PROPERTY, APPROPRIABILITY AND THE FIRST SALE DOCTRINE

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INTRODUCTION

Should sellers of goods be able to control them or restrict their use down the commerce stream as part of their initial property interest? The question of property-type post sale restrictions (“PSR”), or servitudes, has been the subject of many common law doctrines, but of surprisingly little analysis, in academia or elsewhere. This paper attempts to change that situation, focusing on servitudes on intellectual-property-based goods.

Courts have recognized servitudes on land for several centuries, in several guises and subject to a multiplicity of different restrictions. Servitudes on other types of assets, by contrast, have generally been rejected by courts. Servitudes on chattels have long been considered anticompetitive and unduly restrictive, thus contrary to public policy. Servitudes on IP-related products have similarly been rejected, albeit under a unique doctrine - the first sale doctrine. Also known as the exhaustion doctrine, the first sale doctrine is a court-developed IP doctrine that was developed by the Supreme Court late in the 19th century. Pursuant to the doctrine, once a product manufactured under a patent or copyright was sold to another, the seller would no longer have an IP-related right to restrict further resale (in the case of both patent and copyright) or use (in the case of patent rights only) of that specific product; the seller’s IP rights were thus “exhausted” with the first sale. The doctrine was well settled precedent in the copyright field by 1908; it became part of statutory copyright law by 1909, and a well settled facet of patent law by 1913 at the latest.

The first sale doctrine was often perceived by courts and commentators as an application

2 The issue of use was never raised in the context of copyright because the right to use the copyrighted work was never one of the exclusive enumerated rights under copyright. Therefore, traditional copyright jurisprudence considered any restriction on use (other than restrictions against specific uses such as broadcast etc. that are expressly allowed under the Copyright Act) to be outside the scope of the copyright grant.
4 1909 Copyright Act §41, 35 Stat at 1084.
of the common law’s overall hostility against post-sale-restrictions on chattels, whether contractual or in property, due to their perceived anticompetitive effect. However, since the 1950’s, economic analyses of vertical restraints, including PSRs, suggested that such restraints raise few antitrust concerns. This line of thinking was slowly but surely adopted by the courts, as part of modern antitrust jurisprudence, to the point that nowadays courts tend to be skeptical of allegations of anticompetitive effects of vertical restraints, including PSRs, demanding clear economic proof of such effects.6 This change in the economic – and, subsequently, legal - assessment of vertical restraints suggested to many that the first sale doctrine is based on shaky foundations, and the doctrine was eroded in the courts. In the copyright field, software manufacturers evaded the doctrine altogether by arguing that the first sale doctrine does not apply to software distribution, because software is ‘licensed’ rather than sold to end users7. In the patent field, the Federal Circuit all but abolished the doctrine, allowing patent-related PSRs to be enforced as a matter of patent law (as well as contract law, at the election of the seller), subject only to some form of rule-of-reason antitrust analysis in cases where courts find that a PSR has “anticompetitive effects extending beyond the patentee’s statutory right to exclude.”8

In academia, the legal doctrine regarding servitudes on chattels (and IP-based goods) was subject to two major reviews, in 1928 and 1956, by Zacharia Chaffee.9 Chaffee’s account, however, was by and large descriptive, offering an overview of then prevailing attitudes in the courts, and little by way of analysis, justification or critique thereof. In 2004 Glen O. Robinson entered this relative vacuum of analysis with a comprehensive paper examining the history and desirability of servitudes on chattels and IP-based goods. Robinson launched a direct attack on the common law’s traditional approach, suggesting that both the prohibition on servitudes on chattels and the first sale doctrine should be abolished altogether,10 as remnants of a now-defunct view of restraints on trade that runs contrary to the nature of property rights.

In a nutshell, Robinson advanced three arguments: First, that property type PSRs are a

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6 Currently, only vertical price fixing is still considered illegal per se under U.S. antitrust law; all other types of contractual PSRs are considered under varying rule of reason analyses.
9 Zachariah Chaffee, Jr., “Equitable Servitudes on Chattels”, 41 Harv. L.Rev. 945 (1928); Zacharia Chaffee, “The Music Goes Round and Round: Equitable Servitudes and Chattels”, 69 Harv. L.Rev. 1250 (1956). Servitudes on land have attracted more analysis, some of which will be discussed in further detail infra.
“normal incident of property ownership”, i.e. that they are part of the baseline notion of property rights, and that any differences between land (where servitudes are generally allowed) and chattels or intellectual property (where historically they have not been allowed) are “largely irrelevant to the question of servitude restrictions.” Second, that the common law’s general hostility towards PSRs, and the first sale doctrine as one of its manifestations, were based on misguided notions about the competitive impact of servitudes; According to Robinson, PSRs, whether contractual or property-based, have no clear anticompetitive effect, and a rule restricting them is therefore unjustified. And third, Robinson argued that the question of servitudes should be determined by market forces rather than legal rules, subject only to general antitrust rules.

This paper challenges each of Robinson’s arguments in turn, while focusing the analysis on the first sale doctrine. In short, I argue that the first sale doctrine was developed, and is best viewed, as a bright-line rule demarcating the boundary of IP rights and reflecting core IP rationales. As such, I argue, the doctrine has much to commend it.

In Parts I and II of this paper I lay forth a comprehensive theory about the baseline notion of property rights and property ownership. Focusing on property as a mechanism aimed at ensuring appropriability, I offer a framework for determining the scope of property rights and for distinguishing between the law of property and the law of contracts through a “division of labor” between the two. Using this framework, I demonstrate why property-type servitudes on chattels and IP would generally be unjustified, whereas servitudes on land would generally be justified.

Part III examines the history of the first sale doctrine, suggesting that the doctrine was not developed as a reflection of anticompetitive concerns (whether justified or unjustified), but rather as a property-based rule which reflects the notion of appropriability. As such, the doctrine is a justified attempt at demarcating a boundary rule that delineates the scope of IP rights. Part IV completes this historical overview by examining where and why recent first-sale decisions have gone astray in their analysis of the doctrine.

Finally, Part V examines the likely effects of IP-based servitudes. In this part I offer a more nuanced view of the interaction between the first sale doctrine and antitrust law than that

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11 Id., at 1522-1523.
offered by Robinson. The problem with property type servitudes, I argue, is not that they are necessarily anticompetitive; rather, the problem is that when they are anticompetitive, they require courts to balance antitrust concerns with IP concerns - a balancing exercise that courts are usually not able to perform in a satisfactory manner. Because servitudes on IP-based products are not clearly pro-competitive or conducive to increased innovation, they have no clear countervailing value that would balance that cost. The first sale doctrine, eliminating many such balancing exercised, would therefore likely be more efficient than a rule that leaves the question of servitudes in the hand of the market.

PART I: ON APPROPRIABILITY AND PROPERTY RIGHTS

A. Appropriability and Private Property – The Basics

In economic terms, property rights are usually considered necessary to incentivize efficient use of scarce resources.12 Their incentivizing mechanism works by aligning usage of resources with its resulting costs and benefits; they ensure that users of resources will both enjoy (i.e. appropriate) as large a share as possible of the benefits from that use, and bear as much as possible of the costs that are associated with it. They thus prevent over-use or under-use of resources by bringing such cost and benefits to bear on the decision making processes in the market. In other words, property rights help internalize externalities, which exist where benefits associated with the efficient use of a resource – or costs associated with the inefficient use

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12 Harold Demsetz, Toward a Theory of Property Rights, 57 Am. Econ. Rev. 347 (1967); Richard Posner, ECONOMIC ANALYSIS OF THE LAW (6th Ed., 2003) 32. This statement is, of course, an oversimplification of the reasons for, and justifications of, property rights. The debate over the viability and exclusivity of economic justifications for property rights generally, and for private property regimes specifically, goes well beyond the scope of this paper. For prime examples of the contrasting positions, see Jeremy Waldron, THE RIGHT TO PRIVATE PROPERTY (1988) (arguing for a right-based justification for private property regimes under a Hegelian approach); Frank I. Michelman, Ethics, Economics, and the Law of Property, in Nomos XXIV: Ethics, Economics, and the Law, 3 (J. Rolan Pennock and John W. Chapmn, eds., 1982)arguing that “not even a presumptive preference for the rudiments of private property… is obtainable by economic reason…”); Harold Demsetz’s reply, Professor Michelman’s Unnecessary and Futile Search for the Philosopher’s Touchstone, in Nomos XXIV: Ethics, Economics, and the Law, 41, 45 (J. Rolan Pennock and John W Chapmn, eds., 1982)arguing that “Private property allows the market to weigh and compare the beneficial and harmful effects… and to filter out actions that would yield a net loss”); Andrei Shleifer, State versus Private Ownership, 12 J. Econ. Persp., Iss. 4, 133 (1998) (advocating the benefits of private property over state ownership from an economic perspective); Michael Heller, The Tragedy of the Anticommons: Property in Transition Marx to Markets, 111 Harv. L. Rev. 621 (1998) (warning against the possibility of under-use of resources due to fragmentation of rights in scarce resources under private property regimes). At least as a matter of positive law, under U.S. law IP rights have to be justified in welfare terms, since Congress’ power to grant exclusive rights in “writings and discoveries” may be used for only one purpose: “To promote the Progress of Science and useful Arts”. U.S. Const. art. I, §8, cl. 8.
thereof – are not captured (or borne) by the actual user of the resource, but by neighbors, strangers or the public at large. Externalities therefore distort the cost-benefit analysis of the actual user regarding the efficient level of usage.\textsuperscript{13}

Under-usage, as opposed to over usage\textsuperscript{14}, can usually be explained in terms of an appropriability problem. Consider, for example, the case of a farmer who puts time and money into raising cattle. The farmer seeks out the best grazing grounds, breeds the best possible cattle and erects fences to fend off predators that threaten her herd. However, the farmer finds that her cows are taken away by her neighbors before she can either market them or use them herself. Absent property rights, this would not be ‘stealing’, and the farmer would have no legal redress. Under these circumstances, and assuming such poaching activity was recurring, the farmer would likely cease raising cattle altogether, regardless of the fact that the milk and meat she produced is far more valuable than her investment in producing them. Instead, the farmer would probably channel her resources to some other, less efficient use, such as growing a crop which is less susceptible to poaching. An efficient use of resources (land, expert labor etc.) would thus be hindered due to an appropriability problem.

Private property regimes seek to prevent such under-usage of resources by granting to potential users some approximation of “that sole and despotic dominion which one man claims and exercises over the external things of the world, in total exclusion of the right of any other individual in the universe”\textsuperscript{15}. Under private property regimes, resources are parcelled out and

\textsuperscript{13}Demsetz, Towards a Theory of Property Rights, supra note 12, at 348. I use the term externalities in the limited sense just mentioned, i.e. in reference to relevant considerations that are external to the decision making process, regardless of any judgment as to who should ultimately bear such costs or enjoy such benefits. A spill-over of benefits is referred to as “positive externalities”; a spill-over of costs is referred to as “negative externalities”\textsuperscript{14}.

\textsuperscript{14}Over-usage is usually attributed to “tragedy of the commons” situations, where joined users of scarce resources bear the costs associated with their use jointly, but enjoy the benefits of their use individually, thereby “[e]ach man is locked into a system that compels him to increase his usage of the joint resource] without limit – in a world that is limited. Ruin is the destination toward which all men rush, each pursuing his own best interest”; Garrett Hardin, The Tragedy of the Commons, 162 Science 1243, 1244 (1968). See also Demsetz, Towards a Theory of Property Rights, supra note 12, at 351-353 (offering an externalities-type explanation for the emergence of private property regimes that superseded common-ownership of hunting grounds in certain Native-American communities).

\textsuperscript{15}2 William Blackstone, Commentaries on the Laws of England, at *2. The notion of absolute exclusive powers vested in the owner of property is obviously false, nor was it ever considered completely true - even by Blackstone himself; see Carol M. Rose, Canons of Property Talk, Or, Blackstone’s Anxiety, 108 Yale L. J. 601 (1998)(noting that “the famous definition was only a point of departure”, from which the notion of property as exclusive dominion was discussed, deconstructed and attenuated). Recent commentators offered more refined definitions. See, for example, Waldron, supra note 12, at 39 (defining a private property system as on in which “The owner of a resource is simply the individual whose determination as to the use of the resource is taken as final”); Yoram Barzel, ECONOMIC ANALYSIS OF PROPERTY RIGHTS 2 (1989) (offering an economic perspective, according to which “Property rights of individuals over assets consist of the rights, or the powers, to consume, obtain income from, and alienate these assets”); Michelman, supra note 12, at 5 (arguing that property rights must at the very least “allow that at least some objects of utility or desire can be fully owned by just one person”, and that full ownership would ensure “complete and exclusive rights and privileges” over that object, as well as the power to transfer it to another). However these differ, they still heavily rely
allocated to individual owners, and legal barriers are erected between the parcels, ensuring that owners have exclusive access to the benefits flowing from their assets – in other words, the appropriability of these assets.\footnote{It should be noted that the erection of legal barriers is itself costly. Therefore, private property regimes never ensure appropriability of all the benefits that flow from an asset. Consider, for example, the benefits flowing from the erection of a house which is an architectural masterpiece. While the owner of the house would derive most of the benefits flowing from it, some residual benefits may be enjoyed by passers-by, as well as by adjacent property owners. Nevertheless, legal systems would generally not allow the owner to charge money from passers-by, nor from adjacent owners, on the reasonable assumption that a legal rule which would require everyone to pay for their relative enjoyment of every architectural piece would be prohibitively expensive to administer. The legal regime would, however, allow the property owner to erect a fence around her house, and then charge passers-by who would like to enter the property to enjoy the sights. Thus, the expected under-investment in architecture would be limited to the lower of two factors: benefit to passers by, or cost of erecting a physical barrier.} When resources are parceled in this way, owners have a clear incentive to maximize the benefits that flow from them, because they stand to enjoy those increased benefit themselves. Going back to our example, our hypothetical farmer would be willing to put considerable investment into her privately owned cattle ranch. This is exactly where appropriability comes into play: under a private property regime, the farmer would be able to appropriate the milk and/or meat that she produces, and therefore – as long as she expects their value to be higher than the value of her investment – she would invest in raising cattle. Thus, once appropriability is ensured, the farmer would not put her assets to alternative uses, unless she expects these uses to reduce costs or increase revenues; in the absence of negative externalities – which would generally have to be dealt with by other mechanisms\footnote{Some negative externalities – most notably, those that have an adverse effect on neighboring, privately-held property - are dealt with by several tort law doctrines, such as trespass and nuisance. Others – especially those that affect resources that are held in common – are dealt with through governmental regulation, in the form of environmental laws, zoning laws etc.} - this would be the case only if the alternative uses are more \textit{efficient}. Similarly, inefficient transfers of resources would be prevented, because the farmer would not transfer her assets for a price that is lower than the present value of the expected return on her investment. This price would necessarily be higher than the price that a less-efficient user of the assets would be willing to pay (again – assuming the absence of negative externalities). Appropriability thus ensures internalization, and through it incentivizes the efficient use of resources.

While this idea will be further developed later, it should already be noted that the preceding overview demonstrated both what appropriability is and – just as important for the purposes of this paper – what it is not. The appropriability problem revolves around the ability
of investors to reap the rewards of their investment without it being taken by others who have not invested; it is safety from ‘poaching’ that is central to the problem. By contrast, the appropriability problem has very little to do with the type of use that an owner can make of her assets; appropriability is geared towards the appropriation of benefits that flow from any use, regardless of its nature. Appropriability thus solves only one side of the externalities conundrum: it internalizes only positive externalities. To the extent that certain inefficient uses of resources create negative externalities (which would result in over-usage of the resources involved), these would have to be internalized in other ways.

B. Appropriability and Intangible Property

As my reference to Blackstone suggests, the forgoing analysis is far from novel. Appropriability was recognized as a rationale for private property rights for centuries, at least since the days of Blackstone, Hume and Bentham.18 Nevertheless, in recent years, appropriability has attracted relatively little attention in the analysis of property, for three interrelated reasons. First, and rather prosaically, is the unremarkable nature of the appropriability analysis; it lacks the novelty which attracts commentators. A second, interconnected reason, which will be dealt with in more depth in the following sections, is a post-Causan shift in the focus of economic analysis of property rights that is described – and criticized - in length by Thomas Merrill and Henry Smith.19 In a nutshell, Merrill and Smith argue that this shift is characterized by a move away from the understanding

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18 Thus, older accounts of property give a much more central role to the notion of appropriability. See, for example, Bentham’s account of property as a basis of expectations:

Law does not say to man, Labor, and I will reward you; but it says: Labor, and I will assure to you the enjoyment of the fruits of your labor… I will insure it by arresting the hand which may seek to ravish it from you…

The idea of property consists in an established expectation; in the persuasion of being able to draw such or such an advantage from the thing possessed… It is only through the protection of law that I am able to inclose a field, and to give myself up to its cultivation with the sure though distant hope of harvest.


19 The best analysis of this trend may be found in Thomas W. Merrill & Henry E. Smith, "What Happened to Property in Law and Economics", 111 Yale L.J. 357 (2001). See also Carol M. Rose, "The Shadow of the Cathedral", 106 Yale L.J. 2175, 2188; Michael A. Heller, "The Boundaries of Private Property", 108 Yale L.J. 1163, 1193-1194 (1999)(suggesting, however, that the legal-realist’s “bundle of rights” metaphor, which received such a boost by the Coasean analysis, is “losing its place in legal theory”).
of property rights as rights in things that are good against the world, and towards an understanding of property rights as a bundle of personal, contract-like use-rights, that are paradigmatically examined in the context of the relations between two parties. This view of property, as Merrill and Smith note, focuses on the role of property as a baseline for contractual transactions. Absent transaction costs, the initial allocation of these rights is therefore immaterial, because it can be easily readjusted by the parties. Where transaction costs are present, the initial allocation should be an authoritative replication of would-be contractual exchanges, in an attempt to minimize the need for adjustments. Either way, the analysis of these rights does not revolve around, and is not driven by, an imminent threat of misappropriation from the world at large, which is the basis for the appropriability problem.\(^{20}\)

A third related reason has to do with the paradigmatic subject matter of property analysis: tangible goods, and most specifically – real-property. In these contexts, the appropriability “problem” is relatively modest. Where tangible goods are concerned, the famous adage holds true: possession really is nine-tenths of the law. The legal barriers that property law erects around tangible goods are usually either a mere reflection of physical barriers that exist regardless of the legal regime, or amenable to replication by such real-world barriers.\(^{21}\) These physical barriers enable anyone with possession of an asset to exercise considerable control over it, including control over its use and any benefits that flow from it. Exclusivity of access to physical objects can be attained by physical force, even where no property regime is in place; our hypothetical farmer could fight potential cattle poachers with fences, guards and other physical means of protection, even if she had no recognized legal right to the meat and milk that she produces. The main contribution of private property regimes (in the context of tangible property) is thus not in achieving appropriability, but in reducing the costs associated with forceful protection of one’s endeavors, as well as in developing the remaining one-tenth of the law, namely separation of ownership from possession.\(^{22}\)

\(^{20}\) Merrill and Smith suggest that the reason for this trend is that the problem of social order, by and large, had been solved by the time the law and economics movement emerged, and thus commentators were more interested in more novel problems, such as the maximization of welfare once order had been achieved; \textit{id.}, at 398.

\(^{21}\) See Bruce A. Ackerman, \textit{Private Property and the Constitution}, 98-100 (1977).

\(^{22}\) This may very well be yet another explanation to the trend described by Merrill and Smith: in the realm of real property, the question of A keeping B out of Blackacre is simply not very interesting.
By contrast, the role of private property rights in the context of intangible goods – information – is much more meaningful. Intangible goods typically possess all the characteristics of “public goods” - goods that are not excludable by physical means (at least not at a reasonable cost) and are non-rivalrous, i.e. do not diminish through consumption.\(^{23}\) The combination of these two characteristics creates severe appropriability problems. Non-excludability directly hinders appropriability, because it allows – indeed, incentivizes – uncompensated use of the fruits of the efforts of developers of information, which is tantamount to ‘poaching’ of the revenues that flow from such efforts. In the context of technological ideas, many uses (though not all) will disclose such ideas to individuals who have not paid for them.\(^{24}\) The disclosure will allow these individuals to use the ideas for their own benefit, in direct competition with the ideas’ originator. In the context of expression that is affixed in tangible form, most distribution of copies will enable distributees to create further copies, usually at a fraction of the price of developing the underlying expression.\(^{25}\) In both cases, copiers\(^ {26}\) will enjoy a competitive advantage over the originator of the information, because they do not incur the sunk costs associated with developing the information in the first place. Thus, while originators have to charge a price that is higher than their marginal cost of production (in most cases – substantially higher) in order to recoup their investment, copiers make an overall profit even when selling at the marginal cost of production.


\(^{24}\) There are a number of fields where information can be used commercially without being disclosed or exposed to the public. The quintessential example for such use is that of the Coca-Cola Company’s secret formula, which has been used for well over a century in the mass production of company’s beverages. Clearly, where information can be used while its secrecy is maintained, its originator does not face the appropriability problem discussed in this paper, and therefore does not require – and usually will not seek – statutory IP rights (which require disclosure and are limited in time). Furthermore, even when use of information does expose it to potential free riders, originators would still be able to appropriate much of the sales of the information, due to the competitive advantage they would enjoy over free riders in terms of lead time to market. These advantages would be particularly substantial – and, as a result, would ensure considerable appropriability - in industries characterized by slow learning curves, strong brand recognition, network effects or short turnaround time. Unlike the case of secrecy, originators in these industries may still seek IP-type protection to supplement their competitive advantage in the market and bolster the appropriability of their innovation. For data about the preference of specific industries for one form of protection or another see Richard C. Levin, Alvin K. Klevorick, Richard R. Nelson & Sidney G. Winter, *Appropriating the Returns from Industrial Research and Development*, 1987 Brookings Papers on Econ. Activity 783.

\(^{25}\) This problem is most acute – and its analysis most straightforward – in connection with mass-produced works, whose ‘origin’ is of no consequence; books, movies, recorded music, software etc. By contrast, unique works of visual art introduce a new wrinkle into the analysis, because copies usually have no effect over the appropriability of the original works (assuming they are not presented as originals); they do, however, prevent the originator from appropriating derivative works. It should further be noted that non-excludability is not only a legal and economic problem, but many times also a technological problem. Thus, in some instances, technological ‘fences’ can be erected around intangible assets, which may be enforced through property regimes. See, for example, Lawrence Lessig, *Intellectual Property and Code*, 11 St. John’s J. Legal Comment. 635, 636-637 (1996) (discussing the ‘zoning’ of cyberspace); 17 U.S.C. §1201 (prohibiting the circumvention of technological measures that control access to copyrighted works).

\(^{26}\) Hereinafter I shall refer to ‘copiers’ as the users of information developed by another, regardless of whether such use implicated an actual ‘copying’ of a tangible object.
Non-rivalry in consumption further exacerbates the appropriability problem. Non-rivalry enables fast dispersion of information; even if the initial number of copiers is minimal, each can use and re-use, i.e. copy and re-copy the information perpetually. Information therefore tends to be exposed in ever increasing circles, to an ever-increasing number of potential free riders, each one joining – rather than replacing – existing copiers.

Modern day law and economics scholars are by no means the first to recognize these typical characteristics of intangible goods, nor the severe appropriability problem that they create. In an oft quoted passage, Thomas Jefferson articulated these notions as early as 1813:

“If nature has made any one thing less susceptible than all others of exclusive property, it is the action of the thinking power called an idea, which an individual may exclusively possess as long as he keeps it to himself; but the moment it is divulged, it forces itself into the possession of every one, and the receiver cannot dispossess himself of it. Its peculiar character, too, is that no one possesses the less, because every other possesses the whole of it. He who receives an idea from me, receives instruction himself without lessening mine; as he who lights his taper at mine, receives light without darkening me. That ideas should freely spread from one to another over the globe, for the moral and mutual instruction of man, and improvement of his condition, seems to have been peculiarly and benevolently designed by nature, when she made them, like fire, expansible over all space, without lessening their density in any point, and like the air in which we breathe, move, and have our physical being, incapable of confinement or exclusive appropriation.”

It is therefore not surprising that the appropriability problem has taken a much more important role in the analyses of IP rights than in the analyses of property rights in general. In fact, some form of the appropriability problem has been traditionally recognized as the very cornerstone of IP regimes; with few exceptions, it is considered by commentators and courts alike to be the *raison d’etre* for the creation of IP regimes in the first place.
C. The Meaning and Role of Appropriability in Property

1. Two Kinds of Appropriability

As previously noted, private property regimes seek to solve the appropriability problem by granting owners some rough approximation of a ‘sole and despotic domain’ over their assets, in the form of private property rights. The scope of that sole dominion is ultimately determined by the type and extent of legal protection given by the state to the owners’ property rights. To understand the role of appropriability in this framework, we must understand the kind of protection that owners require specifically to ensure appropriability. In order to avoid definitional confusion, however, we must begin by distinguishing two closely-related definitions of appropriability.

In economic parlance, appropriability often refers to the ability of owners to derive (i.e. appropriate) revenues – in any way whatsoever - from an asset; I shall refer to this notion as ‘economic appropriability’. I mention this notion mainly as a caveat: Economic appropriability has very little to do with the appropriability problem discussed earlier, and is not a meaningful concept in determining the optimal scope of property rights, for a number of reasons. Most notably, economic appropriability is a completely open ended concept. If what we seek is to maximize the value of assets to their owners, than obviously – with regards to owners’ rights - ‘more is better’; an owner who has an absolute right to exclude, use and transact in her assets would unquestionably derive more revenues from them than an owner whose rights were subject to restrictions. However, 'more is better' is a poor guiding principle, because absolute rights to

29 Whether these rights are creations of the legal regimes – i.e. of the state -- or are natural rights that are merely protected by the state is a debate which goes beyond the scope of this paper.

30 It should be noted that the appropriability problem does not – in and of itself – suggest that private property rights are better than competing mechanisms, operating under competing property regimes, at incentivizing efficient exploitation of resources. In fact, any of the traditional “holy trinity” of property regimes – state, common, private - could provide some sort of mechanism that would ensure return on certain investments. Whether appropriability – a private property, market-driven mechanism – is the best possible mechanism is a question which has to do with our confidence in, and preference for, a free market economy, and not necessarily with appropriability as such. This feature of appropriability sets it apart from its counterpart property problem, the tragedy of the commons; while both seek to internalize externalities – external benefits in the case of appropriability problems, external costs in the case of tragedies of the commons - tragedies of the commons generate a specific argument against one property regime – common ownership (and, to an extent, state ownership) – and in favor of private property.

31 Much of the economic-oriented literature about IP refers to appropriability in this sense – a measure of the incentives to create/invent intangible property. For example, it is common to find commentators measuring appropriability by the average return on patented inventions; for a recent survey of these analyses see Gideon Parchamovsky and R. Polk Wagner, Patent Portfolios. 154 U.Pa.L.Rev. 1, 14-16 (2005)(themselves noting that “for the appropriability story to hold, patents must be shown to be an effective means of capturing value”).
every property owner are clearly incompatible, and economic appropriability gives no direction as to how such incompatibilities should be reconciled. Moreover, maximization of benefits to owners is only loosely tied to maximization of overall value; if property owners were shielded from certain costs associated with the use of their assets (as they would be, if such use was protected as an exercise of their property right), inefficient uses would often be rewarded.

It is a second and distinct notion of appropriability, which I shall refer to as ‘legal appropriability’, that is at the heart of property regimes. Legal appropriability is a narrow subset of economic appropriability. It is focused only on one aspect of owners' ability to derive revenues, namely the protection that a legal system affords owners in the face of the appropriability-problem presented in the previous pages – a problem that revolves around the fact that “[m]en universally desire to enjoy speedily – to enjoy without labour”32 - and its resulting dangers of under-usage of resources. The appropriability problem has nothing to do with questions of maximization of revenues to owners, but only with the ability of owners to appropriate those revenues that actually do flow from their assets, i.e. that are the result of allowed uses thereof. In this respect, legal appropriability bears a clear relation to such Benthamian notions as security and expectation. As Bentham explained, when speaking of security as the principle object of legal regimes:

Law does not say to man, Labour, and I will reward you; but is says: Labour, and I will assure to you the enjoyment of the fruits of your labour – that natural and sufficient recompense which without me you cannot preserve; I will insure it by arresting the hand which may seek to ravish it from you.33

Similarly, legal appropriability is aimed at prevention of ‘poaching’, the arrest of “the hand which seeks to ravish” benefits from those exploiting resources; that, and nothing more.

2. Appropriability as a Boundary Rule

The traditional legal solution to the appropriability problem is a grant to individuals of rights to exclude others from certain assets, declaring those individuals the 'owners' thereof. Exclusionary rights promote exclusive use of assets and prevent tragedies of the commons, while

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32 Bentham, supra n. 18 at 114.
33 Id., at 110.
ensuring that those exploiting the assets would be free from the threat of poachers, enabling them to transact in access to the fruit of their labor. Thus, it is not surprising that Blackstone, Bentham and many subsequent commentators have identified the right to exclude as the central right at the core of property regimes.34 However, these commentaries typically suffer from two notable failures.

First, many commentators failed to note that exclusionary rights only serve as a crude proxy, means to an end. Describing ownership simply as ‘a right to exclude’ gives us a poor account of the actual scope of owners’ rights, the rationales that should guide courts in determining that scope, or the goals that these rights – and incidents thereof – are intended to achieve. These questions must be addressed in terms of the underlying problems that property regimes seek to solve, not in terms of the exclusionary rights themselves. The problem of tragedies of the commons gives very limited guidance on these issues: It requires exclusivity of use, i.e. privatization of resources, but it does not call for any specific allocation of exclusive-use rights. It is therefore legal appropriability that must define the scope of property rights; it requires that they address the appropriability problem, as it arises in connection with specific types of assets. Property rights, therefore, are not simply exclusionary rights as such; they are best understood as a set of exclusionary rights that apply to assets whose exclusive exploitation (in certain allowed ways) is deemed by the legal system to be worthy of protection from interference by third parties.35

34 For an excellent modern overview of this approach – and the opposition thereto – see Thomas W. Merrill, "Property and the Right to Exclude", 77 Neb. L. Rev. 730.
35 It should be noted that property rights operate mainly against other individuals. By contrast, the role of property rights is nowhere near as clear in the relationship between an individual and the state. As already mentioned, the appropriability problem has to do only with internalizing benefits, not costs. State regulation may be required to internalize costs associated with certain uses of resources, most specifically when such uses have spillovers that harm a resource that either cannot be effectively parcelled – the seas, the air etc. – or whose ownership is too dispersed to effectively negotiate the efficient level of usage. State regulation may also be required to prevent hold-up problems when efficient projects affect the properties of several owners. These roles of government have led the legal system to allow government to regulate, tax and even condemn private property. While many commentators speak of constitutional protection of property rights against the power of the state, individual owners are generally powerless to attack or resist regulation of their property – especially when the regulation was already in place, or was reasonably expected to become effective in the near future, when they have acquired the affected property. This is in line with our analysis, since the appropriability problem and its corrupt effect on incentives cannot arise where there is no legitimate expectation to derive a profit. Transition periods, i.e. periods where new regulation is introduced, or condemnation is effectuated, present a much harder problem. On the one hand, transitions may clearly raise appropriability problems, thus skewing the incentives of owners. On the other hand, compensating owners for inefficient uses, which they have undertaken in reliance on their ability to externalize costs, coupled with a reliance on the availability of future compensation, would also skew the incentives of owners. See, for example, Lawrence Blume, Daniel L. Rubinfeld & Perry Shapiro, "The Taking of Land: When Should Compensation Be Paid?", 99 Q.J.Econ. 71 (1984); Lawrence L. Blume & Daniel L. Rubinfeld, "Compensation for Takings: An Economic Analysis", 72 Cal. L. Rev. 569 (1984); Louis Kaplow, "An Economic Analysis of Legal Transitions", 99 Harv. L. Rev. 509 (1986).
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Second, due to their focus on exclusionary rights, former commentaries failed to recognize the tragedy-of-the-commons-problem and the appropriability problem as the only systemic problems underlying private property regimes, i.e. the only problems that every private property regime must address. To fully appreciate this idea, we must bear in mind our initial understanding of the role of property regimes, as a legal doctrine that governs the allocation of scarce resources, intended to ensure (or at least incentivize) efficient exploitation thereof. Tragedies of the commons suggest that this allocation is most efficient when it is done through parceling of resources and assigning them to private individuals, each with an exclusive right to use them in certain ways. The appropriability problem adds another layer to this notion, by requiring that the return on exclusive uses be secured against poaching, so that investments and rewards are aligned. No other set of economic problems, in and of themselves, requires parceling of resources or assignment thereof in such a way, i.e. the assignment of exclusive use-rights and the creation of exclusionary rights that are good against the world. More importantly, no other set of economic problems is so pervasive: Only these problems apply to virtually every type of resources and underlie the exploitation of practically any type of asset, whether immovable or movable, tangible or intangible. The extent of these problems may differ from case to case, and the rights of owners may be tailored idiosyncratically to address these differences, but the general contours of the underlying problems remain constant. Thus, as a

Ultimately, the approach towards transition policies depends, in large part, on one's evaluation of the effectiveness and incorruptibility of the governmental mechanism, as well as on the ability of owners to insure themselves against the effects of transition in the open market. Thus, for example, Kaplow, id., argues that the effects of transitions can most efficiently be mitigated through a market for insurance, basing his analysis by and large on a model-government whose regulation is always welfare-promoting (even when its capacity for effectively supplying insurance is questioned); see also William A. Fischel & Perry Shapiro, "Takings, Insurance and Michelman: Comments on Economic Interpretations of 'Just Compensation' Law", 17 J. Legal Stud. 269, 276 (1988)(noting that Kaplow assumes a 'Pigovian' government, i.e. one that has all the information and incentives to act efficiently). By contrast, Richard A. Epstein assumes that government regulation would generally be motivated by rent-seeking on the part of a ruling sect, unless government would be obligated to compensate owners for any regulation which adversely affects the value of their assets and which is not aimed at preventing conduct which amounts to a private nuisance; see Richard A. Epstein, Takings: Private Property and the Power of Eminent Domain (1985). See also Thomas W. Merrill, "Rent Seeking and the Compensation Principle – Essay on Takings: Private Property and the Power of Eminent Domain By Richard A. Epstein", 80 Nw. U.L.Rev. 1561, 1584-1585 (1986), in which Merrill contrasts Epstein's 'pessimistic' view of the state with Kaplow's 'optimism' about the role of public institutions. See also Frank I Michelman, "Property, Utility, and Fairness: Comments on the Ethical Foundations of 'Just Compensation' Law", 80 Harv. L.Rev. 1165, 1214-1218 (1967), in which Michelman presents (and ultimately rejects) a utilitarian theory that justifies compensation where the disutilities from non-compensation, dubbed by Michelman 'demoralization costs', outweigh the costs of devising and administering a compensation scheme that would prevent them. It should be noted that even those favoring strict compensation requirements, such as Epstein, recognize the need for governmental power to condemn private property for public uses (as it currently does under the Takings Clause, U.S. Const. Amend. V), thus relegating the protection of private property vis-à-vis the government to what is usually characterized (under the Calabresi/Melamed distinction) as a liability, rather than property, rule.

36 Even when former analyses focus on attempts to delineate the boundaries of property, these attempts typically revolve around the actual legal rights – such as the right to exclude – and not on the underlying rationales thereto, such as the need for appropriability. See, for example, Merrill, id., at 754, arguing that property "means the right to exclude others from valued resources, no more and no less."
baseline rule, property rights must ensure exclusive use (to prevent tragedies of the commons) and freedom from poaching of the fruits of such use (to prevent an appropriability problem). Absent another pervasive problem which underlies every allocation of resources, they do not need to ensure anything else. Legal appropriability, therefore, should generally serve as the boundary which delimits to scope of property rights; as a general rule, owners of exclusive use rights should be protected only against poaching.

This proposition, it must be stressed, concerns only a baseline rule of property. Deviations from that baseline are common. Exclusionary rights are a somewhat crude proxy for attaining appropriability, and their administration comes at a cost. Therefore, property rights never ensure perfect appropriability, nor do they ensure only appropriability; they are over-inclusive in some respects, and under-inclusive in others. Moreover, once property regimes have been set up as legal institutions with unique features, these features may sometimes be used to solve idiosyncratic problems. Thus, a given legal system may tweak the scope of property rights, extending or curtailing the rights of some or all owners to a level above or below the call of the problems underlying the baseline rule. These streamlining efforts would usually be tied to idiosyncratic situations where the type of resources involved, or some characteristic of the market, require unique adaptation; they do not, however, affect the baseline notion of property.

Consider, for example, the Open Range laws enacted in a number of states, which require farmers to “fence out” cattle.\(^\text{37}\) Such laws tweak the traditional rule of trespass, by demanding that farmers erect fences that meet certain minimum standards before they can hold ranchers liable for damages to their crops caused by cattle physically invading the farmers' land.\(^\text{38}\) These laws address a specific, idiosyncratic problem that arises in areas populated by many ranchers (and cattle heads) whose land is devoted to grazing rather than farming. In such areas, it is arguably more efficient for the few farmers to fence their fields than for the cattle to be constantly guarded or “fenced in”. These laws therefore attempt to streamline property rules by

\(^{37}\) A typical “Open Range” law states that “An owner or occupant of land is not entitled to recover for damage resulting from the trespass of animals unless the land is enclosed within a lawful fence”; see, for example, Arizona Revised Statutes § 3-1427 (2006).

\(^{38}\) One might argue that the traditional rule of trespass assures more than mere appropriability, since it gives farmers a right against poachers and non-poachers alike. Some further discussion of this rule will be undertaken in the following sections. For present purposes, we may nevertheless note that to the extent it exceeds the call of appropriability, such extension is aimed at assuring exclusivity of use of the farmer’s land, i.e. at avoiding tragedies of the commons).
requiring farmers to shoulder the burden of erecting physical barriers as a precondition to the erection of legal fences to protect them against one particular poaching-like threat, namely cattle. This streamlining effort affects the allocation of respective use rights; in an open range territory, a rancher can be said to have a right to ‘use’ the farmer’s land in certain circumstances. However, the adjusted rules do not undermine legal appropriability as such, since they do not allow poaching of any kind. Ultimately, open range laws do not create a unique property paradigm; at most, they offer a nuance to an existing one. The baseline rule remains largely unchanged – use-rights are still generally exclusive (even if their allocation is somewhat untraditional), and their owners have a legal right to appropriate the fruits of their exploitation.

D. Appropriability and Coase

1. Appropriability and Numerosness

The Open Range example, essentially identical to Coase's paradigmatic cattle-rancher – farmer example, brings us back to Coase and the bundle-of-use-rights metaphor. In the first part of his classic article *The Problem of Social Cost*, Coase suggested that in the absence of transaction costs (and more precisely – in the absence of prohibitive transaction costs), the initial allocation of property rights is immaterial, because parties would transact to achieve the most efficient uses of resources regardless of that allocation; all that matters is that the initial allocation be ‘well defined’, so that it can serve as a baseline for contracting. To the extent that this proposition relates only to the allocation of exclusive use-rights (which stand at the heart of the Coasean analysis), I have no quarrel with it, although I believe it is incomplete; as explained in the preceding sections, exclusive use-rights solve the tragedies-of-the-commons-problem, but not the appropriability problem.

This proposition becomes less tenable if it is understood to encompass both use-rights and appropriability-based exclusionary rights, i.e. if Coase suggests that a wedge can be driven

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39 Open range rules assume accidental invasion of farmed land. The rules do not allow ranchers to deliberately lead their cattle unto the farmed land; they certainly do not allow a rancher to harvest another’s farmland and feed the crops to her cattle, regardless of whether the farmland was fenced or not.

between the right to use and the right to appropriate. It should be noted that this reading of Coase’s analysis is not trivial, since *The Problem of Social Cost* does not address the appropriability aspect of property rights. Thus, Coase himself never suggested that property rights might be considered ‘well defined’ even if they do not ensure appropriability. Some of his followers, however, have suggested just that.⁴¹ To the extent that the Coasean view of property implies that appropriability is not a prerequisite of property regimes – i.e. that a private property regime may exists where investment and rewards are completely separate as a baseline, requiring parties to transact for the purpose of re-aligning them – I take issue.

As an initial matter, let us examine Coase’s own examples. Using the bundle-of-rights metaphor, Coase departs from the traditional understanding regarding the subject of property rights. If property is comprised of a bundle of rights, the ‘thing’ that must be parcelled in order to avoid tragedies of the commons is not scarce resources as such, i.e. physical (or intangible) ‘things’, but rather the rights to use those resources in certain ways. When Coase turns to examine the rancher-farmer situation, the question he really examines is “who has (or should have) the rights to use a piece of farm land for storage of a certain number of runaway cattle heads – the owner or a neighboring rancher”. Coase's answer is that where transaction costs are low, the initial allocation of these rights would be inconsequential, because the farmer and the rancher would transact for optimal allocation, with the rancher buying some of those rights (for actual use) from the farmer or selling some of them to the farmer (for non-use) as the case may be.

Coase, it should be noted, is careful in framing his examples, limiting them to instances of competition between two generally-efficient uses of resources. In his examples, uses are conflicting but mutually independent. For instance, Coase focuses his analysis to the damage caused by cattle *trampling* the crops on the farmer's land; his analysis makes no room for the possibility that cattle *grazes* the farmer's land, i.e. that the rancher derives a benefit from the farmer's crops, or otherwise requires that the farmer keep farming her land.⁴² Coase, therefore,

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⁴¹ Duncan Kennedy and Frank Michelman have taken up the issue of theft specifically, arguing that absent transaction costs, “there will be no theft”. See Duncan Kennedy and Frank Michelman, “Are Property and Contract Efficient?”, 8 Hofstra L. Rev. 711, 720-722 (1980). As I explain infra, I believe this argument, which they seek to prove on Coasean-like two party examples, is fundamentally flawed.

⁴² In fact, Coase assumes that the parties would bargain for non-cultivation of the farmland in order to minimize the damages caused by the invading cattle. The possibility that leaving the land barren would also decrease the rancher’s profits is never discussed. See Coase, *supra* note
deals with what we have previously characterized as negative externalities; he does not address positive externalities, which are the only externalities that legal appropriability deals with. Thus, Coase's examples do not suggest a separation of the right to use from the right to appropriate. The rancher may have a right to *trample* the crop, which may or may not trump the farmer’s use-rights in her land, but she does not have a right to *use* the farmer's crops for grazing – just as she does not have a right to *harvest* those crops and feed them to her cattle. In Coase's examples, the owner of a use-right invariably also has the right to appropriate the returns of that use, with the farmer appropriating the returns from farming (if there are any returns left) and the rancher appropriating the return from cattle-raising. To the extent that uses are incompatible, such as farming and ranching, it is the right of use that is curtailed by competing use-rights – not the right to appropriate the returns from such use.43

Coase's cautious framing of the issue, I believe, is not accidental. Any suggestion that 'well defined' property rights might exists where use and appropriability are separate is bound to fail, for the following reasons: In a poaching-type situation, the competition is not between different *uses*, but rather between different *users*, each seeking to make the very same use of the underlying resource. In this type of situation, as Kennedy and Michelman suggested, the initial allocation of property rights may be immaterial as between parties that are proximate enough to transact, such as is typically the case in Coase's (and Kennedy’s and Michelman's) two-party examples. For example, a farmer could easily live with a rule that allows its neighbors cattle to graze her land – after all, it is easy enough to imagine a situation where the farmer would contract with a rancher, or even a few ranchers, for this type of arrangement, charging the rancher(s) a per-capita fee. By contrast, it is not trivial to assume that farmers - *as a class* - could adjust to a rule that allows ranchers - *as a class* - to graze their lands. What is immaterial in the two party situation gains a whole new meaning vis-à-vis the world at large; the sheer numerosity of putative poachers makes a great deal of difference in the analysis, even in the absence of transaction costs.

40, at 4.

43 Note that this echoes the distinction between economic and legal appropriability. If a rancher has a rights to raise cattle and trample a farmer’s crop, this would arguably diminish the farmer’s economic appropriability, i.e. reduce the farmer’s revenue stream. However, as long as the farmer has an exclusive right to appropriate the returns form the crop that is left intact (as well as the right to prevent trampling by erecting a fence, for instance), her legal appropriability is unaffected.

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The numerosity factor poses two problems. First, in order to achieve optimal allocation, it would require not only frictionless transacting, but also perfect information and frictionless coordination between all putative poachers. Without meeting these requirements, each poacher would not be able to place a correct value on the crop, because she would not be able to evaluate her competition, and – as a result – her chances of actually seizing the crop (or parts thereof). Assume, for example, that a farmer values the crop at 10, and three potential poachers – ranchers or others - value it at 9 each. Unless each poacher knows that the two other poachers are competing with it, she would not be able to place a true value on the her utility function of poaching the crop – say, for instance, a utility of 3, assuming that each poacher has an equal 1/3 probability of poaching the entire crop. Absent such information, the transaction between the thief and the farmer would readily break down, even though in and of itself it is costless to execute.

This problem is further exacerbated when a temporal aspect enters the negotiations. In a nutshell, deals between the farmer and potential thieves cannot be struck over time, even absent transaction costs, because each poacher would re-evaluate its position following each deal that is struck between the farmer and another poacher. Ex post, the farmer would have no hope of settling with the entire class of poachers at a profitable price, but would instead have to re-incur ever-increasing sunk costs (in the form of past-settlements).\(^4\) Ex ante, a farmer would not undertake to grow the crop absent any hope of reaching effective settlement with the putative class of poachers.\(^4\)

If these problems sound familiar, this should not come as a surprise. With the removal of protection against poaching, a problem which is not dissimilar to the familiar tragedy of the commons arises, only this time the tragedy occurs at the level of the right to appropriate returns, rather than a right to use the underlying resources. The crux of the problem remains the same –

\(^4\) In a market with perfect information, the first poacher would be willing to settle for any price above 3. However, once the farmer settled, the next two poachers re-evaluate their position, each now placing a utility of 4.5 (9 X ½) on their poaching efforts due to the lessening of competition from the settling poacher. If one more poacher would settle, the remaining poacher would not settle for anything below 9. All in all, a farmer settling with the poachers over time would have to pay them over 16.5 to prevent poaching altogether – well above the utility value of the crop to either the farmer or the poachers.

\(^4\) These problems would generally not arise in connection with competing uses, because the effects of competing uses are generally cumulative. Thus, a farmer’s potential damages would be D₁, D₂… Dₙ, with each amount of damages corresponding to the total number of cattle heads raised by the farmer’s neighbors. Invariably, the identity of the owner of the Xₙ cattle head is immaterial under these circumstances. Of course, numerosity of ranchers and/or farmers would probably create problems where transaction costs are consequential.
The grant to a numerous class of individuals the right to a single stream of revenue – the farmer's crops.

The second problem caused by the numerosity factor has to do with the fact that in a near-infinite class of putative poachers, all competing for appropriation of the very same commodity, another implied Coasean assumption – that different people place different values on competing uses – breaks down. Indeed, in the Coasean two-party model, we could safely assume that the two parties would place a different value on each use, thus enabling transfer of the right to the highest bidder.\footnote{This is a fundamentally sound assumption in typical situations, where spillovers would not completely destroy the affected use. For example, one cow would probably not destroy a whole field (and would be unlikely to escape in the first place). The rancher and farmer would thus not negotiate for ranching or farming, but rather for a mutually beneficial (and overall efficient) level of both uses.} However, as the number of parties increases, with each party vying for the same exact use, we would arguably have more parties with very similar preferences. Ultimately, if we were to assume an infinite number of putative poachers, we would have to also assume that some members of the class would have preferences that are indistinguishable from those of the owner, i.e. that would place the same value on crops as would the farmer.\footnote{Indeed, where numerous participants are involved, we can assume that a market would develop; in that case, we can assume that every putative poacher would place the market value on the crop – as would the farmer.}

As between the farmer and these putative poachers, the negotiating mechanism breaks down; neither would settle for anything less than the entire value of the crop (for them), even if the negotiation itself was not costly. In a world where the right to use and the right to appropriate are aligned, this would not pose a problem: the equilibrium would be the status quo, i.e. the farmer would retain both the right to sow and the right to reap. However, where these rights are separated, the ex ante realization that a settlement that leaves any value in the hands of the farmer is most likely impossible, would prevent the farmer from taking on the entire endeavor. Indeed, an appropriability problem would arise.\footnote{Nor would the farmer be able to sell the right to farm, since any buyer would be faced with the same problem the farmer faces. The only buyer who would be willing to invest in the land under these conditions would be one who would be able to fend off poachers regardless of the legal regime.}

2. Appropriability and Thingness

The foregoing analysis suggests that Coase's requirement of ‘well defined’ property rights is not as empty a shell as one would initially think.\footnote{In an earlier piece, Coase himself acknowledged that any property regime would require exclusive rights in resources in order to prevent a state of ‘chaos’ that would undermine the operation of the market through contracting. However, he has not extended this point to address the...} Protection against poaching and free...
riding – protection of legal appropriability against the world at large – is a prerequisite to any well-defined property regime, and Coase’s analysis – like any other property analysis - cannot stand absent such a baseline minimum.

This understanding allows us to re-evaluate the notion of ‘thingness’ of property rights, a notion that was severely undermined by the Coasean analysis. According to Coase, traditional property notions that underlie this feature of property, such as the *ad coelum* principle, or trespass rules that revolve around physical invasion, have very little to commend them. After all, the whole point of the Coaean analysis was to show that the allocation of use rights is *immaterial* in terms of efficiency (absent excessive transaction costs), and therefore that there is no reason to grant an owner – say, a farmer - any ‘priority’ in using her assets, or in excluding others from using them, simply on account of her ownership thereof. In other words, the Coasean analysis shifted the focus of property analysis from the exclusionary rights of owners with respect to things that are owned – say, a farmer’s right to exclude others from her land - to the respective use-rights of owners whose uses may affect one another – say farmers and ranchers. In a Coasean world, legal systems should not be concerned with, or guided by, rules that prevent invasion to the property of another; instead, they should be concerned with and guided by rules that define discrete use rights, such as the right to raise cattle.50

This shift, demonstrated so elegantly by Coase, becomes dramatically less compelling once we realize that *any* allocation of use rights must be made against the backdrop of a property regime that *must* protect appropriability, at least to some extent. In any such regime, owners *must* enjoy a set of legal rights that would afford reasonable protection of their investments against an indefinite class of putative poachers. In other words, regardless of any allocation of use rights, owners *must* have a right to exclude putative poachers from the fruit of their labor.

But how can this exclusionary right be translated into a legal norm? Such norm would have to send a clear exclusionary message to an undefined class.51 To achieve that goal, it must

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50 See Merrill & Smith, id.
51 On information costs as the basis for the relative homogeneity within property regimes see Thomas W. Merrill & Henry E. Smith, “Optimal Standardization in the Law of Property: The Numerus Clausus Principle”, 110 Yale L.J. 1 (2000); see also Merrill & Smith, supra note 19 at 385-388. For a view of information costs as the basis for retaining the ‘thingness’ of property in the IP field see Clarisa Long, “Information
(i) draw a clear boundary around the object to be protected for appropriation; and (ii) signal this boundary to the world at large. In a perfect world, such a boundary could perhaps be drawn around all the fruits of allowed uses, i.e. of those uses to which the owner has a legal right. In the real world, however, owners usually can use their assets in numerous ways – ways which neither the legal system nor third parties can predict. Therefore, drawing a clear boundary around the fruits of specific uses would be impossible. A much more viable solution, at least in the case of physical assets, would be to draw a boundary around each owner’s actual asset, regardless of the owner’s use thereof. Such boundary would be relatively easy to administer, and absent special circumstances should not be excessively under-inclusive. Viable protection of appropriability would thus be best served by a right to exclude putative poachers that is coterminous with the boundaries of the thing which is owned.

This analysis offers a better understanding of the relationship between the bundle of rights metaphor and the notion of ‘thingness’ so prevalent in more traditional analysis of property rights. It suggests that ‘thingness’ is not an arbitrary aspect of property regimes; at least when it comes to protection against poaching, it is a requisite feature thereof. Whether the right to exclude poachers should be extended also to non-poachers in every single case, as trespass law suggests, is a separate question, which goes well beyond the scope of this paper. Intuitively, however, the appeal of such an extension is clear, at least in terms of simplifying the administration of the anti-poaching rule; the physical invasion test affords an easy resolution of a huge bulk of cases. By contrast, the Coasean analysis would apply with full force to non-
invasive competing uses, traditionally handled under the doctrinal heading of nuisance law.\textsuperscript{57} As Coase suggested, these must be resolved clearly in order to facilitate contracting for efficient allocation. Where transaction costs are minimal, their resolution could be made arbitrarily. Where transaction costs are significant, however, it would have to be based on an ad-hoc, cost-benefit analysis of the uses involved, in an attempt to replicate the ultimate allocation that would have been reached absent transaction costs.

\textbf{PART II: ARE PSRS AN INTEGRAL PART OF PROPERTY?}

\textit{A. Property and Contract - Two Levels of Property Rules}

The previous section demonstrates that property operates on two distinct levels. On one level, property operates first and foremost to ensure legal appropriability and prevent poaching – to solve the appropriability problem – while allocating exclusive use rights. These are the basic roles that every private property regime must fulfill. On this level, property’s rigidity, ‘thingness’, and in-rem nature are most apparent.

On a second, ‘higher’ level\textsuperscript{58}, property sometimes operates to allocate use-rights in situations where transaction costs are substantial, i.e. where contractual mechanisms break down. In this role, property rules become that much more nuanced and complex, striving to extrapolate contractual allocations while striking a balance between the benefit of nuanced allocations and concentrate all exclusionary powers in the hand of one agent – the owner – instead of dispersing them, since this would create a clear boundary rule and dramatically reduce information costs.

Another way of looking at this question would be by assessing the effectiveness of a right to exclude that is good only against poachers. It should be noted that such a right could create considerable problems for owners. Most notably, in many cases owners would not be able to distinguish poachers from non-poachers. Take, for example, the rancher-farmer situation. When a farmer is faced with cattle on her land (or threatening to invade it), she has no way of knowing whether the cattle got there by accident (competing use) or intentionally (poaching). In most cases, a judicial determination of this question would be ineffective (in terms of protecting the farmer’s \textit{ex ante} incentives), because it would have to be made \textit{ex post}, and would involve an inquiry into the intent of the rancher – an inquiry that is bound to be prolonged, costly and uncertain in its results, like any inquiry into subjective issues (even if some objective indications thereto may be used to facilitate it). With every additional competing use that would be allowed to invade the farmer’s land, the problem of distinguishing poachers from non-poachers would be exacerbated. With each such use, the farmer’s ability to exclude poachers would be undermined, and her incentive to (efficiently) invest in her tract of land would diminish. Ultimately, if too many invasive competing uses are allowed on the farmer’s land, the farmer would find herself forced to choose between over-enforcement (which would lead to constant bickering and subsequent liability) and relinquishment of all \textit{ex ante} enforcement efforts in favor of costly, ineffective, \textit{ex post} protection. The law of trespass, essentially forbidding all \textit{physical} invasions, as well as the \textit{ad coelum} principle which underlies it, may be justified, at least in part, by this very problem.

\textsuperscript{57} As the previous footnote suggests, they would also apply to situations where a right to invade is exceedingly efficient and transaction costs are high. Such instances are somewhat rare, but they do exist, especially when invasions are not intrusive, such as in the case of air travel, broadcasting etc. These instances require a streamlining of property rights; see for example 49 USC §40103(a)(2), granting all citizens a common right of transit through the ‘navigable airspace’ of the United States.
the information and administration costs associated with deviations from the relatively clear ‘thingness’ model of property. In these situations, property rules no longer solve the overarching problems that we have identified. Instead, they seek to solve problems in the realm of contract law, which are by definition idiosyncratic. This distinction is illustrated in Figs. I and II: In Fig. I, property rights operate to ensure legal appropriability and exclusivity of use, and nothing more; once these are achieved, owners are free to utilize the upper layer – contract law – to transact with proximate parties for the efficient exploitation of their mutual resources. In Fig. II, property rights still ensure legal appropriability and exclusivity of use. However, in certain discrete instances, where the second layer – contract law – fails, governmental regulation utilizes property-like rules to overcome these failures. Note, that in this second level, these property rules do not facilitate contracts, but rather replace them.

This distinction should guide determinations of the scope of property rights. In general, such scope should be limited to the assurance of appropriability and exclusivity of use. Alterations thereof must be justified either by these problems, or by a breakdown in the

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58 I refer to this level as ‘higher’ because it assumes the existence of the first, ‘lower’ level.
contracting mechanism that requires re-alignment of use rights.

This insight should guide our analysis of one of Robinson’s overarching argument, namely that property type PSRs are an integral part of the baseline notion of property rights, as a “normal instance of ownership”. The general desirability of property-type PSRs – servitudes – will be assessed in some detail below. Already at this juncture, however, we may point to a major flaw in Robinson’s proposition: Simply put, PSRs cannot be justified by either of the two overarching problems which underlie property regimes. They have nothing to do with exclusivity of use, nor do they promote protection against poaching. Of course, it is possible that the availability of property-type PSRs would increase the seller's return, i.e. increase her economic appropriability. However, as noted, economic appropriability should not guide us in determining the scope of property rights. It is also possible that property-type PSRs would be welfare-enhancing in certain instances, because of some breakdown in the contractual mechanism which they help overcome; the following section suggests that this is exactly the case in the field of real property. However, an idiosyncratic failure of contracts cannot justify an overarching principle of property law. Absent some direct link between PSRs and either of the problems underlying property regimes in general, PSRs have no place as part of any baseline notion of property rights.

B. The Case of Real Property

The former conclusion begs the question of real property servitudes. Real property servitudes are a well established common law institution dating back to the 16th Century, and are heavily relied on by Robinson for his conclusion that PSRs are a “normal instance of ownership”. However, a careful examination of the unique circumstances surrounding real property servitudes indicates that these property-type PSRs are used as a legal solution to an idiosyncratic breakdown in contractual mechanisms – the very type of breakdown that the former section suggested would justify an extension of property rules beyond their appropriability-based
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baseline. Real property servitudes thus reinforce the viability of the foregoing analysis.

I have argued elsewhere that property-type PSRs are generally justified wherever a seller retains a legitimate interest in the very thing which it sells, regardless of the title thereto. For example, I have argued that sellers of copyrighted goods should be allowed to impose PSRs that would protect the integrity of their works where – and only where - mutilation of these works would undermine the reputation of the seller and impact the value of her entire body of work. The underlying idea that guides this proposition is that some assets are inherently interdependent, i.e. their nature is such that the use made of one asset (a work of art, for instance) affects, or even controls, the value of others (other works of art by the same artist). Real estate fits this bill perfectly, and is probably the quintessential interdependent asset; “neighborhood effects” associated with real estate cause the use of any tract of land to have a direct and immediate effects on the value of neighboring tracts. It is therefore not surprising that the early paradigmatic cases involving real property servitudes involved two-party transactions where the owner of a large tract of land sold off one parcel out of that tract while retaining others, thereby effectively transacting to share the larger tract with the buyer and her assignees. The interdependence of the two assets is central to these transactions; if the seller could not ensure that the sold parcel would never be put to uses that would damage the seller’s remaining tract, she would refrain from entering into the transaction in the first place. This conclusion was the raison d'être for enforcement of real property servitudes, as recognized by the Chancery Court in Tulk v. Moxhay:

That this Court has jurisdiction to enforce a contract between the owner of land and his neighbour purchasing a part of it, that the latter shall either use or abstain from using the land purchased in a particular way, is what I never knew disputed . . . it is [] contended, not that the vendee could violate that contract, but that he might sell the piece of land, and that the purchaser from him may violate it without this Court having any power to interfere. If that were so, it would be impossible for an owner of land to sell part of it

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60 Yonatan Even, “The Right of Integrity in Software: and Economic Analysis”, 22 Santa Clara Computer & High Tech. L.J. 219, 253 (2006). The context there was the right of sellers to protect the integrity of copyrighted works they have sold, which is widely recognized in civil law countries as part of artists’ droit moral and which was recognized by statute in the U.S. with regard to certain visual works of art. See Visual Artists Rights Act of 1990, 17 USC § 106A (2007).

In recent years, the law of servitudes has been applied to slightly different, multi-party settings involving residential community associations (“RCA”). This change in application does not undermine the basic analysis. As in the two party model, individuals living in residential community associations opt to share a given space — be it a condominium, a gated community or another type of RCA. Real estate developers, who initially own these residences in their entirety, stand in a unique position — they hold all the foreseeable future interests of the association in unified form, before these interests become dispersed between several residents and susceptible to corrupt incentives. Developers therefore use servitudes to write “constitutions” for such associations that would run with the residences, regardless of changes in tenancy. In this way, they coordinate *ex ante* between multiple subsequent buyers in an effort to prevent coordination problems, opportunistic behavior and other problems resembling tragedies of the commons *ex post*.

In both the traditional two-party setting and the RCA setting, efficient utilization of resources thus *requires* legal mechanisms that attach to assets and “run” with them. Contract law, however, was designed to attach to individuals, not assets. Specifically, contract law’s privity requirement is intended to *prevent* contracts from obliging anyone who was not party to the “meeting of the minds” that formed the contract, and courts traditionally held that assignees of the original buyer of servient lands were members of that class. Courts were thus faced with a
breakdown in contractual doctrine, the results of which created clear inefficiencies in allocation of resources.

Courts could have solved these problems within contract law doctrine, for instance by relaxing the privity requirement in certain situations. However, the problems arising due to interdependancies between assets do resemble the appropriability and tragedies of the commons problems underlying property law. Moreover, property law’s *in rem* nature provided a simple—though overbroad—solution to the shortcomings of the proximity requirement; in property law, the right of an owner is good against the world, and thus is also good against any assignees of a buyer under a property-type PSR. It should therefore come as no surprise that most Courts chose to extend property law to solve what started out as a problem with contract doctrine. However, courts never considered this extension to represent anything like a “natural incidence” of ownership; far from it. In fact, Courts have been painfully aware that real property servitudes are an exceptional mechanism, and have allowed them only in certain discrete situations. Most notably, following *Spencer’s Case* and *Tulk v. Moxhay*, Courts have required that servitudes “touch and concern” both the servient and the dominant tracts. However vague that requirement is, it does ensure that servitudes can only be imposed in cases of interdependence, where the use of the servient tract directly affects the dominant tract, and property type-PSRs are thus justified. Real property servitudes that “run” with the land are therefore an exception to the scope of ownership, and not a natural incidence thereof.

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In the U.S., equitable servitudes – such as those recognized in *Tulk v. Moxhay* – were initially regarded by courts as contractual, i.e. as “obligations specifically enforced in equity against third party [with notice thereof]”, thereby using equity to circumvent the shortcomings of the proximity requirement. Eventually, however, these servitudes – along with easements and real covenants – came to be regarded as interests in land. Reichman, *supra* note 63, at 1225-1227.

Robinson relies on the Restatement (Third) of Property, which substituted certain reasonableness tests for the longstanding touch and concern doctrine, in suggesting that doctrine no longer applies to real property servitudes. Robinson ignores the fact that the Restatement’s position was harshly criticized when it was first adopted, see for instance Tarlock, *supra* note 61 (noting, for instance, that “the Restatement... strikes out in a new direction that has quite limited academic and judicial support”, id. at 811) and failed to eradicate the use of the doctrine by the courts. See Ben W.F. Depoorter & Francesco Parisi, “Fragmentation of Property Rights: A Functional Interpretation of the Law of Servitudes”, 3 Global Jurist Frontiers, Article 2, at 11 (noting, based on a survey of decision found on Lexis, that “despite the[] efforts by. Scholars and the drafters of the Third Restatement, touch and concern remains is [sic] very much alive in the case law today” and is “a permanent fixture in the case law on land use arrangements.”)
PART III: THE FIRST SALE DOCTRINE – OVERVIEW

A. Forward

Having laid out the framework for an analysis of PSRs, I now turn to examine one particular type of legal rule restricting property type PSRs – the first sale doctrine. In the following sections I examine the desirability of PSRs of the type the first sale doctrine voids. Before we turn to assess the effectiveness and/or desirability of the doctrine, however, it is worthy to understand how the doctrine came to be, how it was shaped over the years, and what were the rationales that have guided the courts in developing it, to the extent these can be crystallized from the case law. The main thrust of this historical overview is that the doctrine, as initially developed by the Supreme Court, was rooted deeply in the realm of property law, driven by property law rationales, and intended to demarcate a bright line between that body of law and the law of contracts; that it was, and should have remained, a manifestation of the appropriability analysis. Unfortunately, soon after the doctrines inception, a second—and, I argue, misguided—strand of first sale decisions emerged, framing the doctrine as the IP reflection of general antitrust doctrine concerning vertical restraints. In that role, as the next Section demonstrates, the doctrine has been widely questioned by commentators and undermined by courts, understandably treated as a relic of a nearly-defunct body of law. These critiques, however, mischaracterize the true nature of the first sale doctrine. Because they ignore the doctrine’s original purpose, they are inapposite to its overall evaluation.

B. First Sale as a Property Doctrine

The origins of the first sale doctrine can be traced back to a number of cases decided by the Supreme Court in the mid-late 19th century. Strangely enough, the first few of these cases did not even involve PSRs.

In Adams v. Burke\(^6\), the patent rights to certain coffin lids were territorially divided between Lockhart & Seelye (“L&S”) and Adams, with L&S having exclusive right to exercise
the patent in a limited territory spanning a ten miles radius around Boston and Adams having the exclusive right to exercise the patent outside of that territory. Based on this arrangement, Adams sued Burke, an undertaker, for patent infringement, alleging that he had used the patented coffin lids in his hometown of Natick, located some 17 miles out of Boston, in a territory where the patent rights were held by Adams. It was undisputed that Burke had lawfully bought the coffin lids from L&S in Boston. The only question before the Court, therefore, was whether Burke could lawfully use coffin lids, which he lawfully purchased from L&S, outside of L&S’s exclusive territory.

Justice Miller, writing for the Court, cited earlier decisions in which the Court held that a sale of patented devices conveyed the right to use the devices for “so long as [they were] capable of use”, unaffected by subsequent renewals of the patent. He then explained that these decisions stand for the general proposition that the sale of patented devices conveyed the right to use these devices “to the full extent to which [they] can be used”. Justifying this proposition, the Court explained:

[I]n the essential nature of things, when the patentee, or the person having his right, sells a machine or instrument whose sole value is in its use, he receives the consideration for its use and he parts with the right to restrict that use. The article, in the language of the court, passes without the limit of the monopoly. That is to say, the patentee or his assignee having in the act of sale received all the royalty or consideration which he claims for the use of his invention in that particular machine or instrument, it is open to the use of the purchaser without further restriction on account of the monopoly.

This plain language, although antiquated and crude, suggests that the main concern of the court was with the scope of (intellectual) property rights, with Justice Miller taking an initial stab at demarcating that scope. The decision stands for the proposition that with the sale of a patented

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67 84 U.S. 453 (1873).
68 Adams, 84 U.S. at 455.
69 Id. The Court cites two cases, Bloomer v. McQuewan, 55 U.S. 539 (1852) and Mitchell v. Hawley, 83 U.S. 544 (1872). While the former undoubtedly stands for the proposition it is cited for, the latter’s holding is not as clear and served as the basis for much confusion in years to come. In Mitchell the patentee granted a license to make, use, and license others to make and/or use certain patented machines for the duration of the patent. The Court, while following Bloomer, states also that “a patentee, when he has himself constructed a machine and sold it without any conditions, or authorized another to construct, sell, and deliver it, or to construct and use and operate it, without any conditions, and the consideration has been paid to him for the thing patented, the rule is well established that the patentee must be understood to have parted to that extent with all his exclusive right”, and that “[s]ales of the kind may be made by the patentee with or without conditions.” 83 U.S. at 547-549. Ultimately, in Mitchell the licensee was not even allowed to sell the machine – only to license it – and therefore the scope of its holding is unclear.
device, the patentee “receive[d] the consideration for [its] use” - in other words, that the patentee commodified her interest in the use of the specific product which she sold (in this case – the coffin), appropriated the market price for it, and is not entitled to further protection of that right as a matter of property law. The Court expressly limited this holding to use-restrictions that are imposed “on account of the [patent] monopoly”, noting that it proceeded “with care”, deciding “no more than what is directly at issue”. The realm of the decision, therefore, is property law alone; Adams says nothing about the general powers of sellers to impose PSRs on buyers of their products, nor does the Court in Adams assessed their desirability.71

The Court further explained its approach in Keeler v. Standard Folding Bed Co.,72 involving similar circumstances. First, it stated that the buyer of patented products directly from the patentee is free to use the products anywhere in the United States, as well as resell them, “unless restrained by contract with the patentee”,73 reasoning that the sold product “is no longer under the peculiar protection granted to patented rights… the patentee, so far as that product of his invention is concerned, has enjoyed all the rights secured to him by his letters patent.”74

Next, the Court turned to examine situations in which patent rights have been divided between regional assignees. In that context, the Court articulated the two questions before it: (i) is the buyer from a regional assignee restricted in her use of the product to the same region as the seller-assignee?; and (ii) is there a distinction in this regard between the buyer’s right to use the product and her right to sell (or rather resell) the product? The Court found that the first question was expressly resolved in the negative in Adams and Hobbie. The Court further found that the second question was also necessarily resolved in Adams, because “the use made by Burke of the[] coffins involved a sale in every single case.”75

Next, as an illustrative aside, the Court distinguished Adams and Hobbie from Boesch v. Graff76, a case in which the Court held that an importer of patented goods may not resell them in the United States, even though it lawfully bought the goods from a foreign patentee who had full

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70 Id., at 456 (Emphasis added).
71 In Hobbie v. Jennison, 149 U.S. 355, 361 (1893) the Court found Adams’s precedent to apply “notwithstanding the knowledge of both parties that a use outside of the territory is intended.”
72 157 U.S. 659 (1895).
73 Keeler, 157 U.S. at 661.
74 Id., at 661 (citing Goodyear v. Rubber Co., 10 F.Cas. 638, 640 (C.C.Mass 1859)).
75 Id., at 664.
rights to make and sell them abroad. The Court explained that in *Boesch* – unlike *Adams* and *Hobbie* — “neither the patentee nor any assignee had ever received any royalty or given any license to use the patented article in any part of the United States.” This distinction can only be explained in terms of the Court’s concern with the ability of inventors to commodify their inventions and appropriate a return for it: whereas a sale in the United States (as in *Adams*, *Hobbie* and *Keeler*) ensures such appropriation by the domestic inventor, and thus – according to the Court – indicates that the role of IP rights had been fulfilled, a sale outside of the United States (as in *Boesch*) does not ensure a return to the domestic inventor, due to the territorial nature of IP rights.

Finally, the Court turned to examine the role of the first sale doctrine in distinguishing between contract law and property law. Echoing the holding of *Adams*, the court stated:

> Whether a patentee may protect himself and his assignees by special contracts brought home to the purchasers is not a question before us, and upon which we express no opinion. It is, however, obvious that such a question would arise as a question of contract, and not as one under the inherent meaning and effect of the patent laws. The conclusion reached does not deprive a patentee of his just rights, because no article can be unfettered from the claim of his monopoly without paying its tribute.

This holding is probably the clearest, most concise articulation of the first sale doctrine’s purpose – to define the scope of IP rights, based on their goal to ensure appropriability. Even more so than in *Adams*, the Court’s holding indicates that the desirability of PSRs does not guide the decision – after all, the case did not even involve a PSR. Under *Keeler*, IP-related PSRs may or may not be desirable; regardless, they serve no property-law rationale, and therefore may not be imposed as a matter of property law.

### C. The Antitrust Aspect

In 1890, five years prior to *Keeler*, the Sherman Act passed into law, expressly outlawing...
“[e]very contract, combination… or conspiracy, in restraint of trade.” The effects of this prohibition on vertical restraints in general, and on IP-based PSRs, soon came before the courts. Their initial attempts to untie this Gordian knot led to several decisions that muddied the first sale waters for years to come, juxtaposing – and at times replacing – the property-related analysis of Keeler with an antitrust-like analysis of PSRs.

The origins of this type of analysis trace back to the Court of Appeals for the Sixth Circuit’s influential decision in the case of Heaton-Penninsular Button-Fastener Co. v. Eureka Specialty Co. The decision involved patented button-fastening machines that were sold with an attached notice allowing their use only in conjunction with unpatented staples manufactured by the patentee. The patentee sued several manufacturers of staples adapted for use in the patented machines, on a theory of contributory infringement. The defendants moved for demurrer, claiming that “the restrictions on use… operate to create a monopoly in an unpatented article, and are therefore void as contrary to public policy, or, if valid as purely legal contracts, are so unconscionable as not to entitle complainant to equitable remedies for their enforcement”.

Judge Lurton, writing for the Court, disposed of the teachings of Adams and its progeny by limiting their applicability to cases involving unconditional sales of patented machines. Conditional sales, Lurton found, are different. Distinguishing between the materials comprising the patented product and the patented idea embodied in it, he wrote:

The buyer of the machine undoubtedly obtains the title to the materials embodying the invention… But, as to the right to use the invention, he is obviously a mere licensee, having no interest in the monopoly granted by the letters patent. A license operates only as a waiver of the monopoly as to the licensee, 'and estops the licensor from exercising its prohibitory powers in derogation of the privileges conferred by him upon the licensee…' All alienations of a mere right to use the invention operate only as licenses. It must follow, therefore, that the purchaser of one of complainant's machines

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79 Act July 2, 1890, c. 647, § 1, 26 Stat. 209.
80 77 F. 288 (6th Cir., 1896).
81 Id., at 289.
82 Id., at 290. Lurton references Adams and Mitchell, but fails to mention Keeler, where the Supreme Court, a year prior to Heaton-Penninsular, stated that any question regarding conditional sales "would arise as a question of contract". See however, Edison Phonograph Co. v. Pike, 116 F. 863, 865 (D. Mass. 1902), which followed Heaton Penninsular despite awareness of Keeler, holding that while Keeler could arguably dispose of claims for IP infringement based on breach of PSRs, “it is not clear that the supreme court meant to exclude the possibility of a contract so drawn that by virtue of a special stipulation therein contained a breach of the contract should, in and of itself, make the wrongdoer an infringer, who could be proceeded against under the patent laws.”
subject to a restricted use takes the structure with a license to use the invention only with staples made by the patentee.83

Abandoning any inquiry into the rationales underlying the patent laws – the very inquiry that guided the Supreme Court in Adams, Hobbie and Keeler — Judge Lurton suggested a model that would allow patentees to place almost any condition on the use of their products as a matter of IP law.84 This model is supposedly justified by the Court’s finding that the specific challenged restrictions are likely to have no anticompetitive effect.85 While this finding is probably correct as a matter of antitrust law, this approach is clearly in tension with that of Keeler, reflecting a completely different baseline upon which IP rights are considered. In Keeler, IP rights were centered on the notion of appropriability; the question that the Court considered (answering in the negative) was whether IP rights should be extended beyond that baseline. By contrast, in Heaton-Penninsular IP rights were analyzed as an open ended concept, with no clear baseline or boundary. The question that the Court considered (also answering in the negative) was whether a boundary should be created, given the alleged anticompetitive effects of the challenged restrictions. Judge Lurton, in rejecting the appeal, noted that what defendants have asked of him is “to mark another boundary line around the patentee’s monopoly, which will debar him from engrossing the market for an article not the subject of the patent”.

This framing of the problem, however, conflates two issues – that of a boundary line around IP rights, and that of the patentee’s ability to ‘engross’ the market for staples. Ultimately, this is

83 Id., at 290-291.
84 The Court did say that it is “not at all prepared to say that there are no limitations upon a patentee’s power of contract with reference to the use of his inventions by others.” Id., at 292-293. However, it gave no guidelines as to when such limitation may be imposed. Furthermore, it held that no such limitation may be placed where “the only reason for... limitation... is that a monopoly in [an] unpatented article may thereby be created.” Id., at 294.
85 The antitrust analysis in the case is remarkably advanced for the period. In a short passage, Judge Lurton explains both the real purpose of the restrictions, namely price discrimination according to levels of use, and explains the fallacy of the monopoly-leveraging theory put forward by the defendants (Id., at p. 296):

The fasteners are thus made the counters by which the royalty proportioned to the actual use of the machine is determined. This method of licensing their mechanism may or may not result in the engrossment of the market for staples. So long as their invention controls the market for button-fastening appliances, and to the extent that their machines shall supersede other modes of clinching staples, just so long will they be enabled to control the market for staples. Their monopoly in an unpatented article will depend upon the merit of their patented device, and the extent to which other clinching devices are superseded by it... The monopoly in the unpatented staple results as an incident from the monopoly in the use of complainant's invention, and is therefore a legitimate result of the patentee's control over the use of his invention by others. Depending, as such a monopoly would, upon the merits of the invention to which it is a mere incident, it is neither obnoxious to public policy, nor an illegal restraint of trade.
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where the decision fails: It does not explain why such engrossing, regardless of its anticompetitive effects, must be done as a matter of property law, rather than simply as a matter of contract law. Arguably, this was the exact question that was addressed by the Supreme Court in *Keeler*.

The Supreme Court dealt directly with the IP-antitrust intersection for the first time in *E. Bement & Sons v. Nat’l Harrow Co.* In that case, the Court was asked to review the legality, under the Sherman Act, of a patent-licensing-agreement which stipulated that the licensee could manufacture and sell patented harrows subject to certain restrictions, including restrictions regarding the geographical area where the harrows may be sold, the type of harrows that may be sold and the price that may be charged for them. The case was brought in state court on a theory of breach of contract. It came before the Supreme Court presenting the single federal question of legality of the contract in question under antitrust law. Examining the interaction between the antitrust laws and the patent laws, the Court held:

> [T]he general rule is absolute freedom in the use or sale of rights under the patent laws of the United States. The very object of these laws is monopoly, and the rule is, with few exceptions, that any conditions which are not in their very nature illegal with regard to this kind of property, imposed by the patentee and agreed to by the licensee for the right to manufacture or use or sell the article, will be upheld by the court [Emphasis added].

When read in context, *Bement*’s applicability to the issues resolved in *Keeler* should have been limited at best: *Bement*, as a case sounding in contract, had nothing to do with the first sale doctrine or with IP-based PSRs. In fact, it did not even involve the sale of a patented *product*, as distinct from the licensing of a patent. Thus, it is not surprising that its analysis, unlike that of *Keeler*; focused exclusively on the *legality* of restrictions imposed by IP owners, rather than on the *power* of IP owners to impose such restrictions as a matter of property law – a question that was never before the Court. Unfortunately, the Court’s sweeping language caused subsequent courts to overlook these distinctions. In the years immediately following *Bement*, several lower courts cited it for the proposition that:

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86 Judge Lurton acknowledges the fact that his model allows the patentee a choice between contractual and patent remedies; Id., at 291.
87 186 U.S. 70 (1902).
88 Id., at 91.
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[A]rticles made under patents may be the subject of contracts by which their use and price in subsales may be controlled by the patentee, and… such contracts, if otherwise valid, are not within the terms of the act of Congress against restraints of interstate commerce… any one who violates the restrictions imposed by the patentee, with notice, is an infringer.89

In these decisions, as in Heaton-Penninsular, the question was framed as one of legality, not power. The first sale doctrine was thus framed as a reflection of general antitrust doctrine. Once a restriction was found to be legal – either because it posed no anticompetitive threat (as in Heaton-Penninsular) or because it was immune to antitrust scrutiny (as in the post-Bement decisions), the first sale doctrine did not apply.

D. The Property-Antitrust Interplay

In the years following Heaton-Penninsular and Bement, the Supreme Court’s position on the first sale doctrine vacillated for several years.

In 1908, the Court first examined the first-sale question in the context of copyrighted goods. In Bobbs-Merrill Co. v. Straus,90 an often quoted decision, the Court reviewed a resale-price-maintenance scheme whereby the owner of copyrights in a book affixed to the books a written notice stating: “The price of this book at retail is $1 net. No dealer is licensed to sell it at a less price, and a sale at a less price will be treated as an infringement of the copyright.”91 Expressly distinguishing both Heaton-Penninsular and Bement,92 the Court also overlooked the fact that the challenged notice clearly came within the ‘contracts brought home to the purchaser’ that – under Keeler - could only give rise to a claim in contract (assuming they meet the requirements for forming a binding contract). This oversight led the Court to conclude that “[a]
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case such as the present one, concerning inventions protected by letters patent of the United States, has not been decided in this court, thereby missing a golden opportunity to develop Keeler into a comprehensive IP doctrine that applies indiscriminately to both patented and copyrighted goods. That flaw notwithstanding, the basic holding in Bobbs-Merryl mimicked Keeler (albeit inadvertently) in most respects:

[T]he copyright statutes, while protecting the owner of the copyright in his right to multiply and sell his production, do not create the right to impose, by notice… a limitation at which the book shall be sold at retail by future purchasers, with whom there is no privity of contract. This conclusion is reached in view of the language of the statute, read in the light of its main purpose to secure the right of multiplying copies of the work… The owner of the copyright in this case did sell copies of the book… [and thereby] has exercised the right to vend.

The rule announced in Bobbs-Merryl was enacted into the Copyright Act within a year of the decision, and remains a statutory copyright doctrine to this very day. By contrast, no such statutory provision was introduced into the Patent Law. In many senses, therefore, Bobbs-Merryl fared better than its patent law counterparts.

Three years later, however, in the 1911 decision Dr. Miles Medical Co. v. John D. Park & Sons Co., announcing the per-se illegality of vertical price maintenance outside the IP arena, the Court (mis)read Bobbs-Merrill for the proposition that vertical price maintenance in connection with copyrighted goods is illegal, rather than merely outside scope of the copyright law. In fact, this erroneous reading of Bobbs-Merrill was used as justification for the Court’s ultimate holding, because “[i]t will hardly be contended… that the manufacturer of an article of

93 Id., at 343.
94 The Court went on to question the very applicability of patent decisions to copyright cases, noting “that there are differences between the patent and copyright statutes in the extent of the protection granted by them”, and that therefore separate analysis is warranted. This comment by the Court, while maybe true in other contexts, completely ignores the common policy rationales underlying both IP regimes in the context of first sales. Furthermore, it ignores the similarity that existed at the time between the relevant statutory provisions - the Patent Law’s grant of an exclusive right to “vend”, compared with the Copyright Act’s grant of an exclusive right to reproduce compositions, coupled with a right of “vending” them. As noted by the Supreme Court in a later decision: “So far as the use of the terms ‘vend’ and ‘vending’ is concerned, the protection intended to be secured is substantially identical. The sale of a patented article is not essentially different from the sale of a book…” Bauer & Cie v. O’Donnell, 229 U.S. 1, 13 (1913); and see discussion of that decision infra.
95 Id., at 350-351.
97 220 U.S. 373 (1911). The decision has been widely critiqued; see, e.g., Richard A. Posner, “The Next Step in the Antitrust Treatment of Restricted Distribution: Per Se Legality”, 48 Uni. Chi. L. Rev. 6 (1981). Nonetheless, it is still good (or at least prevailing) law. In December 2006, however, the Supreme Court has agreed to review this longstanding precedent, granting certiorari in Leegin Creative Leather Products, Inc. v. PSKS, Inc., 127 S.Ct. 763 (2006).
commerce not protected by any statutory grant is in any better case [than the manufacturer of copyrighted goods].”

A year after Dr. Miles, its effect on IP-based tying cases was examined in Henry v. A.B. Dick Co. Justice Lurton – now in the Supreme Court – seized the opportunity to entrench his Heaton-Pennisular analysis. Just as in Heaton-Pennisular, the case involved a tying-type PSR requiring the exclusive use of (non-patented) A.B. Dick (“ABD”) ink in patented ABD mimeographs. ABD alleged that defendants supplied ink to buyers of patented mimeographs despite defendant’s familiarity with the restriction imposed on the mimeograph’s use, thereby contributorily infringing ABD’s patent. Defendants countered by arguing that ABD’s allegations give rise to a claim in contract, not patent, and therefore jurisdiction lay with the relevant state court rather than with the federal court.

Following his analysis in Heaton-Pennisular, Justice Lurton confined Adams and its progeny to unconditional sales, and held that conditional sales give rise to patent infringement claims if the conditions are not met. However, where Heaton-Pennisular included a well founded antitrust analysis of the specific challenged condition, A.B. Dick includes no such analysis, instead relying on Bement for the proposition that virtually any IP-related PSR would be lawful. Nowhere in the decision is there any explanation as to why IP rights should be thus extended. Instead, the decision revolves around the assumption that the right to sell conditionally must flow from the right of patentees to refrain from exercising their inventions altogether, as the lesser of two anticompetitive evils. This assumption is analytically dubious, because conditional sales are not necessarily more benign than refusals to sell. Moreover, this

98 Id., at 384. The effect of Dr. Miles on the first sale doctrine is not inconsequential, even under the property-based analysis suggested in Keeler. While similar holdings can be found in the common law, Dr. Miles did authoritatively clarify for the first time the status of the general law concerning resale price maintenance, while giving an indication regarding the potential enforceability of contractual PSRs in general. Following Dr. Miles, it became abundantly clear that IP owner who elect to bring infringement claims to enforce their PSRs are not merely arguing a jurisdictional issue, but are likely arguing the ultimate fate of their agreement. Dr. Miles has therefore clearly raised the stakes involved in cases involving the first sale doctrine.

99 224 U.S. 1 (1912).

100 The assumption is based on the deeply flawed notion that conditional sales are somehow a ‘lesser’ form of an outright refusal to sell, i.e. that these are two phenomena that can be placed on a common scale of severity, with outright refusal being a more extreme form of imposing conditions. In fact, these are very different phenomena, whose effects are context-related and therefore not amenable to any overarching comparisons. Take for example the following three scenarios. First, assume that pharmaceutical company A decides not to exercise a patent it is holding; this would usually have no clear effect on the market, leaving it in the same state as before A’s invention was made. Next, assume that A decides to manufacture and sell the patented drug itself. This would arguably drive out of the market some or all manufacturers of inferior products, and might even give A certain market power. Next, assume that A announces that it would sell its drug to all its competitors for resale, under a restriction that any competitor who buys the drug for resale may not market any competing drug. Such an arrangement could potentially allow A and its competitors to share monopolistic profits in the market for the patented drug, depressing both competition and
assumption is clearly inconsistent with the common law’s doctrine against servitudes on chattels; with Dr. Miles; and with Bobbs-Merryl’s copyright-related first sale doctrine – three doctrines suggesting that a right not to deal does not automatically grant property owners the right to deal conditionally.\footnote{Justice Lurton was not yet on the Supreme Court bench in the day of Bobbs-Merryl. However, he wrote the opinion of the Court of Appeals in Dr. Miles Medical Co. v. John D. Park & Sons Co., 164 F. 803 (6th Cir., 1908). In that decision, Judge Lurton found that vertical price maintenance with respect to unpatented goods is illegal under the common law and the Sherman Act, whereas price maintenance of patented goods is shielded from the Sherman Act and is therefore legal.}

Echoes of A.B. Dick shadow the analysis in several subsequent decisions, undermining their analytic clarity. In Bauer & Cie v. O’Donnell,\footnote{229 U.S. 1 (1913).} a case involving essentially the same facts as in Bobbs-Merryl but with respect to patented articles, Justice Day attempted to make some sense of the disparity between his own opinion in Bobbs-Merryl and Justice Lurton’s opinion in A.B. Dick. Reluctant to overrule A.B. Dick, he distinguished it based on a purported difference between the exclusive right to use inventions (which was the subject of the challenged PSR in A.B. Dick) and the right to vend them. This distinction, however, has little to commend it. Ultimately, it is unclear whether the Court was more concerned with delineating a boundary around IP rights (à la Adams, Keeler and Bobbs-Merryl) or with the effects of vertical price restraints (à la Dr. Miles). Similar murkiness befell the Court’s analysis in Straus v. Victor Talking Machine Company\footnote{243 U.S. 490 (1917).} in which a patentee allegedly ‘licensed’, rather than sold, patented sound reproducing machines subject to a restriction concerning minimum resale (or re-licensing) price. On the one hand, the Court relied for its ultimate holding on Adams and Bauer, finding that the distinction between the sales agreements in those cases and the ‘licenses’ employed by defendant Victor was one without a difference\footnote{Id., at 500-501.}; on the other hand, the Court framed the issue before it as “whether [the challenged licensing scheme] is a device unlawfully resorted to in an effort to profitably extend the scope of [the] patent at the expense of the general public”\footnote{Id., at 497-498 (emphasis added).}

This murkiness was even more pronounced in a seminal case decided on the same day as Straus, Motion Picture Patents Company v. Universal Film Manufacturing Company, that
concerned an IP-related tying arrangement. The case involved facts that were essentially identical to those presented in *A.B. Dick*, with mimeographs being substituted for mechanisms used in film projectors, and a restriction requiring that they be used “solely for exhibiting or projecting motion pictures… leased by a licensee of the licensor.” The question certified by the Court was also essentially identical. However, Justice Lurton had passed away three years earlier, and it was Justice Clarke’s turn to rewrite the law on the issue.

Citing *Keeler*, the Court sensibly limited its inquiry to the power of patentees as a matter of patent law, noting that the power of patentees to impose restrictions “by special contract… is a question outside the patent law, and with it we are not here concerned.” Just as sensibly, the Court rejected *Bauer & Cie*’s distinction between the exclusive right to “vend” and the exclusive right to “use”, finding that the Court’s holding in that case is incompatible with its holding in *A.B. Dick*. The analysis that followed, however, was only loosely concerned with the power of patentees as dictated by patent law rationales; instead, its main concern was the alleged anticompetitive effects of tying arrangements:

The perfect instrument of favoritism and oppression which such a system of doing business, if valid, would put into the control of the owner of such a patent, should make courts astute, if need be, to defeat its operation. If these restrictions were sustained, plainly the plaintiff might, for its own profit or that of its favorites, by the obviously simple expedient of varying its royalty charge, ruin anyone unfortunate enough to be dependent upon its confessedly important improvements for the doing of business.

And, in summarizing its holding:

A restriction which would give to the plaintiff such a potential power for evil over an industry which must be recognized as an important element in the amusement life of the nation, under the conclusions we have stated in this opinion, is plainly void, because wholly without the scope and purpose of our

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107 Id., at 506. In *Motion Picture Patents* the plaintiff admitted that its patent was an essential part of film projectors, granting it a monopoly in the market for film projectors; however, as discussed *infra*, the decision did not revolve around this facet of the case.
108 Id., at 509.
109 Id., at 509.
110 Id., at 515.
patent laws, and because, if sustained, it would be gravely injurious to that public interest, which we have seen is more a favorite of the law than is the promotion of private fortunes.\footnote{Id., at 519.}

\emph{Motion Picture Patents} is one of those cases where two negatives make a positive. As the following sections will demonstrate, the outcome of the decision – the overruling of \textit{A.B. Dick} and \textit{Heaton-Pennisular} – was correct. Unfortunately, it appears that the Court had reached this outcome for all the wrong reasons. The cardinal flaw in Lurton’s analysis – complete disregard to the rationales underlying the IP laws – remained almost completely unchanged. By contrast, Judge Lurton’s sound antitrust analysis was substituted for a half-baked theory of patent-leveraging.\footnote{An economic argument explaining the purpose of the challenged tying arrangement, which is reminiscent of the argument that was accepted by the court in \textit{Heaton-Pennisular}, was raised in \textit{Motion Picture Patents}, only to be summarily rejected by the Court in the following harsh, yet unfounded, passage (id., at 516-517): It is argued as a merit of this system of sale under a license notice that the public is benefited by the sale of the machine at what is practically its cost, and by the fact that the owner of the patent makes its entire profit from the sale of the supplies with which it is operated. This fact, if it be a fact, instead of commending, is the clearest possible condemnation of, the practice adopted, for it proves that, under color of its patent, the owner intends to and does derive its profit, not from the invention on which the law gives it a monopoly, but from the unpatented supplies with which it is used, and which are wholly without the scope of the patent monopoly, thus in effect extending the power to the owner of the patent to fix the price to the public of the unpatented supplies as effectively as he may fix the price on the patented machine.} Unsurprisingly, this confused analysis served as a springboard for the development of a separate doctrine, patent misuse, that is expressly aimed at addressing anticompetitive concerns in connection with IP.\footnote{“Although \textit{Motion Picture Patents Co.} simply narrowed the scope of possible patent infringement claims, it formed the basis for the Court's subsequent decisions creating a patent misuse defense to infringement claims when a patentee uses its patent 'as the effective means of restraining competition with its sale of an unpatented article'.” \textit{Illinois Tool Works Inc. v. Independent Ink, Inc.}, 126 S.Ct. 1281, 1288 (2006)(citing Morton Salt Co. v. G.S. Suppiger Co., 314 U.S. 488, 490 (1942)).} The patent misuse doctrine, as framed in subsequent decisions,\footnote{See, for example, \textit{Carbice Corporation of America v. American Patents Development Corporation}, 283 U.S. 27 (1931); \textit{Morton Salt}, id.; \textit{Mercoid Corporation v. Mid-Continent Inv. Co.}, 320 U.S. 661 (1944).} created an overarching prohibition (albeit only a defensive one) against \textit{any} ‘extension’ of patents,\footnote{\textit{Although Motion Picture Patents Co.} simply narrowed the scope of possible patent infringement claims, it formed the basis for the Court's subsequent decisions creating a patent misuse defense to infringement claims when a patentee uses its patent 'as the effective means of restraining competition with its sale of an unpatented article'.” \textit{Illinois Tool Works Inc. v. Independent Ink, Inc.}, 126 S.Ct. 1281, 1288 (2006)(citing Morton Salt Co. v. G.S. Suppiger Co., 314 U.S. 488, 490 (1942)).} regardless of whether such extension involves the sale of a patented
For all its faults, *Motion Picture Patents* did manage to regain the unitary analysis of all IP-based PSRs. This effect was reiterated a year later in *Boston Store of Chicago v. American Graphophone Company*[^117], a case involving the sale of patented graphophones with an attached notice concerning resale prices.[^118] Chief Justice White, writing for the Court, turned the case to a review of the Court’s jurisprudence, stating that “every doctrine which is required to be decided in answering the questions [presented] is now no longer open to dispute, as the result of prior decisions of this court.”[^119] Explaining the Court’s holding in *Motion Picture Patent*, he explained:

> The case therefore directly involved the general question of the power of the patentee to sell and yet under the guise of license or otherwise to put restrictions… Comprehensively reviewing the subject, it was decided that the rulings in *Bauer v. O'Donnell* and *Straus v. Victor Talking Machine Co.* conflicted with the doctrine announced and the rights sustained in *Henry v. Dick*, and that case was consequently overruled. Reiterating the ruling in the two last cases it was again decided that as by virtue of the patent law one who had sold a patented machine and received the price and had thus placed the machine so sold beyond the confines of the patent law, could not by qualifying restrictions as to use keep under the patent monopoly a subject to which the monopoly no longer applied.

Based on this review of the cases, he then concluded:

> [T]here can be no doubt that… the power to make [a PSR] in derogation of the general law was not within the monopoly conferred by the patent law and that the attempt to enforce its apparent obligations under the guise of a patent infringement was not embraced within the remedies given for the protection of the rights which the patent law conferred.[^120]

By 1918, therefore, the first sale doctrine was well entrenched in the Supreme Court’s

[^116]: For a full inquiry into the folly of this doctrine and the remedies it prescribes see, for example, Mark A. Lemley, “The Economic Irrationality of the Patent Misuse Doctrine”, 78 Cal. L. Rev. 1599 (1990); for a different (and I believe incorrect) view, see Robin C. Feldman, “The insufficiency of Antitrust Analysis for Patent Misuse”, 55 Hastings L.J. 399 (2003).

[^117]: 246 U.S. 8 (1918).

[^118]: The question certified by the Court was “whether the right to make the price maintenance stipulation in the contract stated and the right to enforce it were secured by the patent law.” Id., at 20.

[^119]: Id., at 20-21.

[^120]: Id., at 26.
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jurisprudence. The concurrence in *Boston Graphophone* by Justice Brandies, one of the main opponents of the doctrine in previous cases, is illustrative of just how well entrenched the doctrine had become (id., at 28.):

On that question I have expressed elsewhere views which differ apparently from those entertained by a majority of my brethren. I concur, however, in the answers given herein to all the questions certified; because I consider that the series of cases referred to in the opinion settles the law for this court. If the rule so declared is believed to be harmful in its operation, the remedy may be found, as it has been sought, through application to the Congress [emphasis added].

The exclusive right to use exists only under patent law. The legitimacy of restrictions on use under copyright law (or rather lack thereof) will be discussed below.


Id., at 125:

[T]he following questions which had been presented by the petition for certiorari.

1. Can the owner of a patent, by means thereof, restrict the use made of a device manufactured under the patent, after the device has passed into the hands of a purchaser in the ordinary channels of trade, and full consideration paid therefor?

Keeler, Bobbs-Merryl and Boston Store arguably put to rest any questions concerning its scope and rationales. Their analysis is straightforward: (i) IP rights are intended to protect the ability to appropriate a return on one’s invention/creative work; (ii) with the sale of an IP-related product (in the U.S.) the IP-owner appropriates a return on the rights to use and/or sell the IP as embodied in the specific product; ergo (iii) this aspect of the IP rights does not require further protection under the IP laws, and shall receive none; however (iv) this conclusion has no bearing on the power of IP owners to restrict the rights of putative buyers of their products through contract. With the law thus settled, it should come as no surprise that the first sale doctrine was seldom revisited by the Supreme Court following its decision in *Boston Store*. Nevertheless, before turning to the current critique of the first sale doctrine, two later decisions are worth mentioning, as they have some bearing on the current analysis of the doctrine.

In *General Talking Pictures Corp. v. Western Electric Co.* a patentee granted licenses to several manufacturers to manufacture and sell its patented amplifiers. Each licensee was allowed to sell the amplifiers to purchasers in a distinct field of use – either commercial or private – and was required to attach a corresponding notice restricting the field of use to each amplifier it sold. Defendant General Talking Pictures ordered and purchased several such amplifiers, for commercial use, from a private-use licensee. Both the licensee and General Talking Pictures had full knowledge that the amplifiers are purchased in breach of the licensing agreement.

The questions certified by the Court related directly to the first sale doctrine.
However, Justice Brandeis, writing for the Court, expressly avoided these questions, finding instead that the amplifiers at issue “were not manufactured or sold ‘under the patent(s)’”. His analysis followed the following steps: (i) the license agreement itself is legal; hence (ii) the amplifiers were knowingly manufactured and sold outside the scope of the license (and hence not “under the patents”); (iii) as General Talking Pictures knew this fact, “it is in no better position than if it had manufactured the amplifiers itself without a license.” Justice Black, in a scorching dissent, reviewed the history of the first sale doctrine since Adams and before, and found that the doctrine applies in full force to the facts stated.

Justice Brandeis’ decision is somewhat of an anomaly, with its scope not clearly defined. To be sure, the decision was not meant to overrule the first sale doctrine, or even to substantially narrow it. The decision most convincingly reads as one concerning active inducement to infringe, a situation which revolves around – and requires – intent to infringe on the part of both the licensee and the ultimate buyer. Even in this narrow sense, the holding does blur the bright line rule of the first sale doctrine; it does not, however, undermine its core.

That the first sale doctrine’s core analysis remained intact after GTM was aptly demonstrated by several subsequent decisions. U.S. v. Univis Lens Co. is illustrative of these. The case involved an antitrust action brought against Univis, the owner of several patents on bifocal lenses. Univis used to sell patented lens-blanks to retailers subject to minimum-resale-

2. Can a patent owner, merely by a 'license notice' attached to a device 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 device?

125 Id.
126 Id., at 127.
127 Citing to Hobbie, Keeler and their progeny, Justice Black held:
Notice to the purchaser in any form could not—under the patent law—limit or restrict the use of the amplifiers after they were sold and knowledge by both vendor and purchaser that the articles were purchased for use outside the 'field' for which the vendor had been given the right to sell, made the transaction between them no less a sale. 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.

128 Any other reading of the decision would mean that the Court has decided the questions before it (see supra note 124) – questions which the Court expressly refused to decide, stating that “neither question should be answered”.
129 Both the Supreme Court and the Federal Circuit have repeatedly held that contributory infringement hinges upon the intent of the accused party. See Aro Mfg. Co. v. Convertible Top Replacement Co., 377 U.S. 476, 488 (1964) (stating that 35U.S.C. §271(c) requires a showing that an alleged contributory infringer knew that acts would be infringing); Ferguson Beauregard/Logic Controls, Div. of Dover Resources, Inc. v. Mega systems, LLC, 350 F.3d 1327, 1342 (Fed. Cir. 2003)(stating that 35 U.S.C. §271(b) requires a showing that an alleged contributory infringer by inducement “possessed specific intent to encourage another's infringement”).
price agreements; the retailers then polished the lenses according to their clients’ prescriptions before reselling them. The Court, in one of the clearest property-based first sale analyses since Keeler, declared that patent rights are intended only to “enable [the patentee] to secure the financial rewards for his invention”,131 and then – reviewing the first-sale cases since Adams – held:

Our decisions have uniformly recognized that the purpose of the patent law is fulfilled with respect to any particular article when the patentee has received his reward for the use of his invention by the sale of the article, and that once that purpose is realized the patent law affords no basis for restraining the use and enjoyment of the thing sold… The first vending of any article manufactured under a patent puts the article beyond the reach of the monopoly which that patent confers… Accordingly neither the Lens Company nor the Corporation, by virtue of the patents, could after the sale of the lens blank exercise any further control over the article sold.132

Univis clearly reaffirmed Keeler’s analysis: Resale price maintenance is beyond the power conferred by the patent law, regardless of its legality under general law principles. It is against the backdrop of this analysis that the current judicial trends, as well as the doctrine’s critique in academia, will be examined.

PART IV: FIRST SALE DOCTRINE – RECENT TRENDS AND CRITIQUES

A. Patent Law

With the law on the issue seemingly well settled, the first sale doctrine was rarely examined by the Supreme Court after the 1940’s. Several cases involving patented products mentioned the doctrine in passing,133 but none included a full blown discussion of the doctrine, its implications or its scope. Lower courts opinions regarding the doctrine were similarly few. It was not until a full decade has elapsed since the formation of the Federal Circuit, in 1992, that the issue first came up for review by that court. The analysis that the Court applied, now

131 Id., at 250.
132 Id., at 251-252. It should be noted that the only mention of GTM in the decision was a cite to Justice Black’s dissent and the cases it cites.
133 See supra note 130 and the decisions there.
entrenched in 15 years’ worth of that court’s jurisprudence, was based on denial of the doctrine’s very existence, effectively reading the doctrine – and over a century of Supreme Court adjudication – out of the law books.

The case that came before the Federal Circuit, *Mallinckrodt, Inc. v. Medipart, Inc.*, involved the sale of patented nebulizers (a machine which generates a mist of radioactive or therapeutic substances for inhalation by patients) to hospitals. The nebulizers were inscribed with a notice reading “Single Use Only”. Defendant Medipart nevertheless offered ‘reconditioning’ of used nebulizers, allowing hospitals to use the same nebulizer repeatedly. Mallinckrodt, the patentee, sued Medipart for direct and contributory patent infringement. The District Court for the Northern District of Illinois, after a thorough review of the Supreme Court’s decisions regarding the first sale doctrine, granted summary judgment of non-infringement.135 Mallinckrodt appealed.

The Federal Circuit took four steps on its way to reversing the District Court’s holding, along with a century of Supreme Court precedent. As a first step, the court adopted a narrow reading of *Bauer*, *Straus*, *Boston Store* and *Motion Picture Patents*, summing these cases up as follows:

> These cases established that price-fixing and tying restrictions accompanying the sale of patented goods were per se illegal. These cases did not hold, and it did not follow, that all restrictions accompanying the sale of patented goods were deemed illegal.136

As noted before, these cases stood for anything but the proposition suggested by the court. All four cases were concerned, either exclusively or predominantly, with an inquiry into the power of patentees to impose PSRs as a matter of patent law, and not with their legality. As the Supreme Court noted in *Boston Store*, it had before it two distinct inquiries, namely whether

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134 976 F.2d 700 (Fed. Cir. 1992).
135 *Mallinckrodt, Inc. v. Medipart, Inc.*, 1990 WL 19535 (N.D.Ill. 1990). While the District Court’s review of precedents is thorough, the court also assumes that the basis for the first sale doctrine is “a pragmatic judgment that, in general, people both expect and should be able to use the goods they purchase without restraints”. Id., at *8. If this was the case, one would assume that the restrictions would not be enforceable as a matter of general law as well – an issue the District Court expressly refrains from deciding.
136 *Mallinckrodt*, 976 F.2d at 704. This finding was predicated on the Federal Circuit’s assertion that “The district court’s ruling that Mallinckrodt’s restriction on reuse was unenforceable was an application of the doctrine of patent misuse, although the court declined to use that designation”. Id., at 703–704. In fact, the district court’s decision was predicated in its entirety on the first sale doctrine, and its analysis was thus directed exclusively at ascertaining the power of patentees to impose property-type PSRs, and not – as in the case of patent misuse – the legality thereof. See, for example, 1990 WL 19535, *8* (noting that the court does not intimate an opinion as to the enforceability of the
the right to impose PSRs was either (i) “secured” by the patent law; or (ii) “valid” under the general law.137 “Validity” of such restrictions under the patent law, if within the power of the patentee, was never in contention in that case, and was only a secondary question in the others. Moreover, the court’s attempt to limit the holdings to two specific types of PSRs is directly contradicted by the holdings of both Boston Store and Motion Picture Patents, in which the Supreme Court expressly held that Bauer and Straus - cases dealing with vertical price restraints – are incompatible with A.B. Dick - a case dealing with a tie-in. If Boston Store or Motion Picture Patent were predicated on a theory that outlawed specific types of PSRs, the Court would have found A.B. Dick inapposite to any of the resale price maintenance cases.

As a second step, the court held that other types of PSRs – i.e. those that do not involve tying or vertical price maintenance – can be maintained as a matter of patent law. To reach this conclusion, the court turned to GTM, citing it for the proposition that “[T]he practice of granting licenses for restricted use is an old one… [and] its legality has never been challenged”.138 This statement in GTM, however, referred to the license agreement between the patentee and its manufacturing licensees, and not to the PSRs which these licensees were required to impose on their buyers.139 The court then expounded its reading of GTM in the following way:

The Supreme Court stated the question as “whether the restriction in the license is to be given effect” against a purchaser who had notice of the restriction. The Court observed that a restrictive license to a particular use was permissible, and treated the purchaser's unauthorized use as infringement of the patent, deeming the goods to be unlicensed as purchased from the manufacturer... Medipart offers neither law, public policy, nor logic, for the proposition that the enforceability of a restriction to a particular use is determined by whether the purchaser acquired the device from a manufacturing licensee or from a manufacturing patentee. We decline to

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137 Boston Store, 246 U.S. at 20. See also Bauer, 229 U.S. at 12 (reading (and following) Bobbs Merrill for the proposition that with the first sale “the right secured by the statute was exhausted”); and Motion Picture Patents, 243 U.S. at 516, where the Court reads Bauer for the proposition that “the right to vend is exhausted by a single, unconditional sale, the article sold being thereby carried outside the monopoly of the patent law and rendered free of every restriction which the vendor may attempt to put upon it,” and finding that the “right to ‘use’ a patented machine is not greater, indeed, it is exactly the same,” and hence susceptible to similar exhaustion upon the first sale.

138 Mallinckrodt, 976 F.2d at 705 (citing GTM, 305 U.S. at 127).

139 That a patentee can impose restrictions in the context of a legitimate license arrangement is unremarkable, and was always the case; the licensees in Adams, Hobbie and Keeler were all subject to territorial restrictions whose legality was never in doubt. In fact, it was the distinction between licenses – which may be restricted – and sales – which may not – that motivated patentees in cases like Straus to label their sales ‘licenses’, albeit to no avail.
make a distinction for which there appears to be no foundation.\textsuperscript{140}

The court’s quote from \textit{GTM} is again inaccurate, for three reasons. First, the quote refers (as before) to the manufacturing license, and not the PSRs. Second, the Supreme Court in \textit{GTM} did not suggest that its inquiry concerns the effect ‘against a purchaser who had notice…’, nor did it treat the purchaser’s unauthorized use as infringement. The Supreme Court’s holding in \textit{GTM} was predicated on the fact that the amplifiers were \textit{manufactured} outside the ambit of that license. The effect of the license was therefore examined, first and foremost, as against \textit{the licensee,} with the purchaser being only secondarily liable, on account of its inducement to infringe – not its actual use.\textsuperscript{141} Third and foremost, the Federal Circuit reads \textit{GTM} for the proposition that patentees may restrict the use made of patented devices by subsequent purchasers thereof, regardless of the intervening sale. However, this is the very proposition which the Supreme Court in \textit{GTM} declined to rule upon, namely “can the owner of a patent, by means thereof, restrict the use made of a device manufactured under the patent.”\textsuperscript{142} Moreover, if \textit{GTM} really did stand for this proposition, it can hardly be considered good law after the Supreme Court expressly held in \textit{Univis} – four years after \textit{GTM} - that once a sale of patented goods is consummated, “the patent law affords no basis for restraining the use and enjoyment of the thing sold.”\textsuperscript{143}

As a result of these inaccuracies, the court’s ultimate conclusion is unfounded as a matter of law. \textit{GTM}, even if correctly decided, does not hold patent-based PSRs enforceable against purchasers of embodiments, except in the limited circumstances of inducement to infringe. This limited holding justifies the distinction which eluded the court: while a purchaser can induce infringement by a licensee, it cannot induce infringement by the actual patentee, who simply cannot infringe its own patent.\textsuperscript{144}

\textsuperscript{140} Id., at 705 (citing \textit{GTM}, id.)
\textsuperscript{141} As the Federal Court noted, the Supreme Court expressly noted that it had “no occasion” to examine the rights of the purchaser if the amplifier had been manufactured ‘under the patent’ and ‘had passed into the hands of the purchaser in the ordinary channels of trade’, nor to examine the effect of the notice attached to the patented amplifiers. \textit{GTM}, at 127.
\textsuperscript{142} Id., at 125.
\textsuperscript{143} \textit{Univis}, 316 U.S. at 251.
\textsuperscript{144} The Federal Circuit asserts that this is ‘formalistic line drawing’ of the kind that was denigrated by the Supreme Court in \textit{Continental T.V., Inc. v. GTE Sylvania, Inc.}, 433 U.S. 56, 57-59 (1977), in which the Supreme Court found that in the antitrust context, vertical restraints (regarding unpatented goods) should be subject to similar antitrust analysis, regardless of the underlying structure of the transaction. \textit{Mallinckrodt}, 976 F.2d at 705. This analogy is problematic for two reasons. First, it is founded on the Federal Circuit’s (incorrect) assumption that limitations on patent-based PSRs must be justified in terms of their anticompetitive effect, which – just like in \textit{Continental T.V.} – depend more on substance
As a third step, the court distinguished *Adams* and its progeny, by relying heavily on *Mitchell* and thus reading them for the proposition that only the “unconditional sale of a patented device exhausts the patentee's right to control the purchaser's use of the device [but] the sale of patented goods, like other goods, can be conditioned. The principle of exhaustion of the patent right did not turn a conditional sale into an unconditional one.”  

In reaching this conclusion, the court ignored the fact that neither *Adams* itself nor any of the cases following it narrowed their holding to unconditional sales, that *Keeler* expressly states that *Adams* expanded on *Mitchell*’s holding, that *Bauer* and its progeny expressly relied on *Adams* for the proposition that PSRs are “beyond the protection and purpose of the [patent] act”, and that this very reading of *Adams* was the cornerstone of the defunct view held by Justice Lurton in *Heaton Pennisular* and *A.B. Dick*. Moreover, nothing in the decision explains why the Supreme Court has taken the time to repeatedly announce, in several decisions, a trivial rule such as that put forward by the Federal Circuit, namely that unconditional sales are unconditional. Of course, the court did not abolish the first sale doctrine; it chose to kill it softly, reducing it to a shadow of its former self.

As a fourth and final step, following in the footsteps of the Supreme Court’s antitrust analysis, the court held that patent-based non-price-related PSRs will be subject to a special rule of reason analysis. As a first stage of this analysis, a determination has to be made as to

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145 *Id.*, at 706.
146 *Bauer*, 229 U.S. at 620; *Starus*, 243 U.S. at 501. See also *Univis*, 316 U.S. at 251 (citing *Adams* and *Keeler* for the proposition that post sale “the patent law affords no basis for restraining the use and enjoyment of the thing sold”).
147 In a footnote, the court also attempted to distinguish *Keeler*’s express statement that questions concerning the validity of contractual restrictions “would arise as a question of contract, and not as one under the inherent meaning and effect of the patent laws,” arguing that while the question whether a license restriction is binding is one of contract law, the remedy for its breach – if binding – is not exclusively in contract. This interpretation of *Keeler* goes against that decision’s plain language, its rationale, and its interpretation in subsequent decision. If the Court in *Keeler* wanted to limit its holding to unconditional sales, it would have said that the question of restrictions is not before it, rather than saying that it is a question of contract rather than patent law (and not before it). See also *Motion Picture Patents*, 243 U.S. at 509, citing *Keeler* for the proposition that “the extent to which the use of the patented machine may validly be restricted… by special contract between the owner of a patent and the purchaser… is a question outside the patent law.”
148 See Julie E. Cohen & Mark A. Lemley, “Patent Scope and Innovation in the Software Industry”, 89 Cal. L.Rev. 1, 33-35 (noting that *Mallinckrodt* “could signal the death of the exhaustion doctrine, at least in any case where the patentee is smart enough to unilaterally (or after the fact) characterize the sale as a limited license instead.”)
149 The court cites *Continental T.V.* and *Business Electronics Corp. v. Sharp Electronics Corp.*, 485 U.S. 717 (1988), two cases holding that
whether the restriction is “reasonable within the patent grant”.\(^{150}\) Next, and only if this part of the analysis shows that the restriction has “anticompetitive effects extending beyond the patentee’s right to exclude”, the restriction would be analyzed to see if its effect “tends to restrain competition unlawfully in an appropriately defined relevant market.”\(^{151}\) The problems with this approach will be discussed in subsequent questions in more detail. For present purposes, it is enough to note that the court adds another layer of complexity to an antitrust-based rule of decision that is already fraught with confusion.\(^{152}\) Moreover, the court adds this layer of complexity without justification for the rule it adopts or guidance as to its application. This rule is particularly perplexing given its invitation for courts to determine the scope of patent rights – an invitation that is extended in the very decision that undermines the only viable boundary rule ever developed for making this determination.

Ultimately, the most disturbing feature of *Mallinckrodt* is that it completely failed to deal with the first sale doctrine and the property-boundary rationale underlying it – at least not directly. The Federal Circuit’s decision does not revolve around a finding that the first sale doctrine (as one delineating the boundary of IP rights) is unjustified, but rather around a finding that such a doctrine, at least as one pertaining to property-based PSRs, *never existed*.\(^{153}\) *Mallinckrodt*, therefore, does little to explain whether the doctrine, as one delineating the boundary of IP, is justified and/or desirable.

### B. Copyright

As already mentioned, the first sale doctrine was enacted into the copyright statutes soon

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vertical restraints (other than vertical minimum price fixing and tying arrangements) would not be considered per-se illegal. These cases reflect a dramatic change in the Supreme Court’s antitrust jurisprudence, in turn reflecting the advent of economic analysis into antitrust law. Economic analysis suggests that vertical restraints on distributors, while lessening certain intra-brand price competition between distributors, increase intra-brand competition in services, thus improving the brand’s ability to compete with other brands (inter-brand competition). For an early form of this analysis (in the context of resale price maintenance) see Lester G. Tesler, “Why Should Manufacturers Want Fair Trade?”, 3 *J. L. & Econ.* 86, 89-96 (1960). Several prominent commentators have taken this analysis to extremes, arguing that vertical restraints should be per-se legal. See, for example, Frank H. Easterbrook, “Vertical Arrangements and the Rule of Reason”, 53 Antitrust L.J. 135 (1984)(arguing that “[N]o practice a manufacturer uses to distribute its products should be a subject of serious antitrust attention”). For what appear to be mainly historical reasons, the Supreme Court has thus far refused to remove vertical minimum price-fixing and tying arrangements from its ever shrinking list of conduct deemed per-se illegal under the antitrust laws.

\(^{150}\) *Mallinckrodt*, 976 F.2d at 708.

\(^{151}\) Id., at 706 (citing *Windsurfing Int’l, Inc. v. AMF, Inc.*, 782 F.2d 995 (Fed. Cir. 1986).


\(^{153}\) Since *Mallinckrodt*, the Federal Circuit has repeatedly held that the first sale doctrine exists as a default rule. For a recent example see *LG Electronics, Inc. v. Bizcom Electronics, Inc.*, 453 F.3d 1364, 1369 (Fed. Cir. 2006)(stating that “[i]t is axiomatic that the patent exhaustion
after it was announced by the Supreme Court in *Bobbs-Merryl*. In its current form, 17 U.S.C. §109(a) provides in pertinent part:

> [T]he owner of a particular copy or phonorecord lawfully made under this title, or any person authorized by such owner, is entitled, without the authority of the copyright owner, to sell or otherwise dispose of the possession of that copy or phonorecord.

With this unequivocal statutory language, complete disregard of the first sale doctrine or its implications à la *Mallinckrodt* was never a viable option in the copyright field. Nevertheless, since the late 1970’s (or at the latest the early 1980’s) courts have gradually limited the doctrine’s scope and applicability, most significantly in the context of copyrighted software. The ‘weapon of choice’ used by software manufacturers to steer courts in this direction has been the software licensing agreement, mainly of the standardized ‘shrinkwrap’ type – a licensing agreement to which each and every end-user of software must assent before installing new proprietary software on her computer. Through these licenses, copyright holders – mainly, but not only, software manufacturers – seek to enhance the protection afforded them under traditional copyright law.154

Practically all current licenses contain provisions stating that end-users receive only a license to use the software rather than ownership of a distinct copy thereof.155 These provisions are intended for the very purpose of circumventing the first sale doctrine and its limitation on PSRs.156 As we have seen, the Supreme Court has rejected such provisions in the past in *Straus*,

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154 As I have explained in some length elsewhere, software is not merely a form of expression, but rather an expression of a functional idea. As such, it does not fit neatly within copyright’s idea/expression dichotomy, and its functionality remains by and large unprotected under traditional copyright law. Software manufacturers – and their creative legal counselors and lobbyists – constantly seek new ways to further the protection their products receive both within copyright law and outside of it. See Yonatan Even, “The Right of Integrity in Software: an Economic Analysis”, 22 Santa Clara Comp. High Tech. L. J. 219, 230-235 (2006). See also Mark A. Lemley, “Intellectual Property and Shrinkwrap Licensing”, 68 S. Cal. L. Rev. 1239 (1995) (noting that “[s]oftware vendors are attempting en masse to "opt out" of intellectual property law by drafting license provisions that compel their customers to adhere to more restrictive provisions than copyright (and even patent) law would require”).


156 See *Step-Saver Data Systems, Inc. v. Wyse Tech.*, 939 F.2d 91, 96, at fn. 7 (3rd Cir. 1991). The 3rd Circuit explained that software firms (and, to a lesser extent, music companies) wanted to circumvent the first sale doctrine because it allowed buyers of software to rent their copies to others, who found it extremely easy to unlawfully copy the rented copy. This legitimate concern culminated in 1990 in the adoption of 17 U.S.C §109(b), which qualifies the first sale doctrine by prohibiting businesses from renting out software products and phonographs. Noting the constitutional problems raised by these licenses, the 3rd Circuit to conclude that “[t]he amendment renders the need to characterize the
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looking at the economic nature of the underlying transaction rather than its contractual label. A few courts have applied a similar analysis to software licenses, finding some of them to be sales rather than mere licenses to use.\textsuperscript{157} However, several courts have found otherwise. Some of these have done so without any analysis of the underlying transaction, apparently relying simply on the label of the applicable licensing agreement.\textsuperscript{158} Others have reversed the issue altogether, finding that the very imposition of restrictions suggests that the transaction involves a license rather than a sale. A striking example of this trend may be found in Adobe Systems Inc. v. One Stop Micro, Inc.:  

These numerous restrictions imposed by Adobe indicate a license rather than a sale because they undeniably interfere with the reseller's ability to further distribute the software.\textsuperscript{159}
This form of analysis is both circular and self-defeating. The first sale doctrine is an unambiguous statutory scheme intended to limit the ability of copyright owners to restrict the resale of copies of their works. Any suggestion that the doctrine’s applicability to specific agreements depends on the inclusion in such agreements of the very restrictions that the doctrine aims to limit is simply incredible. Following the courts’ analysis to its logical (?) conclusion, the first sale doctrine would only prohibit restrictions where there are none.

C. Conclusion

At the end of the day, therefore, the first sale doctrine has fared only marginally better in the copyright field than it did in the patent field. What is striking is that in both copyright and patent law, the decline of the doctrine has not been the result of a reasoned evaluation of the doctrine’s purpose or rationales; if anything, it appears to be the result of some vague notion, prevalent in the patent-tribunal and the Palo Alto area, that patentees and software developers need more protection than patent and copyright grants them.

These gaps in judicial analysis of the first sale doctrine have attracted the attention of several commentators. Most have focused their efforts on the software-licensing context; see also Adobe Systems Inc. v. Stargate Software Inc., 216 F.Supp.2d 1051, 1057 (2002), and Wall Data Inc. v. Los Angeles County Sheriff’s Dep’t, 447 F.3d 769, 785 at fn. 9:

Indeed, the first sale doctrine rarely applies in the software world because software is rarely "sold"… By licensing copies of their computer programs, instead of selling them, software developers maximize the value of their software, minimize their liability, control distribution channels, and limit multiple users on a network from using software simultaneously.

160 As an anecdote, it should be noted that the software industry is walking a thin line in its insistence on judging software-related agreements according to form rather than substance, as this is clearly a two edged sword. Consider the following case. In Central Point Software, Inc. v. Global Software & Accessories, Inc., 880 F Supp. 957 (E.D.N.Y. 1995), defendant, a software distributor, set up a “deferred billing plan” whereby it allowed potential software buyers to try out copies of software for limited periods of time – usually up to 5 days – before they had to make a purchasing decision, in return for a small deposit. If the Buyer decided to keep the software, she would be charged its full price (and the deposit would go toward that payment); if she returned it to the defendant, the deposit would not be refunded, and would be considered a restocking fee. As it turned out, nearly all customers elected to return the software at the end of the evaluation period. Several prominent members of the Software Publishers Association – companies like Computer Associates, Symantec and others – filed suit, claiming that “the Rental Amendment’s language and legislative history ‘make clear Congress’ intent that enforcement of the rental prohibition not be thwarted by formalistic interpretations of state law.'” The court accepted this argument, and rightly so. However, there seems to be little justification for a rule which requires formalistic interpretation of software licenses for purposes of first-sale determinations, and substantive interpretation for purposes of sale/rental determinations.

161 It is unclear whether courts would allow ‘licensing’ in other fields. Would publishers be allowed to ‘license’ their books, CDs or DVDs? For that matter – would manufacturers of non-proprietary goods be allowed to “licenses” their goods, instead of sell them? Or manufacturers of patented goods? The answers to these questions are anything but clear. On the one hand, the distinction between software and other types of goods is unclear. On the other hand, it seems that wholesale recognition of licensing by courts is unlikely.

162 See, for example, David A. Rice, “Licensing the Use of Computer Program Copies and the Copyright Act First Sale Doctrine”, 30 Jurimetrics J. 157 (1990)(arguing that software licenses are, in fact, sales that should be subject to the first sale doctrine); Chatterjee, supra note 156
Robinson’s overarching critique thus stands out from the crowd. Having dispensed with Robinson’s argument for PSRs as a normal incidence of ownership, this Section demonstrated why Robinson’s second argument - that the first sale doctrine is predicated on misguided antitrust notions - is also inaccurate. In the next Part, I turn to examine Robinson’s final argument - that the desirability of PSRs should ultimately be left to the markets.

PART V: PSRS IN IP

A. The Problem with IP Servitudes

We have seen that IP-related PSRs are not a “normal” incidence of ownership, and that no clear breakdown in the contractual mechanism justifies the extension of property law to include them, similar to that which exists in the context of real estate. In this part I therefore turn to examine what I refer to as the “why not?” argument, which goes something like this: Even if IP PSRs are not necessary to solve an appropriability problem, and even if they are not necessary to protect a legitimate interest of the owners in general in the face of an identifiable breakdown in contractual mechanisms, why should owners not have the flexibility to impose PSRs on their patented or copyrighted products? Moreover, why should we not rely on market mechanisms to weed out such PSRs when they are inefficient?163

The basic problem with this argument, I believe, is that it would lead to greater friction between IP policy and other policies, most notably with antitrust policies. Because property rights are generally considered important—more so, for example, than contractual rights164—courts give them considerable weight when their exercise interferes with the rights of others or

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163 If I understand correctly, this argument is a fair presentation of Robinson’s ultimate conclusion; see, for example, Robinson, supra note 10 at 1522-1523.

164 Property rights, for example, receive extensive constitutional protection, on par with one’s right to life and liberty, and arguably more than the right to freely contract. The historical and philosophical reasons for this go well beyond the scope of this paper, but they are arguably intrinsic...
with the public interest. Thus, whereas courts have no trouble finding that contractual rights to
are subject to antitrust rules—indeed, Congress has made it abundantly clear that “contract[s] . .
in restraint of trade . . . [are] illegal”\(^{165}\)—the relationship between property rights and antitrust is
one of balance, not subjection; an exercise of property rights, even if anticompetitive, may well
be considered legal by the courts. This approach is clearly warranted where these rights serve the
rationales for which they were created; a patentee, for example, may usually monopolize the
market for its patented product (to the extent such a market exists). The proposition that property
rights should be allowed to trump antitrust concerns even when they serve no such rationale,
however, is much more dubious. Trump them, however, they would: if PSRs were to be
considered an exercise of one’s property rights, courts would try to strike a balance between the
owner’s property right and the public interest in competitive markets—a balance that is
impossible to strike, is costly to litigate, and would necessarily grant owners something more
than core property notions warrant (i.e. more than legal appropriability).

At this conjecture, some might raise an objection to the foregoing proposition, arguing
that in the IP field, courts cannot escape such balancing acts. This objection revolves around the
unique non-rivalrous nature of intangible assets; as the objection would go, in stark contrast to
tangible property, static economic analysis shows that any protection against unbridled
copying/use of intangible property comes at a social cost. Therefore, any rule that enhances
appropriability (in any sense) of intangible property would necessarily allow the originator of
such property to set supra-competitive prices (i.e. prices above marginal cost), ‘artificially’
reduce supply, extract economic rents, and impose a cost on society as a whole.\(^{166}\) Thus, IP
rights, by definition, reflect a broad cost-benefit analysis, and any attempt to prevent courts from
engaging in this type of analyses when considering them is necessarily futile.

While this argument is not completely without merit, I believe it should ultimately be
dismissed, for two reasons. First, as a preliminary matter, the argument is inherently flawed
because of the disconnect between its point of departure – the higher social costs of intangible

\(^{165}\) 15 U.S.C. 1. This pronouncement is, of course, overbroad; “[t]he true test of legality is whether the restraint imposed is such as merely
regulates and perhaps thereby promotes competition or whether it is such as may suppress or even destroy competition”, Board of Trade of City

\(^{166}\) The appropriability problem is based on dynamic analysis. See Posner, supra note 12 at 32, 37-39.
property rights - and its ultimate goal, an extension of the scope of these rights. If rights in intangible property are inherently costlier than rights in tangible property (as they arguably are), then the logical conclusion is that their scope should be minimized, rather than extended, thereby reducing these costs to the bare minimum.

Second, and more substantively, the argument is flawed because it assumes that the costs associated with intangible property are unique. Any private property regime, however, whether tangible or intangible, is costly. Analytically, there is no difference between the social cost of erecting and administering a tangible property regime – for example, the cost of parceling lots, maintaining an updated record of property rights, adjudicating property disputes, and enforcing the outcomes of such disputes – and the social costs of erecting and administering an intangible property regime. Both necessarily reflect, and are predicated on, a cost-benefit analysis. In the case of intangible property, this cost-benefit analysis results in more limited protection of appropriability. Thus, not every idea or expression is entitled to protection in the first place; those that qualify receive protection that is limited in time and, occasionally, scope. However, nothing in the appropriability analysis of property rights assumes the costlessness of private property regimes. Nor is the appropriability analysis predicated on the assumption that property regimes do not reflect a cost-benefit analysis. Instead, it presupposes the existence of a private-property regimes. Informed by the economic rationales that underlie such regimes, the analysis suggests a method for defining the boundaries of private property rights in certain contexts. Under this analysis, courts should view property rights in certain goods as a legal fact, and should not inquire, on a cases-by-case basis, whether these rights are justified; a court may not decide that an owner’s legal appropriability would not be protected in a given case because of a finding that a poacher would make better use of certain crops.

Moving back to property rights in intangible goods, there is no reason why courts should

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167 Posner, id., at 39.
168 Ideas can be patented only if they are useful, novel and nonobviousness; 35 U.S.C. §§101-103 (2006). Expression can be the subject of copyright only if it is original and fixed in tangible form; 17 U.S.C. §102 (2006).
170 Patent protection is generally expansive. However, the scope of protection is curtailed in some situations. See, for example, 35 U.S.C. §271(e)(1) (allowing certain unlicensed experimental use of patented compositions); for application of the rule see Merck KGaA v. Integra Lifesciences I, Ltd., 125 S.Ct. 2372 (2005). Copyright protection is far more limited to begin with, as it extends only to a set of enumerated rights. See 17 U.S.C. §106. Furthermore, even this limited protection is subject to specific carve-outs such as the Fair Use doctrine, which will
not view them as legal facts; in fact, in most circumstances, this is exactly what courts do. Courts do not engage in substantive, ad-hoc cost-benefit analyses to decide the ‘efficient’ scope of protection that should be afforded to specific intangible goods. Instead, courts operate within the dictates of the IP laws, relying on the cost-benefit assumptions that underlie them. In doing so, courts apply to IP the same standard that they apply to tangible property cases: just as courts assume that it is efficient to grant perpetual rights in a parcel of land, so they must assume that it is efficient to grant exclusive rights for 20 years in ideas that are useful, novel and non-obvious. The appropriability analysis works against that same backdrop: assuming that both assumptions are true, protection of legal appropriability is assumed to be efficient in both cases. Courts cannot, however, make the same assumption with regard to economic appropriability. Therefore, it is only protection of IP rights that goes beyond legal appropriability that requires courts to strike a balance between the costs and benefits of IP rights.

Can this balancing exercise nonetheless result in more efficient outcomes than those produced under the first sale doctrine? This proposition is also dubious. As noted in the first pages of this paper, a move from a bright line rule that resolves the friction between antitrust and IP to a case-by-case balancing act is costly. In the case of PSRs, these costs may be offset if either (i) IP servitudes usually serve an efficiency-promoting purpose that may not be attained by other means, or (ii) IP servitudes usually do not pose a significant anticompetitive threat (or, of course, any combination of both). Both these conditions are easily met in the case of real property, as the forgoing analysis demonstrated. An analysis of typical IP servitudes, by contrast, be further discussed below. See 17 U.S.C. §107.

171 This proposition must hold true if we are to classify patents (and copyrights) as forms of property, a classification that is so widely accepted that it requires no further analysis. See...

172 Robinson cites several cases for the proposition that businesses have legitimate rationales for imposing servitudes on chattels. Notable of these, as the only one having an antitrust implication, is Tri Continental Financial Corp. v. Tropical Marine Enterprises Co., 265 F.2d 619 (5th Cir. 1959), in which the 5th circuit held that a non-compete covenant that “ran with” a ferry boat was enforceable against all subsequent buyers of the boat. If anything, the case demonstrates the type of errors courts are prone to make whenever the notion of property is thrust at them. As the Court in Tri Continental correctly observed, ancillary restraints that accompany the sale of a business, including its good will, are usually upheld, subject to their reasonableness in scope and duration. The rationale for this is clear: if a buyer is to realize the benefit of the deal, the seller may not immediately re-enter the market and make use of the very good will and business connections it has just sold to the buyer for value. The case in Tri State, however, was completely different. First, the seller did not leave the business, but rather stayed active within it; the sale did not involve good will or any similar non-rivalrous commodity. In fact, the covenant was aimed squarely at protecting the seller from regular market competition, rather than protecting the buyer from unfair competition using that which she paid for.

173 Some might argue that in the case of IP, a rule allowing servitudes (subject to a case-by-case analysis) would be efficient even if servitudes were typically used in anticompetitive ways to increase the economic appropriability — the returns on investment — for inventors or creators, provided that the additional benefit in terms of inventiveness due to the increased incentives outweighs the social costs of the anticompetitive conduct. This argument, I believe, is misguided. If IP is to be treated as a workable form of property, it must follow basic notions of property law. We cannot abandon these notions for the purpose of increasing incentives; if incentives are sub-optimal, they can and should be adjusted.
suggests that in that context the first sale doctrine is probably more efficient than any alternative, and that to the extent PSRs serve a legitimate purpose, that purposes can better be served (or served just as well) through an extension of contract law, rather than an extension of property law.  

B. An Analysis of IP Servitudes

1. Market-Division Between Distributors

PSRs may be used by manufacturers of IP-protected goods to divide the market—most commonly on a territorial basis—between their distributors. A division of markets between distributors of a single brand, initiated by the manufacturer of that brand, is usually considered pro-competitive. Market division between distributors only isolates them from competition vis-à-vis distributors of the same brand, usually referred to as intra-brand competition; a profit-maximizing manufacturer would sacrifice intra-brand competition (that would might otherwise depress the distribution markup) only if it believes that isolation from intra-brand competition improves its distributors’ competitive position vis-à-vis other, competing brands, thereby making the manufacturer’s brand more competitive.

Although market division between distributors may certainly be attained though property-type PSRs, it is currently prevalent in the marketplace, and can easily be attained and enforced through the use of contract law. Distributors usually have—or can have—intricate contractual arrangements with manufacturers, and manufacturers can—and arguably do—use these contracts to exert sufficient control over their distribution chains. One could make the argument that IP-related PSRs could make that control more airtight, especially where resellers are involved.
However, as we will see in our analysis of other categories of PSRs, where current contractual structures are insufficient to attain a certain goal (whether legitimate or not), cases tend to come before the courts where parties seek to extend either IP law or contract law in order to attain that goal. That such cases rarely—if ever—come before courts in the context of market division suggests that contract law provides a satisfactory solution to this particular problem of controlling distribution chains.

2. Tying-Type PSRs

Sellers of IP-protected products may use PSRs to require buyers of their products to use only supplies or services supplied by the seller in conjunction with the IP-protected product it just bought. In the 1940’s and 1950’s similar tying arrangements were condemned by the Supreme Court as anticompetitive in *Morton Salt*\(^1\) under a patent misuse theory, and in *International Salt Co. v. U.S.*\(^2\) under a per-se antitrust violation theory; both decisions assumed that such tying arrangements are used by patentees to “leverage” their patent to monopolize the markets for other, non-patented goods. In the ensuing decades, however, two realizations undermined the foundation of these decisions. First, courts, somewhat belatedly, came to realize that at a very minimum, tying arrangements are not anticompetitive unless the seller exerts market power in the market for the tying product, because lack of market power would allow consumers to easily switch to competing brands. By 1984, the Supreme Court, reluctant to completely overrule its precedent holding tying arrangements illegal per-se, nonetheless made it clear that tying arrangements would not be condemned absent, at the very least, a showing of market power in the market for the tying product.\(^3\) Second, both the legislature and courts came to realize that there is not basis in reality for a presumption of market power for patentees in the market for their patented products; in fact, even successful patented products usually face stiff competition from other patented and non-patented products. These realizations ultimately led to

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\(^1\) 314 U.S. 488.

\(^2\) 332 U.S. 392 (1947).

\(^3\) *Jefferson Parish Hosp. Dist. No. 2 v. Hyde*, 466 U.S. 2 (1984). Justice O’Connor filed an influential concurring opinion, joined by Justices Burger, Powell and Rehnquist, that went further than the Court’s opinion, called for abandoning the per-se treatment of tying arrangements altogether, and suggested that tying arrangements should not be condemned as anticompetitive absent a showing of (i) market power in the tying product; (ii) a substantial threat that the seller will acquire market power in the market for the tied product; and (iii) a coherent economic theory for treating the tying and tied products as distinct, e.g. a showing of demand for the tying product on a standalone basis. *Jefferson Parish Hosp. Dist. No. 2 v. Hyde*
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the demise of the Morton Salt/International Salt precedent in both patent and antitrust doctrine.\footnote{See 35 U.S.C. §271(d) (providing that “[n]o patent owner . . . shall be . . . deemed guilty of misuse or illegal extension of the patent right by reason of his having . . . conditioned the license of any rights to the patent or the sale of the patented product on the acquisition of a license to rights in another patent or purchase of a separate product” unless the patentee has market power in the market for the patented product); Illinois Tool Works Inc., 547 U.S. 28 (holding that “a patent does not necessarily confer market power upon the patentee” and therefore tying of unpatented products or services to the sale of a patented product, absent a showing of market power, is not per se illegal).}

In conjunction with these developments, commentators suggested that tying arrangements are not used to “leverage” any purported market power patentees may or may not have, but rather to price-discriminate between consumers based on the intensity of their usage of the patented product\footnote{See, e.g., Benjamin Klein, John Shepard Wiley Jr., “Competitive Price Discrimination as an Antitrust Justification for Intellectual Property Refusals to Deal”, 70 Antitrust L.J. 599, 603-605 (2003).}—the very same proposition that Judge Lurton found compelling in his Heaton-Penninsular decision.\footnote{See n. 85 supra and the text thereto.} Price discrimination based on intensity of usage allows low-intensity users to buy the patented product more cheaply (and in greater quantities) than they otherwise could while making high-intensity users pay more (and potentially buy less) than they otherwise would. The overall effect of price discrimination on output is unclear,\footnote{The overall effect would largely depend on the accuracy of the metering mechanism in matching the demand curve for high-intensity consumers (i.e. consumers who value the product more than the competitive, non-discriminating price), thus avoiding the loss of sales to some of those customers due to overpricing. See, e.g. Klein & Wiley, supra note 180 at 612.} and although some have argued that in the case of certain IP products—those characterized by small marginal cost and high R&D costs—it is probably efficiency enhancing, these arguments are not applicable to all IP-protected products.\footnote{Id., at 612-615. Klein & Wiley also argue that dynamic efficiency effects of price discrimination are likely positive, because price discrimination would increase IP-holders’ returns, thus incentivizing innovation. This analysis conflates legal and economic appropriability; taken to its logical conclusion, it would suggest that IP-owners should be allowed to do anything that may increase their returns, because increased returns on innovation are by-definition efficient. That proposition is unfounded.}

Price discrimination, it may be argued, is best facilitated by the use of IP-based PSRs, because those would allow IP owners to enforce their tie-ins not only against dispersed end-users, but also (and more importantly) against competing suppliers of the metering product or service, on a theory of contributory infringement of the PSR (and hence the IP right). However, this argument is not very compelling. Enforcement of IP-based PSRs against third parties, although possible in some cases, would generally be available only where the metering product is non-staple. The category of non-patented, non-staple goods that can be used as good metering mechanisms is arguably too narrow to justify a broad rule that would undo the first sale doctrine...
altogether. Moreover, satisfactory alternatives to IP-based PSRs are available to IP-owners in most circumstances. One such alternative is contractual, with a remedy against third parties through actions for interference with contractual relationships. Another alternative, widely used in the marketplace, is conditioned warranties, that incentivize compliance and facilitate cheap and effective enforcement against dispersed end users. The case for IP-related PSRs, therefore, cannot be justified solely to enable price discrimination.

3. Field of Use/Type of Customer Restrictions

Owners of IP rights may also try to price-discriminate between consumers based on the type of use that they make of their products, or the type of consumer that they are. The case for such price discrimination, at least in the abstract, is much weaker than that for tie-ins, because the discrimination is much cruder, and therefore less likely not to result in restricted output. Take, for example, the Adobe cases, in which Adobe tried to market a cheap version of its software aimed specifically at academics, and sought to restrict arbitrage that would undermine its efforts to price-discriminate between academics and non-academics. It is unclear whether Adobe could afford to lose some (or all) of the academic market absent the ability to price discriminate. Therefore, it is not clear whether, absent the ability to price-discriminate, Adobe would have marketed only the more expensive version, or would it have been forced to reduce the price of its software to all consumers.

A business conduct that is at least arguably anticompetitive and does not serve the purposes of property law can hardly justify an extension of IP rights. Moreover, even if we assumed that this kind of price discrimination is efficient, it is not evident that it cannot be effectively achieved using contractual PSRs that are “brought home to the purchasers”, as contemplated by the Supreme Court in Keeler. If current contract doctrine is not flexible enough to allow for effective enforcement of this kind of PSRs—a dubious proposition in the era of shrinkwrap contracts—than we should arguably consider expanding that doctrine rather than IP law, because the problem that should be addressed (if it should) bears no relation or resemblance to the kind of problems that property law is adept in addressing.

4. Period of Use Restrictions

Owners of IP-related products can use IP-based PSRs to restrict the period of use of their products, essentially turning what is a durable (or, at least, re-usable) good into a perishable; this is the type of restriction discussed in Mallinckrodt. The court there, allowing these PSRs to stand, thereby allowed IP-owners to circumvent another longstanding patent doctrine, whereby courts historically distinguished between reconstruction of a patented product, that was considered infringing even absent a specific PSR, and repair, that was considered an essential right of consumers.185

The rationale that led courts to adopt the reconstruction/repair distinction appears to be predicated on an assumption that durable use of given resources is more efficient than a one-time use of the same resources—an assumption that appears logical. Moreover, in a short paper published in 1972, Coase demonstrated that durapolists—monopolists who manufacture durable goods—are unable to exert market power to the same extent that can monopolists who manufacture perishable goods, due mainly to declining demand for their product.186 This proposition, subsequently dubbed “the Coase conjecture”, was subsequently developed by others to suggest that the inability of durapolists to exert market power may lead them, absent a clear competitive threat, to turn their products into peripherals.187 Mallinckrodt type PSRs would arguably allow IP-owners to achieve that goal contractually, rather than technologically.

Given the dubious welfare effects of this type of PSRs, they can hardly justify an extension of IP rights. Of course, I do not propose that the legal system should regulate all attempts to reduce the lifespan of IP-protected products (or, indeed, any other products); that task is arguably beyond the power of courts.188 However, nor should the legal system strive to facilitate these attempts or make them more effective.

5. Competition Restrictions on End Users

Finally, IP owners may use IP-based PSRs to restrict certain competitive efforts by end
users, such as reverse engineering and patenting-around. No-reverse-engineering restrictions are commonplace in the software industry, and have received much attention in the copyright literature, almost all of which has viewed them as an illegitimate attempt by copyright owners to expand their rights beyond the statutory grant and restrict consumers’ right to “fair use” of the copyrighted product.\footnote{Id., at 90-100 (noting that both contrived durability and planned obsolescence are generally beyond the scope of antitrust challenges.} I have not found a case discussing “no patenting around” restrictions, arguably because patentees expect that such restrictions would be viewed negatively by the courts.

Whatever can be said for other PSRs, anti-competition PSRs are arguably always anticompetitive, undermining the rationales of both antitrust law and IP law, by stifling, rather than incentivizing, innovation. Where the IP owner enjoys market power, the effects on both current and future markets may be devastating. Whatever we may think of their effects in the absence of market power, there is no reason to alter the legal system simply to make such anticompetitive business arrangements more feasible or more effective in stifling competitive innovation.

6. Summary Conclusion

The forgoing analysis demonstrates that the case for IP-based PSRs, or IP servitudes, is far from compelling. Arrangements (1) and (2), while arguably benign or even procompetitive, can be effectuated through contracts, with a change in effectiveness that is marginal at most. Arrangements (3), (4) and (5) will undoubtedly benefit from IP-based PSRs (with (3) less so and (4) and (5) more so), but are arguably not welfare enhancing; although IP owners may have an interest in entering into these type of arrangements, they have no legitimate interest that requires the extension of their IP rights in the face of a contractual problem. The business rationales for IP-based PSRs are therefore dubious at best, whereas their cost—assuming they compel courts to engage in hopeless balancing acts that would necessarily result in the approval of some anticompetitive conduct with no real redeeming features—is considerable.
CONCLUSION

Delineating the scope of property rights in general, and IP rights in particular, is not an easy task. Legal boundaries are never airtight, and exceptions and idiosyncrasies abound. Nonetheless, the exercise is worthwhile if it results in real clarity in many or most cases; where distinctions are reasoned, rather than formalistic, they may streamline what is inevitably an imperfect legal system.

Nihilistic calls for abolition of formalistic distinctions are, of course, legitimate - provided, however, that they are based on rigorous analysis that demonstrates why long-standing bright-line rules are inefficient. The first sale doctrine, unfortunately, has been the subject of very little analysis in recent court decisions. Robinson’s was the first real attempt at such an analysis; the current paper proposes a more general analysis of such boundaries. Hopefully, between Robinson’s paper and this one, the parameters for future discussion of the first sale doctrine and of property rights in general are now clearer.