappropriate to extend them to achieve more of the objective the lobbyists wanted. . . . What the industry obtained, the courts enforce; what it did not obtain from the legislature—even if similar to something within the exception—a court should not bestow. . . . Recognition that special interest legislation enshrines results rather than
principles is why courts read exceptions to the antitrust laws narrowly, with beady eyes and green eyeshades.  