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Comment

Use Restrictions and the Retention of Property Interests in Chattels Through Intellectual Property Rights

Granting intellectual property rights promotes invention but also encourages wasteful expenditures to avoid monopoly prices. If patent or copyright owners are allowed to place some types of restrictions on the products they sell, these wasteful efforts can be avoided. This Comment discusses restrictions that have this effect and how intellectual property law might best create a doctrine enforcing them.

INTRODUCTION

The United States Constitution grants Congress the authority to "promote the Progress of Science and the useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries." Considerable debate exists concerning the wisdom of granting exclusive rights to authors and inventors, but most modern commentary is supportive of the

2. For a historical review, see Fritz Machlup & Edith Penrose, The Patent Controversy in the Nineteenth Century, 10 J. Econ. Hist. 1 (1950). Many arguments concern the issues of whether the intellectual property grant is effective in increasing the amount of invention, whether too many resources are expended on invention, and whether the interference with free market access to invention outweighs the benefits of its increased creation. See, e.g., Stephen Breyer, The Uneasy Case for Copyright: A Study of Copyright in Books, Photocopies, and Computer Programs, 84 Harv. L. Rev. 281 (1970);
statutory grant. However, intellectual property grants are imperfect instruments. Granting monopoly rights in innovation motivates innovators, increasing the overall production of creative work. But, products such as books or machine tools that incorporate protected expression or invention are sold at a higher price because the innovator hopes to realize the available profits from his/her monopoly and earn a return for the costs of creation. This monopoly pricing reduces the total volume of sales, thereby preventing normal distribution and availability of the creation. Intellectual property law uses several means to minimize these inefficiencies. One method is limiting the duration of the grant. Another method is careful definition of what is patentable or copyrightable. A third method regulates express restrictions on use, imposed directly by the intellectual property owner, on the articles which incorporate protected invention or expression. This third method is the subject of this Comment.

Use restrictions attempted by intellectual property owners can be grouped broadly into the following four types: 1) resale price restrictions, 2) tying arrangements, 3) restrictions on use to certain types


6. The limitations on the duration of statutory protection and types of protected works are often explained on the basis of their effect on the amount of investment in inventive activity, rather than their effect on the use of invention after its production. See POSNER, supra note 4, at 40; Mark F. Grady & Jay I. Alexander, Patent Law and Rent Dissipation, 78 VA. L. REV. 305 (1992).

7. A resale price restriction requires the owner of a patented or copyrighted product to sell only, if at all, in some limited price range. The attempted restriction is usually to a minimum resale price. See, e.g., Bobbs-Merrill Co. v. Straus, 210 U.S. 339 (1908).

8. Tying restrictions typically require the owner of a patented or copyrighted product to use it only in conjunction with another product also provided by the patent or copyright holder. For instance, a patented wrench may be restricted to tightening certain brands of nuts and bolts, or a theater may be required to sell a particular popcorn when showing a copyrighted film. See, e.g., Motion Picture Patents Co. v. Universal Film Mfg. Co., 243 U.S. 502 (1917). The Supreme Court has defined a tying arrangement somewhat more broadly, as “an agreement by a party to sell one product [the tying product] but only on the condition that the buyer also purchases a different (or tied) product, or at least agrees that he will not purchase that product from any other supplier.” Northern Pac. Ry. Co. v. United States, 356 U.S. 1, 5-6 (1958).
or fields, and 4) restrictions on the duration or number of uses. The first three types have a long history in the case law, and these types of restrictions have received detailed comment.

By definition, legal enforcement of post sale restrictions would create direct limitations on the distribution and use of invention. This would be especially true of restrictions enforceable against all future owners of the item, in a manner similar to real property easements. Because of these use-inhibiting effects, one might suppose that use restrictions would be acceptable only when absolutely required to maintain the monopoly that motivates the initial creation. Contrary to intuition, however, some use restrictions, especially when enforceable against subsequent purchasers, can actually reduce the market distortions and inefficient use of creation that accompany the intellectual property grant.

Part I of this Comment introduces a conceptual model of how contracts can create use restrictions that bind subsequent purchasers. Part II illustrates the most recent judicial treatment of patent-and-copyright-enforced use restrictions with two cases, Mallinckrodt v. Medipart, a patent case involving a "single-use-only" restriction on a medical device, and Independent News Co. v. Williams, a copyright case involving a prohibition on the resale of comic books that had been purchased as wastepaper. Part III reviews the precedent existing prior to Mallinckrodt and Independent News, precedent which is generally hostile to patent-and-copyright-enforced use restrictions, although exceptions exist. Part IV presents ways in which the enforcement of restrictions may be the best doctrine because some use restrictions are consistent with the goal of minimizing the market distortions that the intellectual property grant creates. Part

9. A field of use restriction requires the owner of a patented or copyrighted product to use it for particular types of activities. For example, a patented wrench could be restricted to use only in assembling airplanes or prohibited from being used to assemble cars. A copyrighted film could be restricted to showings in theaters seating less than 50 people, or prohibited from being shown on television. The activities are typically segregated based on the value of the patented or copyrighted product for the particular use. See, e.g., General Talking Pictures Corp. v. Western Elec., 304 U.S. 175 (1938), aff'd on reh'g, 305 U.S. 124 (1938).

10. A duration restriction requires the owner of a patented or copyrighted product to dispose of or otherwise stop using the article after a certain period of time or number of uses. See, e.g., American Cotton Tie Co. v. Simmons, 106 U.S. 89 (1882) (holding single use restriction invalid).

11. See infra notes 46-77 and accompanying text.


V also presents ways in which the enforcement of use restrictions can be effectively included into intellectual property doctrine.

I. A MODEL OF SERVITUDE CREATION

The term "use restriction" refers to an enforceable obligation on the part of an owner of an item to use it in a particular way. Contracts creating use restrictions are common in the real property context. For example, neighbors may contract concerning a limitation on the type or placement of structures that may be erected on their respective properties. Other use restrictions require no contract for their existence. For instance, the real property doctrine of nuisance prohibits one from opening a beef slaughterhouse in the middle of a residential neighborhood, even without a contract with the neighbors agreeing not to do so.

Borrowing the real property concept of the "equitable servitude," this Comment uses the term "servitude" to refer to a use restriction that binds future owners of the restricted item, even if those future owners are not party to a contract creating the restriction. Use restrictions that are independent of contractual agreements are always servitudes. The use restrictions created by nuisance law, for example, are enforceable against all future owners of the property at issue. Use restrictions created by contract, however, need not also be servitudes. If a piece of property passes to another owner, the new owner is not necessarily bound by the contractual obligations of the prior owner.

The use restriction/servitude distinction is important because servitudes create obligations on parties who have not entered into contracts creating them. Thus it is possible for a servitude to be enforced against a real property owner who had no knowledge of the servitude at the time of purchase. Though a voluntary transaction is thought to be economically efficient because presumably the parties would not have entered into it otherwise, a servitude needs special justification because this presumption cannot be made. Additional reasons for enforcement, reasons that overcome the fact

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14. There is no doubt that land owners can bind themselves with contracts concerning the use of their land. The difficult problem is in determining when those contractual obligations are binding on a subsequent owner of that land. See 5 RESTATEMENT OF PROPERTY §§ 522-568 (1944).
15. The use restrictions imposed by nuisance law are not contractual in nature because the creation of a nuisance is a tort. 4 RESTATEMENT (SECOND) OF TORTS §§ 822-831 (1979).
16. See supra, note 15. Since nuisance is a tort doctrine, any owner of the land, no matter how it was acquired, will be subject to civil liability for nuisance creation.
17. See supra, note 14.
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that the defendant never contracted into an obligation, must be present. Consequently, only special types of contracts create servitudes.

A conceptual framework for the creation of servitudes on products incorporating protected intellectual property can be constructed as follows. The patent and copyright grants confer, by statute, certain exclusive rights to the grantee. When an intellectual property owner sells an article incorporating the protected invention or expression, some of these exclusive rights pass to the purchaser of the product, and some of them are retained by the patent or copyright owner. For example, the purchaser of a copyrighted book does not have the right to make copies of the book.19 This right is retained by the copyright owner. Similarly, the purchaser of a patented tool does not buy the right to reconstruct it if destroyed by some accident.20 To retain these two rights, the intellectual property owner need not place a label on the item explaining that copying or reconstruction is prohibited, or that such actions will be considered copyright or patent infringement.

As the cases discussed below illustrate, however, intellectual property owners are not always satisfied with the "default" distribution of rights, defined by the terms of the statutes. It is not uncommon for a patent or copyright owner to want greater control over the future disposition of the item. Restrictions that reallocate rights away from the default distribution require a contract for their creation. If the intellectual property owner wishes to bind future owners of the item as well, a contract right is insufficient: the patent or copyright holder must retain a property right in the sold article. If the contract is effective in preventing a property right in the article from passing to the purchaser, then it may become a servitude, potentially binding future owners of the item who may not have contracted with anyone concerning the restriction. To give future parties in possession of the article "notice" of the retained property right, some type of labeling might be used.21 There are, therefore, two issues to be decided.

21. All of the cases discussed in this Comment involve restrictive language placed on the patented or copyrighted product by a label or inscription. The marking is an effort to ensure that future owners of the item have notice of the restriction, a crucial element in the creation of a servitude. The form of the statement, and its effectiveness in imparting notice, is a subject which has received little attention in the cases dealing with this issue. Usually, "actual notice" of the restriction is assumed, and the debate focuses
The first is whether the initial contract successfully retained a property interest in the article that would otherwise have passed to the buyer. The second is whether the subsequent owner had sufficient notice of its existence to be bound by its terms. Judicial treatment of these two issues is illustrated in the following Part.

II. MALLINCKRODT AND INDEPENDENT NEWS

An example of servitude enforcement is provided by the 1992 federal circuit decision in *Mallinckrodt v. Medipart.* The plaintiff in the case, Mallinckrodt Inc., sold a medical device known as the UltraVent, used to deliver radioactive or therapeutic aerosol mist into the lungs. Each unit, covered by five patents concerning various aspects of the device, was marked with the inscription “Single Use Only,” and was provided with detailed instructions for proper disposal. Instead of following the disposal instructions, many hospitals sent used UltraVents to the defendant, Medipart. Medipart would recondition them by gamma radiation sterilization and the replacement of miscellaneous accessories (not covered by patents) such as nose clips and plastic tubing, and return them to the hospital.

Mallinckrodt filed suit to enjoin further “reconditioning” by Medipart, arguing that the single-use-only inscription was a limited license to use the patented invention. Overruling a thoughtful district court opinion, the *Mallinckrodt* court held that the inscription, if a “valid condition of sale” and if “within the scope of the patent grant or otherwise justified,” was effective to limit the use rights of the UltraVent purchaser. In reaching this conclusion, the *Mallinckrodt* court construed prior case law narrowly, noting that all cases previously denying the validity of use restrictions after sale involved price fixing or tying arrangements.

The two fundamental issues in servitude litigation, contractual validity of the restriction and notice to the subsequent purchaser, are clearly the issues the court considered important. Their treatment in the court’s opinion, however, is rather muddled.

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on whether the property right is retainable in principle by the intellectual property owner.

Whether it is possible for the user of a patented or copyrighted article to be held to have "constructive" notice of a restriction placed on a label (as opposed to having "actual" notice) has apparently never been addressed in litigation.

22. 976 F.2d 700 (Fed. Cir. 1992).
23. *Id.* at 702. Because the UltraVent can be radioactive and infectious after use, proper disposal procedures are important.
24. *Id.* at 709.
25. *Id.* at 704. Due to the lack of factually similar precedent, the district court opinion relied on expansive language in the price fixing and tying cases. 15 U.S.P.Q.2d (BNA) at 1117. In reversing, the appellate court stated that they "do not favor this practice." 976 F.2d at n. 8. See infra Part III for a detailed discussion of the price fixing and tying cases cited in both opinions.

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The court based its decision on the fact that "[t]he movant Medipart did not dispute notice of the restriction."\textsuperscript{26} The "notice" requirement makes sense as applied to Medipart, because to be held liable as an infringer of a limited-use license, Medipart must be bound by the terms of a sales and license contract that it is not a party to. This is similar to real property doctrines under which the purchaser of a tract of land can be bound by provisions contained in a prior contract he had no part in if he had notice of a contractual agreement concerning the land.\textsuperscript{27}

The court also stated that "[t]he UltraVent device was manufactured by the patentee; but the sale to the hospitals was the first sale and was with notice of the restriction."\textsuperscript{28} The court apparently used the concept of notice to justify the contractual validity of the restriction.\textsuperscript{29} The court’s statement is also confusing because the outcome of the case requires a subsequent purchaser (Medipart) to live up to the terms of the hospital’s sale contract. There is no reason why it should matter that the sale to the hospitals was the first sale.

The \textit{Mallinckrodt} court stated its holding as follows:

\begin{quote}
If the sale of the UltraVent was validly conditioned under the applicable law such as the law governing sales and licenses, and if the restriction on reuse was within the scope of the patent grant or otherwise justified, then violation of the restriction may be remedied by action for patent infringement.\textsuperscript{30}
\end{quote}

This statement is directed entirely at the initial purchaser. It does not explain why the circumstances justify binding Medipart, who was not a party to this validly-conditioned-sale contract.

If Medipart’s actions are considered only inducement to infringe, rather than actual infringement,\textsuperscript{31} it is possible to interpret the \textit{Mallinckrodt} holding without reference to servitudes. One fact recognized at both the district and appellate level was that after reconditioning, Medipart returned the units to the same hospital that sent them out.\textsuperscript{32} The second use of the same unit, if originally purchased under a validly conditioned sale, would be infringement by

\begin{footnotes}
\item[26] 976 F.2d at 701.
\item[27] See supra, note 18.
\item[28] 976 F.2d at 705.
\item[29] In passing, the court cited § 2-207(2)(c) of the Uniform Commercial Code in support of its proposition that the inscription on the device could become a binding part of the sale contract. \textit{Id.} at n.7.
\item[30] \textit{Id.} at 709.
\item[31] Medipart was being sued for both infringement and inducement to infringe. \textit{Id.} at 701.
\item[32] 15 U.S.P.Q.2d (BNA) at 1114; 976 F.2d at 701.
\end{footnotes}
the hospital, an infringement to which Medipart contributed. While this may be a possible reading of the court's language, the reach of the Mallinckrodt holding is very limited if the result of the case rests on the fact that the hospital received from Medipart the same UltraVents they originally purchased. If the original hospital sold used UltraVents to a second hospital, who then contracted for the reconditioning, Mallinckrodt would have had no basis for an infringement action without resorting to servitudes and ideas of notice. The same would be true if Medipart bought used units outright from hospitals, reconditioned them, and then resold them to different hospitals. The second use could not be considered infringement unless the second hospital is bound by the validly-conditioned-sale contract entered into by the first hospital due to notice of the license condition.

Both the district and appellate court opinions touch on sterilization and infection concerns, as Mallinckrodt justified its restriction on the grounds that it was based on health, safety, efficacy, and liability considerations. The district court called these factors "irrelevant to the question of infringement."34 The circuit court, citing the decision in Marks v. Polaroid,35 noted that safety concerns have been found sufficient to defend a single-use restriction against allegations of patent misuse. The absence of patent misuse, however, only establishes that a single-use restriction is enforceable as a license contract. The Mallinckrodt opinion does not take the next step, at least not explicitly, and explain why the restriction should become a servitude, binding future owners of the product who are not party to a license contract with the patentee.36

Rather than restrict the repair of an otherwise usable patented product, the attempted servitude in Independent News Co. v. Williams37 forced the destruction of an otherwise useable copyrighted product. In Independent News, the plaintiffs published, distributed, and owned copyrights over certain comic books. They sold the comic books to wholesalers, who in turn sold them to retail outlets, where

33. That is, unless the terms of the original sale contract have become a servitude on the UltraVent.
35. Mallinckrodt, 976 F.2d at 708-709. In Marks v. Polaroid, the plaintiff patent holder manufactured 3-D viewing glasses for movie theaters. After each use, the theater owner was required to throw the used glasses away. Polaroid justified this restriction in part on the possible transmission of eye infections with multiple use. The court found that the license restriction did not constitute patent misuse. Marks v. Polaroid Corp., 237 F.2d 428, 436-437 (1st Cir. 1956).
36. See infra notes 97-98 and accompanying text for a discussion of how health and safety concerns can be relevant to infringement and can justify this type of restriction as a servitude.
37. 293 F.2d 510 (3d Cir. 1961).
they were sold to consumers for a limited time specified by the publisher. After this period, the retailer returned unsold comics to the wholesaler for full credit. The wholesaler could then return the same unsold comics to the publisher, also for full credit. Another option for the wholesaler was to return only the front cover to receive full credit. As for the rest of the comic, the wholesaler was under contract to destroy or mutilate the remaining portions thereof so as to render them unsalable as publications . . . . [S]uch destroyed or mutilated portions of return copies shall be disposed of or sold for no other purpose than waste paper, and . . . a written commitment [will be obtained] from the purchasers of such destroyed or mutilated return copies that the same will be used only for waste and will not be resold. 38

In addition, each of the comics contained a notice reading:

This periodical may not be sold except by authorized dealers and is sold subject to the conditions that it shall not be sold or distributed with any part of its cover or markings removed, nor in a mutilated condition, nor affixed to, nor as part of any advertising, literary, or pictorial matter whatever. 39

The defendant was a secondhand book and magazine dealer, who had purchased comics with removed covers from a wastepaper dealer. The defendant was selling the comic books, and plaintiffs sued to enjoin under several theories, including copyright infringement. 40 Finding that unrestricted title to the comics had passed to both the wastepaper dealers and the defendant, the court refused to prevent defendant's continued sales of the comics. 41

In contrast to Mallinckrodt, the Independent News opinion clearly distinguishes between the rights and obligations of parties to a use-restricting-license contract, and the rights and obligations of subsequent purchasers of the copyrighted work originally licensed. "[W]here the publisher has parted with the title to the coverless comics in the copyright holder "until the same are so destroyed or mutilated as to be unusable for any purpose except waste," the court found the wastepaper dealers to be buyers in the ordinary course of business, capable of transferring title under § 2-403(2) of the Uniform Commercial Code. Id. at 511-14. The court assumed that the wastepaper dealers had no notice of the contractual provisions reserving title or requiring destruction of the comics. Id. at 512-14. The copyright infringement action was then dismissed because "once there is lawful ownership transferred to a first purchaser, the copyright holder's power of control in the sale of the copy ceases." Id. at 517.
work and despite the fact that as between the immediate parties there is a contractual restriction on its use, this restriction does not bar subsequent purchasers from vending the periodical as a literary work free of the restriction." The court held this to be the rule "irrespective of whether the defendant had notice of the original contractual restriction."

In spite of this lack of legal support for the scheme, the retailer credit and disposal procedures of the Independent News case are still common. The industry has apparently accepted the observation of the district court in Independent News, which stated that "[w]e recognize the plaintiff's desire to have return copies destroyed as a perfectly legitimate goal. But if plaintiffs are to accomplish this goal it will have to be without our assistance." Given the different outcomes in Mallinckrodt and Independent News, it is somewhat surprising that the patent and copyright precedent leading to both decisions is similar. This precedent is discussed in the following Part.

III. TYING, PRICE FIXING, FIELD-OF-USE, AND DURATION RESTRICTIONS

As described in Part I, patent and copyright holder's attempts at creating servitudes fall into four general types, tying, resale price fixing, field-of-use restrictions, and limitations on duration of use.

A. Tying Restriction Cases

An example of judicial treatment of patent-enforced tying restrictions is provided by Motion Picture Patents Co. v. Universal Film Manufacturing Co. In this case, the plaintiff, owner of patents incorporated in movie projectors, licensed a manufacturer to make and sell projectors incorporating the patented invention, if all projectors were sold with the condition that only certain types of films would be

42. Id. at 516-17.
43. Id. at 516.
44. Paperback novels published by Random House contain this statement: Sale of this book without a front cover may be unauthorized. If this book is coverless, it may have been reported to the publisher as "unsold or destroyed" and neither the author nor the publisher may have received payment for it. Dell Publishing uses a slightly different form: If you purchased this book without a cover you should be aware that this book is stolen property. It was reported as "unsold and destroyed" to the publisher and neither the author nor the publisher has received any payment for this "stripped book". Note that the statements appeal to the conscience of the buyer, rather than threatening the seller with an infringement suit.
46. 243 U.S. 502 (1917).
used with the projector. The manufacturing licensee was also re-
quired to affix a label to the projectors, stating the terms of the use
restriction. The Supreme Court found the use restriction invalid,
holding that the right to restrict what types of other products are
used with a patented device is not part of the patent grant. The
same conclusion on the enforceability of tying restrictions, stated
with similar language, has been reached in copyright cases.

B. Resale Price Restriction (Price Fixing) Cases

Resale price restrictions have also been attempted, with little suc-
cess. One example is a case involving a resale price restriction on a
novel. In *Bobbs-Merrill Co. v. Straus*, the plaintiff owned the
copyright to a novel, and had printed inside, next to the copyright
notice, the following statement:

The price of this book at retail is one dollar net. No dealer is licensed to sell

47. The required films incorporated patents which the plaintiff also owned, and
were available only through the plaintiff. *Id.* at 506.

48. The text of the label stated:
The sale and purchase of this machine gives only the right to use it solely with
moving pictures containing the invention of reissued patent No. 12,192, leased
by a licensee of the Motion Picture Patents Company, the owner of the above
patents and reissued patent, while it owns said patents, and upon other terms to
be fixed by the Motion Picture Patents Company and complied with by the
user while it is in use and while the Motion Picture Patents Company owns
said patents. The removal or defacement of this plate terminates the right to
use this machine.

*Id.* at 506-507.

49. The Court stated:
[I]t is not competent for the owner of a patent by notice attached to its ma-
chine, to, in effect, extend the scope of its patent monopoly by restricting the
use of it to materials necessary in its operation, but which are no part of the
patented invention, or to send its machines forth into the channels of trade of
the country subject to conditions as to use or royalty to be paid, to be imposed
thereafter at the discretion of such patent owner.

*Id.* at 516. See also *Morton Salt Co. v. G.S. Suppiger Co.*, 314 U.S. 488 (1942) (involv-
ing tying the use of particular salt tablets to the use of patented salt depositing ma-
chines). *Morton Salt* characterized this type of restriction as "use of the patent to secure
an exclusive right or limited monopoly not granted by the Patent Office." *Id.* at 492.

(E.D. Penn. 1964), the owner of copyrights in musical compositions licensed the works to
a distributor to be sold only on long playing records in connection with the promotion
and sale of a certain shampoo. The defendant retail store bought copies of the records
with the shampoo from the distributor and then sold the two separately. The court
stated: "The fact that defendants knew of the restrictions which were part of the license
agreement between plaintiff and Beecham [the distributor] neither binds defendants to a
contract to which they were not parties nor widens the scope of control granted by the
Copyright Act." *Id.* at 19.

it at a less price, and a sale at a less price will be treated as an infringement of the copyright.\textsuperscript{52}

The defendants had purchased copies of the novel from wholesale dealers, who had purchased from either the plaintiff directly or from other wholesalers, and were selling the novel for less than the required one dollar. Both the defendant and the wholesalers were aware of the statement printed in the book, but neither was under any contractual agreement with Bobbs-Merrill concerning resale prices.\textsuperscript{53} The narrow issue, according to the Court, was whether or not "the sole right to vend [provided by copyright statute] . . . secure[s] to the owner of the copyright the right, after a sale of the book to a purchaser, to restrict future sales of the book at retail . . . because of a notice in the book."\textsuperscript{54} The Court answered that question in the negative, refusing to enjoin the Straus brothers from selling the book at a discounted price. The Court stated:

To add to the right of exclusive sale the authority to control all future retail sales, by a notice that such sales must be made at a fixed sum, would give a right not included in the terms of the statute, and, in our view, extend its operation, by construction, beyond its meaning . . . .\textsuperscript{55}

The leading resale price restriction cases in the patent regime are the Bauer trilogy.\textsuperscript{56} In each of these cases, patentees attempted to impose resale price restrictions by attaching labels or notices to the articles stating the patentee's resale restriction. Finding that the patent grant does not include the right to impose resale price restrictions on sold articles, each court refused to enforce the condition.\textsuperscript{57} However, sale price restrictions imposed on manufacturing licensees of patented products, rather than purchasers, have been upheld.\textsuperscript{58}

Although the tying and price fixing cases involved label notices,
courts have disposed of these cases by holding that the statutory grant does not include the right to control sold articles in those ways. If the grant does not create that property right in the first place, it cannot be retained by the patentee or copyright owner. The decisions, do not, therefore, reach the issue of notice.\(^\text{59}\)

C. Field-of-Use Restriction Cases

A field-of-use restriction was at issue in General Talking Pictures Corp. v. Western Electric.\(^\text{60}\) In that case the plaintiff owned a patent on a particular design for vacuum tube amplifiers.\(^\text{61}\) The plaintiff had licensed the American Transformer Co. to manufacture and sell tubes incorporating the patented design “only for radio amateur reception, radio experimental reception and radio broadcast reception.”\(^\text{62}\) The patentee retained for itself the right to sell into the commercial field, comprising, among other applications, “talking picture equipment for theaters.”\(^\text{63}\) Part of the agreement between the patent owner and the licensee American Transformer Co. was that American was to affix a label to each tube manufactured stating that one of the conditions of sale under which the tube was made was that the device was only to be used in amateur radio reception. The defendant, with knowledge of the license restriction, bought vacuum tubes from American Transformer with the intent to use them commercially in theaters. American Transformer Co. was aware of this intention when the tubes were sold.\(^\text{64}\) Western Electric sued, and the circuit court issued an injunction preventing General Talking Pictures from using the tubes they had purchased. This decision was affirmed.

\(^{59}\) Although judicial opinion is solidly opposed to both price fixing and tying, a doctrine the Mallinckrodt court indicated no intention to change, commentators have found reasons for enforcing both under some conditions. See generally Henry N. Butler & W.J. Lane et al., The Futility of Antitrust Attacks on Tie-In Sales: An Economic and Legal Analysis, 36 HASTINGS L.J. 173 (1984); John E. Lopatka, The Case for Legal Enforcement of Price Fixing Agreements, 38 EMORY L.J. 1 (1989); Keith K. Wollenberg, An Economic Analysis of Tie-In Sales: Re-examining the Leverage Theory, 39 STAN. L. REV. 737 (1987).

\(^{60}\) 304 U.S. 175 (1938), aff'd on reh'g, 305 U.S. 124 (1938).

\(^{61}\) Id. at 176.

\(^{62}\) Id. at 181.

\(^{63}\) Id. at 179. As a license contract matter, the Court held it to be established that the right to license only a portion of the exclusive right to sell, such as the right to sell only in a geographic area, or only into one market, is a valid practice. Id. at 181. The question before the Court was whether or not this valid manufacturing license contract could become a servitude on the products produced under it. Id. at 177.

\(^{64}\) Id. at 180.
by the Supreme Court. The General Talking Pictures court held that because the defendant (and American Transformer Co.) knew that the licensee had no authority to make the tubes for that particular use in the first place, no valid sale ever occurred: "The Transformer Co. could not convey to petitioner what both knew it was not authorized to sell." That the label notice was not a basis for the decision was made clear by the Court. By not relying on the label, General Talking Pictures avoided declaring servitude creation valid, although that is the practical effect of the holding.

A field-of-use servitude was enforced at the district court level in 1965. In Chemagro Corp. v. Universal Chemical Co., the plaintiff was an exclusive licensee under a patent related to insecticide. Chemagro sold insecticide in both a 10% and 2% concentration; 10% for professional agriculture, 2% for the home gardener. They also placed a label on the 10% concentration stating that the license to use the 10% product was conditioned on not diluting it and reselling it into the home market. One defendant, The Ferti-Lome People, was in the business of selling home gardening products, including chemicals manufactured by the other defendants, Universal Chemical Co. The Ferti-Lome People sold 2% insecticide originally sold to the other defendants in the 10% concentration. The Chemagro court, relying on General Talking Pictures, upheld the use restriction, stating:

A patent owner or licensee thereof can, by a limited patent license in the form of a written label notice attached to a product made under the patent and sold in the ordinary channels of trade, place an enforceable restriction on the purchaser thereof as to the use to which the purchaser may put the product if said purchaser had actual notice of said limited patent license.

In its wholehearted support of servitudes, the Chemagro opinion contains no analysis of the Supreme Court language in the price fixing and tying cases discussed above.

Copyright owner's attempts at field-of-use servitude creation are rare, but one example is Waring v. WDAS Broadcasting Station.

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65. Id. at 183.
66. Id. at 181.
67. "[P]etitioner's second question, as to effect of the license notice, need not be considered." Id. at 182.
68. 244 F.Supp. 486 (E.D. Tex. 1965).
69. They were also granted the right to sue in their own name. Id. at 488.
70. Id. at 489.
71. Id. Although the facts and holding of the General Talking Pictures case are consistent with this statement, the language of the opinion expressly states that this conclusion was not reached. Chemagro takes the step that General Talking Pictures did not, and expressly relies on servitude creation. See supra note 67 and accompanying text.
72. The Mallinckrodt district court refused to follow this opinion, saying that "[g]iven both the lack of analysis in Chemagro and the policy reasons discussed before, Chemagro is not persuasive." Mallinckrodt, 15 U.S.P.Q.2d (BNA) at 1120.
73. 194 A. 631 (Pa. 1937).
In *Waring*, the plaintiff was the conductor of Fred Waring's Pennsylvanians, a successful orchestra that played mostly live performances, but that also had a contract to play for radio broadcast one night a week. When the orchestra began recording its music, the plaintiff, concerned about retaining the radio play market, arranged for the statement "Not licensed for radio broadcast" to be placed on the records. The defendant owned a radio station, had purchased a recording of the plaintiff's orchestra, and had also obtained a license to the copyrighted music from the American Society of Composers, Authors, and Publishers. After the defendant played the records on the radio, Waring sued for an injunction. Finding phonograph play and radio play to be "so radically distinct as to belong to two totally different fields of operation," the court enjoined further radio broadcast of the record.

**D. Duration Restriction Cases**

An attempted duration restriction was at issue in another case. In *Cotton Tie*, the American Cotton Tie Company sold metal ties for cotton bales. The ties were patented, and the buckle was stamped with the statement "Licensed to use once only." The ties needed to be cut when removed from cotton bales, and the defendant was in the business of buying scrap cut ties, straightening them, riveting them back together, and reselling them for additional use. American
Cotton Tie brought an infringement action, but the suit was dismissed by the circuit court on the ground that the attempted restriction to single-use was beyond the limits of the patent grant. The Supreme Court reversed, ruling that the defendant’s actions were an infringement. The Cotton Tie Court characterized the defendant’s actions as reconstruction rather than repair. “Whatever right the defendants could acquire to the use of the old buckle [on which was printed the restrictive notice], they acquired no right to combine it with a substantially new band, to make a cotton bale tie... [as] a tie the defendants reconstructed it, although they used the old buckle, without repairing that.” The court continued, “We do not decide that they are liable as infringers of either of the three patents, merely because they have sold the buckle considered apart from the band or from the entire structure as a tie.”

It is not clear whether the stamped restriction was any part of the grounds for the decision. Twenty-six years later the case was discussed in Straus, where the court concluded that the statement printed on the buckle was not part of the grounds for decision. More recently, the holding was discussed in Aro Mfg. v. Convertible Top Replacement Co., in which the Court stated that “the fact that the ties were marked ‘Licensed to use once only,’ was deemed of importance by the Court.” As in General Talking Pictures, the

80. 1 F. Cas. 623 (C.C.D.R.I., 1878)(No. 293).
81. Cotton Tie, 106 U.S. at 95.
82. The permissible repair doctrine states that the owner of a patented device may repair it, but may not rebuild it to the extent that it constitutes a reconstruction of the patented invention.
83. 106 U.S. at 93-94.
84. Id. at 95. This statement suggests that even though the buckle was stamped with a single-use restriction, it would not be an infringement to reuse it for a purpose other than baling cotton.
85. Discussion of the restriction printed on the buckle is limited to two sentences: “On each of the buckles which the corporation has made and put upon the market it has placed the words ‘Licensed to use once only,’ stamped into the body of the metal. This practice was also observed by its predecessor, the copartnership firm.” Id. at 91.
86. “That the case was not decided as one of restricted license, because of the words stamped on the buckle, is shown by the language of Mr. Justice Blatchford in concluding his opinion” Straus, 210 U.S. at 343.
88. Id. at 343 n.9. This ambiguity was an issue in Mallinckrodt as well. The district court judge concluded that:
Although footnote number nine in the Aro I opinion states that ‘the fact that the ties were marked ‘Licensed to use once only,’ was deemed of importance by the [Cotton Tie] court,’ (citation omitted), that footnote should not be leaned on too hard. Whatever the implication of footnote nine, the analysis in Cotton Tie rests little if any weight on the license notice. 15 U.S.P.Q.2d (BNA) at 1121. In reversing, the circuit court referenced the Aro Mfg. interpretation approvingly, citing footnote nine in its discussion of the Cotton Tie facts without further comment. Mallinckrodt, 976 F.2d at 707-08.
Cotton Tie Court managed to avoid relying on a label created servitude capable of binding subsequent purchasers with notice. Notwithstanding the uneven judicial treatment of the subject, sensible reasons can be found for enforcing some servitudes but not others. The real questions are whether courts can be expected to distinguish the good servitudes from the bad, and what new concerns will arise if a doctrine sympathetic to servitudes is created.

IV. The Case for a Doctrine Supportive of Servitudes

Some servitudes can be useful to the intellectual property system in ways that go beyond providing intellectual property owners with additional ways to exploit their grant. The following subparts discuss two types of restrictions — field-of-use and duration — which, if enforced by the courts as servitudes, would help to reduce the inefficiencies created by the granting of intellectual property rights.

A. Field-of-Use Restrictions

Field-of-use restrictions can be useful by increasing the availability of the patented or copyrighted product. This is demonstrated by an example of how the patent grant can lead to the underutilization of useful invention.89

Assume that a product incorporating patented invention costs $10 to manufacture, and over the life of the patent grant, the patentee can expect to sell 1000 units to users who value the product incorporating the invention at $50. Suppose also that there is a second use for the invention, again a potential market of 1000 units, but whose users value the product at only $15. The patentee will find it more profitable to sell 1000 units at $50 each to selling 2000 units at $15 each. In this case, the invention will not be purchased for its low value use. If the patent grant did not exist, competition between producers, each able to produce for the $10 manufacturing cost, would drive the price down until all users who value the invention more than $10 will buy and use it. The patent grant would restrict the distribution and use of this invention.

If the patentee can create use restricting servitudes on the patented products, production of the product would increase to what it would in a competitive market without patent monopolies. The most profitable situation for the patentee would be to sell 1000 units at

89. Although the discussion uses patented products for examples, the principles apply to copyrighted works as well.
$50 each and another 1000 units at $15 each. If the patentee can prevent resale from the low value market to the high value market at less than $50, this will be possible. One way to do this would be to sell use restricted products for $15 into the low value market, and unrestricted products into the high value market for $50. By making a use based price structure available, an enforceable servitude of this sort can increase, not decrease, the distribution and use of the invention.90

The servitude at issue in General Talking Pictures is of the field-of-use type. Western Electric had granted to a manufacturing licensee the right to make and sell for private radio reception use, retaining commercial sales for itself. Although the General Talking Pictures Court did not admit that Western Electric had successfully created a servitude,91 this type of market segmentation is the kind of servitude that, under the right conditions, will lead to wider distribution of the invention.92

90. The previous example is the simplest possible case of perfect market segmentation. General Talking Pictures Corp. v. Western Elec., 304 U.S. 175 (1938), aff'd on reh'g, 305 U.S. 124 (1938), and Chemagro Corp. v. Universal Chemical Co., 244 F. Supp. 486 (E.D. Tex. 1965), were similar attempts to discriminate between two largely separate markets. Under complete market segmentation, monopoly production equals competitive production. Where total segmentation of markets is not possible, an increase in production and use is not guaranteed to follow from a restriction that allows this type of price discrimination. The effect of a specific market segmentation will depend on the details of the individual demand curves of the markets being segmented. Baxter, supra note 5, at 367-70. Further, even perfect price discrimination might still result in higher total social costs because of inordinate investment in attaining and keeping monopolies. Posner, supra note 4, at 281-82. Even so, restrictions leading to use-based price discrimination have received considerable support. Martin J. Adelman & Friedrich K. Juenger, Patent-Antitrust: Patent Dynamics and Field-of-Use Licensing, 50 N.Y.U. L. Rev. 273, 303-04.

The form of the servitude can also alter its distributive effects. The servitude, "this article may not be used for high value use X," and its converse, "this article may only be used for low value use Y," are essentially identical if X and Y are the only uses for the product. The latter servitude, however, has some of the same drawbacks as resale price fixing. A servitude restricting use to only one specific type will prevent transfer of that item into a new or previously unforeseen higher value market.

91. 304 U.S. at 182, 305 U.S. at 125. A servitude was not created because servitudes, by definition, are effective even after a valid sale passing title of the item subject to the servitude. General Talking Pictures, by holding that the sale itself infringed the patents and consequently could not pass title to the defendant, manages to bind the defendant (a third party not involved in the restrictive license contract in any way) without creation of a servitude on the vacuum tubes. Justice Black's dissent points out the logical flaws in finding the sale itself an infringement. "Had petitioner - after making the purchase - decided not to use these amplifiers in the forbidden fields, or had they been destroyed prior to such use, certainly the mere state of mind of the parties at the time of sale would not have made them both infringers." 305 U.S. at 131. This problem would have been avoided had the majority grounded its decision on the theory that the restrictive license provision created a servitude on the patented article, enforceable against subsequent purchasers with notice.

92. It has been suggested, however, that the particular facts of the General Talking Pictures case lead to the conclusion that use-based price discrimination was not the effect of this particular servitude. Western Electric actually did not sell unrestricted
The servitude in Chemagro is similar to that in General Talking Pictures. The home-use and commercial-use discrimination is a worthwhile field restriction if commercial growers had more available alternatives to this particular insecticide, with the result that the patentee would be required to sell into this market at a lower price to compete. Without the possibility of creating a servitude, Chemagro Corp. might have decided to sell only 2% formulations at a high price into the home market, thereby depriving entirely the commercial market of a potentially useful product at a competitive price.

The Waring case has also been seen as an example of a desirable field-of-use restriction. As with General Talking Pictures and Chemagro, the resulting use-based price discrimination should increase the availability of the copyrighted work to lower value users.

B. Duration Restrictions

Field-of-use restrictions are not the only types of servitudes that can be justified with analysis of this sort. Duration restrictions can also be useful, but in a different way.

Assume, as above, that a patentee can produce a product incorporating the invention for $10 and sell the product for $50. Suppose further that the unit wears quickly, and after one use requires a $25 repair to use a second time. The buyer will prefer to spend $25 on the repair, rather than buy a second unit for $50. If the buyer does this, $15 more will be spent on the additional use than is required, because a new unit can be built for $10. The buyer is motivated to spend $25 on repair because $50 is a monopolistic price, created by the patent grant. In a competitive market, new units would be available for close to the $10 production cost, and buyers would buy new products instead of repairing used products. The extra $15 is an inefficiency; it is a social cost that can result from the existence of the patent grant. A single-use restriction imposed by the patentee can eliminate this problem. The buyer would be forced to pay $50 for a
new device, and the $15 waste of resources would be saved.\textsuperscript{94} In this situation, enforcement of a duration restriction will not curtail efficient use of the invention, but will increase it.\textsuperscript{95}

Although the Supreme Court did not rest its holding on these grounds, the \textit{Cotton Tie} outcome may be justified in this way. In \textit{Cotton Tie}, if straightening and riveting the ties back together was more costly than creating new ties from scratch, it is sensible to enforce the "Licensed to use once only" servitude.\textsuperscript{96}

The \textit{Mallinckrodt} single-use restriction can be seen as analogous to that in \textit{Cotton Tie}.\textsuperscript{97} Many recommendations, instructions, and use restrictions imposed by manufacturers of medical products involve health and safety concerns. With disposable products and accessories, there is a constantly shifting trade-off between product cost, sterilization cost, costs associated with increased infection or complications from reuse, and disposal costs of the resulting hazardous waste. Maximizing the difference between the benefits of the products and the costs associated with using them is made more difficult if the product is covered by patent protection, because the price of the product is artificially high and is not representative of the social inputs that went into producing it.\textsuperscript{98} This problem will be especially acute in the case of a valuable invention incorporated in a disposable device, because its high price would motivate buyers of the product to reuse it, even if that required accepting large sterilization costs, infection risk, and additional medical complications.

These considerations, as with those involved with expensive repair or refurbishing efforts, can support a policy of allowing a patent

\textsuperscript{94} The extra $25 the buyer would need to spend is not a cost in the same sense as the $15 difference between production and repair cost. This $25 is a transfer of wealth to the patentee, the transfer intended by the creation of the patent grant. See Posner, \textit{supra}, note 4, at 278. Note, however, that the transfer may still be a source of social costs, which may ultimately exceed the benefits. \textit{Id.} at 278-79.

\textsuperscript{95} It has been noted that it is "not clear how restrictions on use which effectively bar normal repair and reuse of reusable goods enhance output or maximize wealth for consumers". James B. Kobak Jr., \textit{Contracting Around Exhaustion: Some Thoughts About the CAFC's Mallinckrodt Decision}, 75 J. Pat. [\& Trademark] Off. Soc'y 550, 555 at Note 16, (July 1993). Although the effects of any specific servitude probably will not be clear, it is possible to demonstrate that benefits may exist.

Although duration restrictions could be beneficial in preventing wasteful repair expenditures, their enforcement could lead to decreased use of the invention because the effect of the restriction is to increase the cost to the buyer for each use. Some purchasers would then decide to purchase cheaper substitutes. Avoiding this would require coupling a field-of-use restriction on low price units, with a duration restriction on high price units.

\textsuperscript{96} Scrap ties, consisting of buckles and cut bands, were sold for 1½ cents per pound, new ties were sold at 6 cents per pound. \textit{Cotton Tie}, 106 U.S. at 92. Repairing used ties must have cost less than 4½ cents per pound, but the production cost of new ties is unknown.

\textsuperscript{97} Although Mallinckrodt also characterized its restriction as a field-of-use type "wherein the field of use is single (i.e. disposable) use." 976 F.2d at 703.

\textsuperscript{98} See Posner, \textit{supra} note 4, at 271-74.
owner to restrict a patented medical device to single use. If the nature of the use, price, and sterilization of the patented product are related in this way, then post-initial-use sale at a lower price raises the same concerns, and enforcement of such a restriction as a servitude can be justified.

V. Feasibility of Alternative Mechanisms for the Enforcement of "Inefficiency Minimizing" Servitudes

It is apparent that servitude creation and enforcement could be a useful tool for regulating and minimizing inefficiencies associated with patents and copyrights. It is also apparent that although some general conclusions can be drawn concerning what types of use limitations should be enforced as servitudes, the value of any particular servitude will depend on the details of its provisions and the particular market for the patented or copyrighted product. One might therefore suggest a servitude doctrine that only enforces servitudes minimizing inefficiencies associated with the intellectual property grant. The difficult question, though, is how to best implement this doctrine.

One alternative is for Congress to evaluate the economic effects of various servitudes and modify the patent and copyright statutes to indicate specifically what types of servitudes are allowable on what types of products.99 The copyright statutes already contain a framework for doing this. Section 106 of the Copyright Act enumerates

99. Mallinckrodt, for instance, would have been an easy case if there was a statute stating something like: "The use rights obtained by the purchaser of a patented nebulizer unit do not include the right to sterilize and re-use the unit if the nebulizer unit bears an inscription stating 'Single Use Only' and the purchaser is aware of the existence of the inscription at the time of purchase."
the copyright entitlements.\textsuperscript{100} Section 109 enumerates those entitlements that pass to the purchaser of a copyrighted work.\textsuperscript{101} If the copyright owner wishes to retain all of the statutorily granted rights, section 109(d) allows the copyright owner to structure the transfer as a lease or rental and avoid the forced transfer of the right to resell contained in section 109(a).

The explicit treatment of this issue, with different rights allocations for different types of copyrighted works, and with codification of the sale-vs.-license distinction, has apparently been universally interpreted to prohibit changing the default distribution of rights through contractual servitude creation. Since the passage of the 1976 Copyright Act, there have been no reported cases of copyright holders attempting to create servitudes with label notices of the type discussed in this Comment.\textsuperscript{102}

In contrast, the patent statutes grant rights only to patent holders, but do not state which of these rights pass to purchasers of patented

\textsuperscript{100} 17 U.S.C. § 106 reads: Subject to Sections 107 through 120, the owner of copyright under this title has the exclusive rights to do and to authorize any of the following:

(1) to reproduce the copyrighted work in copies or phonorecords;
(2) to prepare derivative works based upon the copyrighted work;
(3) to distribute copies or phonorecords of the copyrighted work to the public by sale or other transfer of ownership, or by rental, lease, or lending;
(4) in the case of literary, musical, dramatic, and choreographic works, pantomimes, and motion pictures and other audiovisual works, to perform the copyrighted work publicly.

\textsuperscript{101} Section 109 contains five subsections, (a) through (e), dealing with the transfer upon sale of the rights contained in sections 106(3), § 106(4), and 106(5). The rights contained in sections 106(1) and 106(2) are always retained by the copyright owner after the sale of the copyrighted work.

§ 109(a) grants to the purchaser of a copyrighted work the right to resell or "otherwise dispose of the possession of that copy."

§ 109(b) limits the application of § 109(a) by providing that the right to lease or lend a copy of a musical work or computer program for commercial gain does not pass to the purchasers of these particular works.

§ 109(c) grants to purchasers of the products described in § 106(5) the right to display the copy publicly.

§ 109(d) allows the copyright owner to retain all of the § 106 rights if the copy is rented or leased, rather than sold outright.


\textsuperscript{102} The only statutorily sanctioned method for retaining additional rights is to license or lease, rather than sell, the article. 17 U.S.C.A. § 109(d) (West 1977 & Supp. 1993). Notwithstanding the extra protection given by section 109(b)(1)(A), discussed infra note 106, the transfer of a copy of software is often structured as a license or lease, taking advantage of section 109(d) to avoid the first sale doctrine. \textit{See generally} Penelope Smith Wilson & Ronald E. Myrick, \textit{Licensing Rights to Software}, \textit{PATENTS, COPYRIGHTS, TRADEMARKS, & LITERARY PROPERTY COURSE HANDBOOK SERIES}, Mar.-Apr. 1993, at 467.

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products. Rights granted to patent holders are enumerated in 35 U.S.C. § 154, which grants to an inventor the exclusive right to "make, use, and sell" the invention.\textsuperscript{103} 35 U.S.C. § 261 allows the patent owner to assign or convey these rights to others for use in "the whole or any specified part of the United States".\textsuperscript{104} The patent statutes contain no analog to 17 U.S.C. §§ 106 and 109, with their specific treatment of retained and transferred rights upon the sale of a copyrighted article. The sale-vs.-license distinction is not explicitly present in the patent statutory framework, but had been read into it by the courts.\textsuperscript{105}

It would certainly be possible for Congress to sanction specific types of servitudes and their permissible methods of creation.\textsuperscript{106} Unfortunately, although perhaps easier to do with copyright than patent, the detail and scope of statutory material required to implement a comprehensive solution to the servitude problem makes it clear that the patent and copyright statutes will never contain laundry lists of products and associated acceptable or unacceptable restrictions.

Another alternative is to create simplifying presumptions. On the one hand, patent law could, like copyright, prohibit servitudes entirely. This approach has the virtue of simplicity, but eliminates the possibility of using servitudes to mitigate market distortions created by intellectual property grants. On the other hand, all servitudes could be enforced, regardless of substantive content. This approach is also simple, but would allow patent and copyright owners to enforce restrictions that have already been found to be opposed to other important principles, such as the antitrust concerns associated with resale price restrictions. It has been argued that \textit{Mallinckrodt}
is leading patent law in this direction.107

As a final alternative, then, it might seem that the middle path of a servitude doctrine that only enforces servitudes that minimize inefficiencies could be established judicially. Unfortunately, this rule would require case-by-case litigation over production costs, demand curves, etc., that could seldom produce a complete and accurate factual basis to support any reliable conclusion. In addition, it would provide little guidance to intellectual property owners deciding what servitudes they may impose in their particular situation.

Fortunately, all is not lost. The establishment of a legal regime which presumes that single-use restrictions minimize inefficiencies leads to the correct result. Assume that a patented product can be produced for $10, can be used a total of ten times before wearing out completely, with each use requiring a $20 repair, and with each use valued at $40 by purchasers.

A purchaser will be willing to spend $40 each for single-use-restricted units. Furthermore, taking the cost of repair into account, a purchaser would be willing to spend $220 on an unrestricted unit, because the total cost of ten uses would be the $220 purchase price, plus $180 repair cost, for a total of $400. The patentee will clearly prefer selling ten use-restricted units for $40 each, netting $300, than one unrestricted unit for $220, netting $210.

In contrast, if the production cost is $20 and the repair cost is $10, the purchaser will still be willing to spend $40 each for single-use-restricted units, but will now be willing to spend $310 on an unrestricted unit. In this case, the patentee will find it more profitable to sell an unrestricted unit for $310, netting $290, rather than ten use-restricted units, netting $200.108

107. "Thus, the end result of Mallinckrodt, if its broadest language is taken to its logical conclusion, would be not only to limit the misuse doctrine but virtually to eliminate any application of either that doctrine or antitrust principles to resale and reuse restrictions on patented goods." Kobak, supra note 95 at 561-62. Kobak also worries that "Mallinckrodt will almost surely encourage patentees to impose reuse restrictions, for through such restrictions patentees may accomplish even more than they could through tying restrictions. By preventing any right to reuse, a patentee can require that all ancillary items, and even an entire new unit, be purchased from it." Id. at 564. At the time of this writing, one district court refused to extend the Mallinckrodt holding in this way. Surgical Laser Technologies v. Surgical Laser Products, 1993 WL 23899 (E.D. Pa. 1993). This case involved a single-use restriction on an unpatented accessory to a patented medical laser.

108. It could correctly be argued that the sale-vs.-license distinction prevalent in copyright law leads to exactly the same result. The patentee will weigh the same concerns when deciding whether to license or lease (or perhaps rent) the invention to users, with a single-use restriction as part of the contract, or simply sell it outright. The servitude approach has advantages, however, because it does not require the user of the product to be under contract with the patentee, with all of the attendant transaction costs.
If the parties to a sale know that the legal regime enforces duration restrictions, patentees will only be motivated to create restrictions that prevent wasteful repair. A court need not analyze the details of the production and repair costs of each duration restriction that comes before it. This observation sheds some light on what may be the most fruitful method of developing a servitude doctrine.

VI. PATENT SERVITUDE LITIGATION AFTER MALLINCKRODT

After Mallinckrodt, patent servitude litigation can be expected over two points for which there is no guidance in precedent. The first is whether the restriction is "within the scope of the patent grant or otherwise justified." The second is whether the purchaser had sufficient notice of the restriction. The language of the court indicates that it expects the first requirement to be construed broadly, allowing a wide range of contractual arrangements to create servitudes. This may be a fundamentally sound position, because it can be expected that a wide range of servitudes will be useful in minimizing monopoly created inefficiency. Furthermore, if the doctrine's limitations are developed by tight regulation of what constitutes "notice," courts can take advantage of the market's apparent tendency to create servitudes that reduce monopoly motivated wastes of resources.

The notice requirements to be developed are important because it is only when the patentee, the initial purchaser, and subsequent purchasers all have knowledge of the restriction and bargain over its presence that the market will be effective in regulating what servitudes are created. To help accomplish this, the purchaser should

109. See supra note 19.
110. See supra notes 15-18 and accompanying discussion.
111. The circuit court in Mallinckrodt defined "within the scope of the patent grant" as "relating to subject matter within the scope of the patent claims." 976 F.2d at 708. A narrow reading of this requirement must not be intended because the district court pointed out that "[n]either 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. Neither do they claim that either the manifold or the nebulizer are clean or disinfected." 15 U.S.P.Q. 2d (BNA) at 1114. Since duration restriction enforcement will tend to prevent wasteful repair, it is sensible to consider these types of restrictions as being "within the scope of the patent grant."
112. Perhaps servitudes "within the patent grant or otherwise justified" should be interpreted as meaning those servitudes which market forces tend to create only when they reduce waste or inefficiency associated with the patent monopoly. Duration restrictions apparently have this character, but it may not be true of other types.
113. The sufficiency of notice was not addressed by the Mallinckrodt court, but was to be determined on remand. As the case was settled soon after the circuit decision
be required to have notice of both the restriction, and of the patentee's intention to enforce the restriction with infringement actions. Also, the user should have notice of specifically defined prohibited uses. Servitudes that attempt to reserve the right to declare at a future date what uses are prohibited should not be enforced. The restriction should be shown to have been part of the bargain in the purchase of the device, whether the purchaser is the original purchaser from the patentee or a subsequent purchaser.\footnote{Kobak, supra note 95 at 554.}

With Mallinckrodt, the Federal Circuit has started down an uncertain path. Whether or not the benefits of avoiding some types of monopoly-motivated waste will be worth the judicial effort to create a servitude doctrine largely from scratch remains to be seen.

**CONCLUSION**

Intellectual property grants, though creating incentives for innovative activity, also create incentives for inefficient behavior. The monopoly price will motivate some potential users of the invention to prefer more costly, but lower price, substitutes. In addition, the monopoly price can motivate users to incur socially wasteful costs associated with prolonging the useful life of a product incorporating the invention. These costs may involve direct expenditures to repair or refurbish the item, or they may be indirect costs, such as injuries, associated with extended use. Construing the intellectual property grant to include the ability to create servitudes on products incorporating the invention can reduce the costs that are associated with the patent and copyright monopolies, although a doctrine sympathetic to servitude creation requires investigation into how to decide what servitudes are appropriate and when to consider a purchaser as having sufficient notice of the restriction.

Now that the Federal Circuit has taken such a step in the patent arena, and indicated little limitation on restrictions it will consider appropriate for servitude status, the requirements for notice should be crafted to ensure that the restriction imposed is clearly part of the sale bargain. This will prevent unjust surprise on the part of purchasers, and also limit post sale determinations by patentees of what constitutes simply instructions or suggestions for use, and what use came down, this issue remains undecided. Kobak, supra note 95 at 554.\footnote{Kobak, supra note 95 at 554.}

\footnote{Being part of a sale bargain is not intended to be synonymous with being part of a sale contract. As indicated supra, in note 108, servitudes have advantages over leases and licenses only to the extent that the intellectual property owner is relieved from the need to bind all future users of the item by contract.}
rights are intended to be retained as property rights, enforceable through infringement actions.

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