AGAINST IMMUNITY FOR UNILATERAL REFUSALS TO DEAL IN INTELLECTUAL PROPERTY: WHY ANTITRUST LAW SHOULD NOT DISTINGUISH BETWEEN IP AND OTHER PROPERTY RIGHTS

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ABSTRACT

The antitrust unilateral refusal to deal doctrine raises vexing issues as regards the preservation of *ex ante* incentives to invest and the scope of the right to exclude from one's property. The Federal Circuit recently chose to give intellectual property owners immunity for unilaterally refusing to deal, thereby creating a distinction between intellectual property and other property rights for the application of antitrust law. This Article argues against the immunity rule for unilateral refusals to deal in intellectual property and considers whether the rule of reason should be applied in all unilateral refusal to deal cases, regardless of the type of property involved. The immunity rule overlooks the notion that intellectual property laws aim at putting intangible and tangible property on equal footing and distorts the application of antitrust principles by refusing to inquire into the intent for refusing to deal when intellectual property is at issue. In addition, application of the immunity rule causes important under-deterrence problems. This Article argues in favor of the application of the rule of reason and contends that, although exercise of intellectual property rights is a presumptively valid business justification for refusing to deal, plaintiffs should be able to rebut this presumption by undermining the causal link between the intellectual property and the refusal. This requires an inquiry into intent that is consistent with antitrust principles and preserves legitimate intellectual property claims.

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Any views or opinions in this Article are solely those of the author.

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I. INTRODUCTION

In a time when intellectual property (IP) laws cover assets that are crucial to competitiveness in key markets of the "digital economy,"[1] the scope of legal difference between intellectual property[2] and other property rights is still unclear. This raises an important question in the antitrust context: when a conduct is condoned under intellectual property laws but would, in the traditional property sense, be illegal under antitrust laws, should it be immune from liability? The issue is particularly delicate in the area of unilateral refusals to deal. When sanctioned as an antitrust offense, a unilateral refusal to deal directly eliminates or reduces the right to exclude. Consequentially, courts have defined antitrust liability for unilaterally refusing to deal as an exception to the general principle that one is free to refuse to deal.[3] But if one assumes that intellectual property and other property rights should enjoy similar treatment, then the circumstances giving rise to antitrust liability for unilateral refusals to deal in tangible property should equally apply to the field of intellectual property. This is, however, not true currently. To the contrary, the Federal Circuit's decision in *Xerox*,[4] established an IP-specific rule of quasi-immunity for unilateral refusals to deal by patentees and copyright owners under § 2 of the Sherman Act.[5]

In the *Xerox* case, CSU, an independent service provider (ISO), filed a suit on the basis of Xerox's refusal to sell parts to them unless they were also end-users of the copiers.[6] Xerox objected to the monopolization claim by claiming protection of its patents and copyrights.[7] The *Xerox* court refused to inquire into the intellectual property owner's intention underlying the refusal to deal as long as the refusal is not extended beyond the patent or copyright's statutory grant.[8] There is therefore no room for antitrust liability when the excluder merely exercises his exclusionary rights under

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1. Robert P. Merges, *Who Owns the Charles River Bridge? Property and Competition in the Software Industry* (Apr. 2, 1999) at 2, *available at* http://www.law.berkeley.edu/institutes/bclt/pubs/merges/criver.pdf (last visited Apr. 19, 2004).

2. Although I will use the generic term "intellectual property," the analysis conducted in this Article is focused on patents and copyrights.

3. United States v. Colgate & Co., 250 U.S. 300, 307 (1919) ("In the absence of any purpose to create or maintain a monopoly [a] private business [may] freely exercise his own independent discretion as to parties with whom he will deal.").

4. *In re* Indep. Serv. Orgs. Antitrust Litig. v. Xerox Corp., 203 F.3d 1322 (Fed. Cir. 2000).

5. *Id*. at 1325-26.

6. *Id.* at 1324.

7. *Id.*

8. *Id.* at 1327-28.

the copyright and patent laws, and *Xerox* establishes a rule of per se legality.[9] The Federal Circuit's solution thus sets forth a novel test of legality of unilateral refusals to deal specific to intellectual property that is separate and distinct from the test applicable to other types of property.

The First and the Ninth Circuits, called upon to rule on similar issues, had set forth different rules before *Xerox*. In *Data General*,[10] the defendant, Grumman, who provided independent repair services to minicomputer owners, raised an antitrust counterclaim in defense of an infringement suit brought by Data General.[11] The defendant argued that Data General refused to license its diagnostic software to third party maintainers (TPMs). The First Circuit held that "while exclusionary conduct can include a monopolist's unilateral refusal to license a copyright, an author's desire to exclude others from use of its copyrighted work is a *presumptively valid business justification* for any immediate harm to consumers."[12] The Ninth Circuit later applied this rule in *ITS v. Eastman Kodak* ("*Kodak II*"),[13] where it deemed the presumption rebuttable by evidence that the intellectual property claim was a pretext.[14] Thus the presumption of legality can be defeated by proof of an anticompetitive intent on the part of the intellectual property owner in refusing to license.

The contrast between these precedents and *Xerox*, (i.e., between treating the exercise of intellectual property rights as a rebuttable business justification for an otherwise objectionable conduct on one hand and treating it as a per se immunity from antitrust liability on the other) muddles the distinction between intellectual property and other property rights. While the rebuttable presumption approach comports with the unilateral refusal to deal doctrine as applied to tangible properties,[15] the *Xerox* per se immu-

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9. *See, e.g.*, Jonathan I. Gleklen, *Per Se Legality for Unilateral Refusals to License IP Is Correct as a Matter of Law and Policy*, THE ANTITRUST SOURCE, (July 2002), *available at* http://www.arnoldporter.com/pubs/files/Legality.pdf (last visited Apr. 19, 2004); HERBERT HOVENKAMP ET AL., IP AND ANTITRUST: AN ANALYSIS OF ANTITRUST PRINCIPLES APPLIED TO INTELLECTUAL PROPERTY LAW 13-16 (2002).

10. Data Gen. Corp. v. Grumman Systems Support Corp., 36 F.3d 1147 (1st Cir. 1994).

11. *Id*. at 1155 & n.8.

12. *Id.* at 1187. (emphasis added)

13. Image Technical Servs., Inc. v. Eastman Kodak Co., 125 F.3d 1195 (9th Cir. 1997) [hereinafter *Kodak II*].

14. *Id.* at 1219 ("Neither the aims of intellectual property, nor the antitrust laws justify allowing a monopolist to rely upon a pretextual business justification to mask anticompetitive conduct.").

15. *See* Aspen Skiing Co. v. Aspen Highlands Skiing Corp., 472 U.S. 585 (1985); Verizon Communications Inc. v. Law Offices of Curtis V. Trinko, 124 S. Ct. 872 (2004).

nity rule sets intellectual property apart in the application of the Sherman Act.

The academic debate on this matter falls into two camps: (1) the proponents of the *Xerox* rule take a utilitarian view of intellectual property and fight for minimal antitrust intervention;[16] and (2) the opponents, on the other hand, believe that antitrust law has a role to play in regulating market behaviors even when intellectual property rights are involved.[17] The pro-*Xerox* camp maintains that subjecting intellectual property owners to antitrust liability would discourage them from pursuing innovative activities, thereby undermining the system of incentives as set forth by the intellectual property laws. This argument, however, relies on false assumptions for three reasons: (1) it wrongly assumes that the intellectual property laws give the right holders a "legal monopoly;"[18] (2) it wrongly assumes that the acquisition of monopoly power is the only way to appropriate revenues deriving from inventions and original works;[19] and (3) it erroneously assumes that antitrust liability would necessarily have overall adverse effects on incentives to innovate.[20]

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16. *See, e.g.*, Gleklen, *supra* note 9; Peter M. Boyle et al., *The Antitrust Law at the Federal Circuit: Red Light or Green Light at the IP-Antitrust Intersection?*, 69 ANTITRUST L.J. 739 (2002); James C. Burling et al., *The Antitrust Duty to Deal and Intellectual Property Rights*, 24 J. CORP. L. 527 (1999).

17. *See, e.g.*, Jeffrey K. MacKie-Mason, *Antitrust Immunity for Refusals to Deal in (Intellectual) Property Is a Slippery Slope,* THE ANTITRUST SOURCE (July 2002), *available at* http://www-personal.umich.edu/~jmm/papers/JMM%20Slippery%20Slope.pdf (last visited Apr. 19, 2004); Douglas A. Melamed & Ali M. Stoeppelwerth, *The CSU Case: Facts, Formalism and the Intersection of Antitrust and Intellectual Property Law*, 10 GEO. MASON L. REV. 407 (2002).

18. *See, e.g.*, Burling et al., *supra* note 16, at 535 ("[T]hus the patent laws create a monopoly in the 'discovery' for the inventor who spent the time and resources necessary to create the invention. The monopoly owner is thereby insulated from the competitive exploitation of his patented art.").

19. *See, e.g.*, Lawrence Summers, The New Wealth of Nations, Remarks at the Hambrecht & Quist Technology Conference (May 10, 2000), *available at* http://www.ustreas.gov/press/releases/ls617.htm (last visited Apr. 19, 2004). Summers argues that a grant of monopoly power is necessary to encourage production:

> [T]he only incentive to produce anything is the possession of temporary monopoly power—because without that power the price will be bid down to marginal cost and the high initial fixed costs cannot be recouped. So the constant pursuit of that monopoly power becomes the central driving thrust of the new economy.

Id.

20. *See, e.g.*, Gleklen, *supra* note 9, at 7 ("[T]he problem with the 'sacrifice of profits' test is that it inappropriately focuses on static efficiency . . . and ignores the long-term effects of a rule requiring licensing upon incentives to innovate . . . .").

I contend that there is no sound reason to treat intellectual property differently from other forms of property in this context, and that all unilateral refusals to deal should be evaluated with the same legal standard. This Article discusses and explores the appropriate standard, for both tangible assets and intellectual property, and concludes that such a standard should embody a rule of reason. Part II of this Article explains why intangible and tangible property rights should be deemed equivalent in analyzing refusals to deal for antitrust purposes. Part III exposes the anticompetitive effects that refusals in the intellectual property context can potentially foster, arguing that such anticompetitive effects are no less harmful than what we see in other property contexts. Part III demonstrates why the rule of reason is a better approach for courts to take in intellectual property cases.

II. INTELLECTUAL PROPERTY AND OTHER PROPERTY RIGHTS ARE EQUIVALENT FOR PURPOSES OF UNILATERAL REFUSALS TO DEAL DOCTRINE

Intellectual property laws aim to put intangible assets on an equal footing with their tangible counterparts[21] so that creators and innovators may appropriate the revenues flowing from their creative endeavors.[22] A rule of per se legality for unilateral refusals to deal in the intellectual property context contradicts this purported goal. Part A of this section shows that, as a matter of policy, treating intellectual property and other property equally is more likely to foster long-term benefits to social welfare as compared to the per se immunity treatment. Part B demonstrates that, as a matter of law, a rule of per se legality lacks legal support.

A. A Wrong Policy Judgment: the Economic Case for Treating Intellectual Property and Other Property Rights as Equals

Certain commentators distinguish intellectual property from tangible property by applying micro-economic analysis of monopolistic market situations to patents and copyrights, simply assuming that possession of

21. Cont'l Paper Bag Co. v. E. Paper Bag Co., 210 U.S. 405, 425 (1908) (stating that "patents are property, and entitled to the same rights and sanctions as other property").

22. *See, e.g.*, WILLIAM M. LANDES & RICHARD A. POSNER, THE ECONOMIC STRUCTURE OF INTELLECTUAL PROPERTY LAW 374 (2003) ("Information is a scarce good, just like land. Both are commodified—that is made excludable property—in order to create incentives to alleviate their scarcity."); HOVENKAMP ET AL., *supra* note 9, at 1-2 ("[I]ntellectual property in the United States is fundamentally about incentives to invent and create. Both the Constitution and judicial decisions seem to acknowledge the primacy of incentive theory in justifying intellectual property.").

intellectual property confers market power.[23] Others highlight the dynamic efficiency rationale underlying the necessity of intellectual property protection and suggest that the perspective of *ex post* duties to deal will destroy *ex ante* incentives.[24] These analyses, however, are not specific to intellectual property. They can be equally effectively applied to evaluating monopoly power derived from exploiting tangible property rights. Intellectual property is just a form of property, and should be treated as such. The policy arguments in favor of unfettered intellectual property rights are either misguided or advanced at such generality that no clear conclusions can be drawn. Instead, a proper understanding of dynamic efficiency under the antitrust law would suggest an equivalent treatment of intellectual property and other property rights in the context of unilateral refusals to deal.

1. Intellectual Property Rights Are "Normal" Property Rights

There is a common misconception that the legal grant of intellectual property protection automatically confers a legally protected monopoly.[25] While a patent entails certain exclusionary rights, these rights do not equate with a monopoly, i.e., a power over price. A typical monopolistic scenario would have one seller and many buyers, or a producer of a unique good or service with no substitutes in the marketplace. When no substitutes exist on the market, intellectual property rights can potentially confer just as much market power and competitive advantages to their owner as would tangible assets. Therefore, equating intellectual property rights with monopoly power confuses the distinct concepts of property and monopoly.[26]

To the contrary, intellectual property grants do not automatically confer monopoly power onto their owners.[27] The acquisition of market power

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23. *See* Edmund W. Kitch, *Elementary and Persistent Errors in the Economic Analysis of Intellectual Property*, 53 VAND. L. REV. 1727, 1732 (2000) [hereinafter Kitch, *Elementary Errors*].

24. *See* Richard M. Brunell, *Appropriability in Antitrust: How Much is Enough?*, 69 ANTITRUST L.J. 1, 4 (2001).

25. *See, e.g.*, Burling et al., *supra* note 16, at 535; LANDES & POSNER, *supra* note 22, at 374; Kitch, *Elementary Errors*, *supra* note 23, at 1729-38.

26. *See, e.g.*, LANDES & POSNER, *supra* note 22, at 374 (Supposing "there is an inherent tension between intellectual property law, because it confers 'monopolies,' and antitrust law, which is dedicated to overthrow monopolies . . . was a mistake. At one level it is confusion of a property right with a monopoly.").

27. *See* HOVENKAMP ET AL., *supra* note 9, at 4-8 ("The intellectual property laws do not purport to confer any monopoly, however, but only the right to exclude others from producing the good, expression or symbol covered by the intellectual property interest. This right is a property right that is not different in principle from other property rights.").

depends on market conditions for the products embodying the intellectual property rights. For example Edmund Kitch points out that "it is impossible to analyze a market for a single patent. It is only possible to analyze a market for a product that embodies the patent."[28] This is because a patent is unique. Only the product embodying the patented invention is produced and supplied to the market, with varying prices and quantities depending on supply and demand. To optimize the value of a patent, the owner would have to charge more when the patent contributes more to the value of the final product. Thus, whether a particular patent confers monopoly power in the economic sense is an empirical question rather than a legal one.[29]

The source of confusion between intellectual property protection and monopoly power perhaps stem from the requirement of novelty or originality before the rights attach. At first sight, it may be difficult to see how an invention, or original form of expression could have any substitute. Arguably, the originality or novelty requirements ensure that innovative products are to emerge from the intellectual property rights.[30] But in reality, various patents can cover the same end functionality. Even subscribers of the incentive theory according to which granting *ex post* exclusion fosters *ex ante* incentives to innovate acknowledge that intellectual property rights tend to foster duplicative inventions: the reward attracts too many players, inducing redundant and wasteful R&D efforts in developing alternative ways to obtain the same functional result.[31] The scope of novelty thus leaves the door open to "rivalrous inventions." Before a patent application is issued as a valid patent, the applicant must disclose the invention in sufficient detail so as to enable persons ordinarily skilled in the art to make the invention.[32] The disclosed details can, in turn, induce research efforts to "invent around" the patent.[33] In a way, the law itself encourages the creation of substitutes, which potentially constrict the inventor's market power.

Finally, products embodying patents, although innovative, do face competition in the marketplace because substitutes may exist. In the beginning of a patent's life, the "newly obsolete technology" continues to

28. Edmund W. Kitch, *Patents: Monopolies or Property Rights?*, 8 RES. IN L. & ECON. 31, 37 (1986) [hereinafter Kitch, *Patents*].

29. Kitch, *Elementary Errors*, *supra* note 23, at 1731.

30. See 17 U.S.C. § 102(a) (2003), for originality requirements in copyrights, and 35 U.S.C. § 102 (2003), for novelty requirements in patents.

31. *See* William Fisher, *Theories of Intellectual Property*, *in* NEW ESSAYS IN THE LEGAL AND POLITICAL THEORY OF PROPERTY, 168, 182-83 (Stephen R. Munzer ed., 2001).

32. *See* 35 U.S.C. § 112.

33. LANDES & POSNER, *supra* note 22, at 295.

exist in parallel with the new technology brought to bear by the patent, and competes with it.[34] Furthermore, the limited patent life-span creates an incentive for patent holders to set their prices at a competitive level in order to discourage entry of other firms making similar products or offering similar services.[35] If the patent holder went too far and set his prices too high, at supra-competitive levels, he may end up losing market positions after the patent expires. It is therefore incorrect to assume that patents necessarily confer monopoly power to their owners. Many other factors are at play and out of the controls of the patent holders.

2. *Dynamic Efficiency Does Not Warrant Per Se Legality for Unilateral Refusals to Deal in Intellectual Property*

An essential purpose of the grant of intellectual property protection is to confer privative rights of certain intellectual assets to enable innovators and creators to appropriate revenues generated based on their intellectual output. This future appropriation is what fosters the *ex ante* incentive to innovate.[36] Economic analyses dispute the idea that the concentration of market power is the best way to ensure an optimal appropriation. Kenneth Arrow suggests that a monopolist has less incentive to innovate than a firm in a competitive industry.[37] Comparing this monopolist with a competitive firm Arrow concludes that since a competitive firm's incentive is the cost-reduction for its product, its incentive to innovate will always exceed that of the monopolist.[38] Central to Arrow's analysis is the idea that although new entrants can appropriate all returns on new products that displace existing products, monopolists holding the same innovation would earn only the difference between the increased return and the existing return on its present output.[39] Accordingly, the competitive firm's return will be higher than the monopolist's.

A monopoly is, therefore, not a necessary corollary to having intellectual property rights. This simple conclusion can be used to reassess dy-

34. Kitch, *Patents*, *supra* note 28, at 34.

35. *Id.*

36. *See* KENNETH J. ARROW, *Economic Welfare and the Allocation of Resources For Invention*, *in* ESSAYS IN THE THEORY OF RISK-BEARING 144, 157-58 (Julius Margolis ed., 1971).

37. *Id.*

38. *Id.* at 158.

39. *Id.* ("The preinvention monopoly power acts as a strong disincentive to further innovation."); *see also* JEAN TIROLE, THE THEORY OF INDUSTRIAL ORGANIZATION 392 (1988), (describing this as the "replacement effect" that "[t]he monopolist gains less from innovating than does a competitive firm because the monopolist 'replaces himself' when he innovates whereas the competitive firm becomes a monopoly").

namic efficiency arguments in two ways. First, it suggests that antitrust liability may affect the defendant and its rivals in ways that do not result in an overall decrease in incentives to innovate in the relevant industry. Adapting this conclusion to a realistic market situation where a dominant producer faces fringe rivals, Jonathan Baker suggests that antitrust liability for monopolization will adversely affect the dominant firm's incentive to innovate in most cases. Antitrust liability will, at the same time, raise fringe firms' incentives.[40] Thus the dominant firm may rather adopt a strategy of accommodation than try to deter rivals' innovation.[41] When the dominant firm innovates less and its fringe rivals innovate more, the net effect on the market is generally unclear.[42] Baker nevertheless advocates for a liability rule against intellectual property holders based on the Supreme Court's jurisprudence on refusals to deal.[43] He therefore implies that intellectual property and other property rights should be treated equally. When competition in innovation results in a "winner-takes-all" award, even strong antitrust enforcement is unlikely to discourage innovation.[44] But, even in the absence of a disproportionate reward, antitrust liability may be a useful deterrent for opportunistic behaviors in collaborative or complementary relationships between dominant firms and fringe rivals (i.e., when the dominant entity takes advantage of its position to effectively monitor its rivals and impede their success by, for example, refusing to license its intellectual property).[45] This makes sense in cases

40. Jonathan B. Baker, *Promoting Innovation Competition Through the Aspen/Kodak Rule*, 7 GEO. MASON L. REV. 495, 511-12 (1999). In the absence of a liability rule the dominant firm's strategy is based on a simple cost/benefit analysis: if maintaining its market share is the optimal goal, then the dominant firm will invest in R&D to keep its competitive advantage up to a point where fringe firms are deterred from innovating and will simply imitate; if, however this deterrence strategy is too costly and/or risky (because the chances for success are low), the dominant firm will simply let its fringe rivals be the primary source of innovation, take short-term profits, and let its position be challenged.

41. *Id.* at 512.

42. *Id.* ("As a matter of economic theory, it is impossible to say for certain whether enforcement of the antitrust prohibition against monopolization, which might restrict the conduct of a dominant firm, will on balance enhance or reduce aggregate industry innovation in general.").

43. *Id.* at 508 ("The *Aspen*/*Kodak* rule promotes the ends of antitrust laws by fostering rivalry in industries with a dominant firm where innovation competition is effectively 'winner-take-all' and where fringe rivals are in a collaborative or complementary (as well as competitive) relationship with the dominant firm.").

44. *Id.* at 514-15.

45. *Id.* at 519-20.

where a previous course of dealing existed and was stopped for no valid business reason, as was the case in *Xerox*,[46] *Kodak II*,[47] or *Aspen*.[48]

Second, since liability for unilateral refusals to deal is rare,[49] the application of antitrust law would impose a limited constraint on intellectual property owners' courses of action. Ian Ayres and Paul Klemperer suggest that marginal limitations on intellectual property owners' market power are likely to reduce the deadweight loss resulting from unconstrained price increase by patentees, the increase in social welfare being greater than the reduction in the monopolist's profits.[50] Indeed, the question is not whether monopoly power fosters incentives to innovate, but rather is whether incentives to innovate in the industry at issue are sufficiently sensitive that liabilities for unilateral refusals to deal would induce a significant decrease of incentives to invest in R&D.[51] In other words, the issue is, if one accepts that the intellectual property laws are based on a trade-off between competition and innovation, whether the reestablishment of competition as dictated by the Sherman Act deters innovation to such an extent as to undermine the policies underlying the intellectual property laws.

Ayres and Klemperer suggest that policy makers should be aware that profits derived from the last increment of monopoly pricing are disproportionately small compared to the social costs such pricing inflicts.[52] In the context of the patent system, Ayres and Klemperer suggest that small re-

46. *In re* Indep. Serv. Orgs. Antitrust Litig. v. Xerox Corp., 203 F.3d 1322 (Fed. Cir. 2000).

47. *Kodak II*, 125 F.3d 1195, 1214 (9th Cir. 1997).

48. Aspen Skiing Co. v. Aspen Highlands Skiing Corp., 472 U.S. 585 (1985).

49. United States v. Colgate & Co., 250 U.S. 300, 307 (1919); Verizon Communications Inc. v. Law Offices of Curtis V. Trinko, LLP, 124 S. Ct. 872, 879 (2004).

50. Ian Ayres & Paul Klemperer, *Limiting Patentees' Market Power Without Reducing Innovation Incentives: The Perverse Benefits of Uncertainty and Non-Injunctive Remedies*, 97 MICH. L. REV. 985, 990 (1999).

51. This was articulated by Chris Sprigman, Presentation at the Department of Justice Antitrust Division and Federal Trade Commission Hearing on Competition and Intellectual Property Law and Policy in the Knowledge Based Economy, Strategic Use of Licensing: Is There Cause for Concern About Unilateral Refusals to Deal? (May 1, 2002), *available at* http://www.ftc.gov/opp/intellect/detailsandparticipants.htm#May%2010) (last visited Apr. 19, 2004).

52. Ayres & Klemperer, *supra* note 50, at 987 ("[T]he insight that the last bit of monopoly pricing provides disproportionately small profits in comparison to its social cost should be of continuing independent concern to policymakers seeking an optimal enforcement regime.").

strictions on the patentee's market power are efficient as the loss of incentives is negligible relative to the increase in social welfare.[53]

Nevertheless, their conclusion applies only in cases where there is high (or sufficiently high) price elasticity in the market, when every increment of price reduction results in a corresponding increase of demand and sales. When price elasticity is low (i.e., when consumer demand does not correlate with the price levels), then the reduction in monopoly price has few consequences on deadweight losses, although it does greatly diminish incentives to innovate. Because different industries have different market structures and price elasticity, the validity of Ayres and Klemperer's conclusion varies from industry to industry.

In sum, dynamic efficiency arguments are highly indeterminate and industry-dependent.[54] There are many valid and forceful arguments against the notion that a regime of antitrust liability applicable to unilateral refusals to deal would annihilate incentives to innovate. An innovator in competition indeed may have higher incentives to innovate than a monopolist.[55] And marginal limitations on patentees' market power may actually increase social welfare,[56] which in practice may undercut the necessity for antitrust immunity for intellectual property owners who have unilaterally refused to deal. Therefore, courts should review IP-related refusals according to their particular market conditions.

B. Immunity For Unilateral Refusals to Deal in Intellectual Property Lacks Legal Support

The illegality of a refusal to deal may be proved by a plaintiff using either: (1) the so-called "intent" test, which is the traditional analysis of monopolization under Section 2 of the Sherman Act; or (2) the essential facilities doctrine.[57]

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53. *Id.* at 990 ("Because the last bit of monopoly overcharging is so disproportionately damaging, restricting the patentee's monopoly power a small amount is likely to increase social welfare. The benefit of reducing the deadweight loss of supra-competitive pricing is likely to outweigh the costs of a slightly lower incentive to innovate.").

54. *See* Brunell, *supra* note 24, at 4.

55. *See* Arrow, *supra* note 36.

56. Ayres & Klemperer, *supra* note 50, at 987.

57. For sake of clarity I will distinguish Sherman Act claims of monopolization, or the so-called "intent test" from essential facility claims. As stated by the 10th Circuit, "the dichotomy, though in part illusory, is a useful analytical tool." Aspen Highlands Skiing Corp. v. Aspen Skiing Co., 738 F.2d 1509, 1520 (10th Cir. 1984). The overlap between the essential facilities doctrine and the intent test is real but the classification, imperfect as it may be, clarifies the law.

1. Intellectual Property and Other Property Rights Are Equivalent for Purposes of Monopolization Claims

Despite the general principle that one has the freedom to choose the counterpart of one's deals,[58] a unilateral refusal to deal may still violate the antitrust law against monopolization if the refusal is made by a monopolist without a valid business justification.[59] Supporters of weak antitrust enforcement in the intellectual property context tend to rely on the statutes, policies and case-law to suggest a near-absolute right to exclude others in the hands of intellectual property owners.[60] Yet the statutes and case-law actually point to the opposite direction. A careful reading of intellectual property laws shows that immunity runs contrary to congressional intent. In addition, Supreme Court cases over the past century advise an equivalent treatment of intangible and tangible property for unilateral refusals to deal.

a) The Patent and Copyright Acts: Setting Intellectual Property and Other Property on Equal Footing

i) Intellectual Property Owners' Right to Exclude is a Qualified Prerogative

The Patent and the Copyright Acts grant the right owners broad rights to exclude.[61] But nothing in the acts extends the exclusionary rights beyond the scope of ownership rights in tangible property. Moreover, the Supreme Court has stated that "repeals of the antitrust laws by implication from a regulatory statute are strongly disfavored and have only been found in cases of plain repugnancy between the antitrust and the regulatory provisions."[62] The question is therefore whether the exclusionary rights of

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58. *See* United States v. Colgate & Co., 250 U.S. 300, 307 (1919).

59. *See* Aspen Skiing Co. v. Aspen Highlands Skiing Corp., 472 U.S. 585, 595-96, 604-05 (1985).

60. *See, e.g.*, Gleklen, *supra* note 9.

61. *See* 35 U.S.C. § 154(a)(1) (2000) ("[Patentees are authorized] to exclude others from making, using, offering for sale, or selling the invention throughout the United States."); 17 U.S.C. § 106(1)-(3) (1994). The language of the statute reads:

> [T]he owner of a copyright under this title has the exclusive rights to do and to authorize [reproduction of] the copyrighted work in copies or phonorecords; [preparation of] derivative works based upon the copyrighted work; [distribution of] copies or phonorecords of the copyrighted work to the public by sale or other transfer of ownership, or by rental, lease, or lending.

17 U.S.C. § 106(1)-(3).

62. United States v. Philadelphia Nat'l Bank, 374 U.S. 321, 350-51 (1963).

intellectual property, granted under the Patent and Copyright Acts, plainly contradict antitrust principles.

The Supreme Court has held that the exclusionary rights attached to tangible or intangible property are the "essence" of the grant of ownership.[63] For example, *Continental Paper Bag* stated that exclusion of competitors "is the very essence of the right conferred by the patent as it is the privilege of *any owner of property* to use or not to use it, without question of motive."[64] Similar language can be found in cases referring to the exclusionary component the ownership rights to tangible property.[65]

Though a central attribute of *any* form of private property, the right to exclude is never absolute. It never included the right to monopolize markets in an anticompetitive way. On the contrary, all exclusionary rights are qualified, existing "*only to the extent* that they serve a socially-acceptable justification."[66] When it comes to intellectual property, courts do recognize the fact that though intellectual property is not privileged regarding antitrust enforcement, antitrust laws do not negate intellectual property owners' right to exclude.[67] To date, many efforts to analyze the intersection of antitrust duties to deal and intellectual property laws have stopped there, where commentators concluded that intellectual property laws confer a legal monopoly and that the antitrust laws have no business interfering with the exercise of that right.[68] Part II.A. demonstrated that this conception is flawed and incomplete. But even assuming that a given intellectual property grant does not have any substitute and bestows its owner monopoly power in the market for the goods or services embodying the innovation, it still does not entitle the patentee to exclude rivals in an anticompetitive way, in derogation of antitrust principles.

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63. *See* Dawson Chemicals Co. v. Rohm & Haas Co., 448 U.S. 176, 215 (1980) ([T]he "essence of a patent grant is the right to exclude others from profiting by the patented invention."); *see also* Stewart v. Abend, 495 U.S. 207, 229 (1990) ("[A] copyright owner has the capacity arbitrarily to refuse to license one who seeks to exploit the work.").

64. Cont'l Paper Bag Co. v. E. Paper Bag Co., 210 U.S. 405, 429 (1908) (emphasis added).

65. *See, e.g.*, Kaiser Aetna v. United States, 444 U.S. 164, 176 (1979) ("[O]ne of the most essential sticks in the bundle of rights that are commonly characterized as property [is] the right to exclude others.").

66. JOHN G. SPRANKLING, UNDERSTANDING PROPERTY LAW § 1.03(A), at 4 (2000) (emphasis in original).

67. *See, e.g.*, Intergraph Corp. v. Intel Corp., 195 F.3d 1356, 1362 (Fed. Cir. 1999).

68. *See, e.g.*, Burling et al., *supra* note 16, at 535.

ii) Distinguishing Monopolization From Patent Misuse

Defendants in patent infringement suits often raise the patent misuse defense. This defense argues "that the patent owner has over-reached and tried to do more than legitimately is authorized by the patent monopoly."[69] In *Xerox,* the Federal Circuit explicitly drew a parallel between antitrust claims against patentee's refusals to deal and the law on patent misuse.[70] The court then implicitly conflated the antitrust challenge with patent misuse.[71] The court undertook both of these readings so that it could properly immunize intellectual property owners' refusals to deal from Section 2 of the Sherman Act, thus setting intellectual property apart from other property rights regarding antitrust law. Neither of these readings of the law are sound.

First, equating antitrust claims to the treatment of refusals to license patents under patent misuse law effectively renders patentees' refusals to deal immune from antitrust regulation, because the 1988 amendment of the Patent Act expressly shields refusals to license or use patent rights from misuse claims. The amendment added the following italicized elements to U.S.C. Section 271(d):

> [N]o patent owner otherwise entitled to relief for infringement . . . shall be denied relief or deemed guilty of misuse or illegal extension of the patent right by reason of having done one or more of the following: . . . (4) *refused to license or use any rights in the patent.*[72]

Standing alone, the statute is unclear as to what "illegal extension of the patent right" means. The clause sounds all-encompassing, which led commentators to construe it as including antitrust claims.[73] Such a construction, however, contradicts Supreme Court case-law. To prove that a unilateral refusal to deal is monopolization, one must demonstrate (1) monopoly power and (2) exclusionary conduct. The latter has been defined as "the willful acquisition or maintenance of [monopoly] power as distin-

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69. ARTHUR R. MILLER & MICHAEL H. DAVIS, *in* INTELLECTUAL PROPERTY: PATENTS, TRADEMARK, AND COPYRIGHTS IN A NUTSHELL § 8.7, at 141 (3d ed., 2000). Patent misuse was defined by the Supreme Court as "attempts to broaden the physical or temporal scope of the patent monopoly" in *Blonder-Tongue Lab., Inc. v. Univ. of Ill. Found.*, 402 U.S. 313, 343 (1971).

70. *In re* Indep. Serv. Orgs. Antitrust Litig. v. Xerox Corp., 203 F.3d 1322, 1326 (Fed. Cir. 2000).

71. *Id.* at 1327-28.

72. 35 U.S.C. § 271(d) (2000) (emphasis added).

73. *See, e.g.*, Gleklen, *supra* note 9, at 3.

guished from growth or development as a consequence of a superior product, business acumen, or historic accident,"[74] the exercise of power "to exclude competition,"[75] "exclude . . . from the right to trade,"[76] "driving competitors out of business,"[77] or "the willful acquisition or maintenance of [monopoly] power by anticompetitive or exclusionary means or for anticompetitive or exclusionary purposes."[78] These definitions do not include "illegal extension" of an exclusionary right. Leading Supreme Court unilateral-refusal-to-deal cases have sanctioned refusals to publish advertisements when an advertiser uses or intends to use its competitors to conduct parallel announcements,[79] a refusal of access to a privately owned mountain,[80] a refusal to provide power to local systems at wholesale in municipalities where the supplier had previously sold power at retail.[81] Illegally extending the scope of one's right to exclude is not the standard the Court uses for finding antitrust offenses in unilateral refusals to deal. Rather, *Aspen* makes it clear that what was impermissible was "a decision by a monopolist to make an important change in the character of the market."[82] In the absence of valid business reasons, the firm's effort to drive its competitors out of the market is evidentially significant.[83] But the refusal to deal in *Aspen*, removed from its circumstances, would have taken place within the scope of the defendant's exclusionary rights. It is thus the circumstances and the goal pursued by the defendant in refusing to deal that had made the refusal illegal. It is therefore unwarranted to read Section 271(d) as extending immunity for refusing to deal to the realm of antitrust.[84]

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74. United States v. Grinnell Corp., 384 US 563, 570-71 (1966).

75. United States v. United Shoe Mach. Corp., 110 F. Supp. 295, 342 (D. Mass. 1953).

76. Standard Oil Co. v. United States, 221 U.S. 1, 76 (1911).

77. Brooke Group Ltd. v. Brown & Williamson Tobacco Corp., 509 U.S. 209, 251 (1993).

78. Aspen Skiing Co. v. Aspen Highlands Skiing Corp., 472 U.S. 585, 596 (1985).

79. Lorain Journal Co. v. United States, 342 U.S. 143 at 148-49, 155 (1951).

80. *Aspen*, 472 U.S. at 585.

81. Otter Tail Power Co. v. United States, 410 U.S. 366 (1973).

82. *Aspen*, 472 U.S. at 604.

83. *Id.* at 608, 610 ("[T]he monopolist made a deliberate effort to discourage its customers from doing business with its smaller rival.").

84. Judicial opinions support this interpretation. *See, e.g.*, Grid Sys. Corp. v. Texas Instruments Inc., 771 F. Supp 1033, 1037 n.2 (N.D. Cal. 1991) ("On its face, section 271(d) relates only to the defense of patent misuse as a defense to an infringement claim. . . . [A] full reading of the legislative record reveals that Congress rejected the extension [into the area of antitrust] despite this articulate support.").

Second, the *Xerox* court seemed to mix misuse law and antitrust law when it stated that "we . . . will not inquire into [the patent holder's] motivation for exerting his statutory rights, even though his refusal to sell or license his patented invention may have an anticompetitive effect, *so long as that anticompetitive effect is not illegally extended beyond the statutory patent grant"*[85] (emphasis added). How is this test different from patent misuse? The court seems to have conflated patent misuse and unilateral refusal to deal as an antitrust offense since in the absence of a finding of "illegal extension of the patent grant," *i.e.*, misuse, it does not conduct an antitrust inquiry. This conflation continued in footnote 2 of the opinion, where the court admitted that "[h]aving concluded that Xerox's actions fell within the statutory patent grant, we need not separately consider [the plaintiff's] allegations of patent misuse and they are rejected."[86] In other words, antitrust claims and patent misuse claims were considered to be one and the same.

This conflation is *exactly* what Congress had refused in rejecting Bill 438, the predecessor to the 1988 Patent Misuse Reform Act. The Bill provided that a patent owner shall not be guilty of misuse or illegal extension of a patent unless such practices or actions violate the antitrust laws, and attempted to restrict the realm of the misuse doctrine to antitrust offenses. The rejection of the Bill manifested a congressional intent that, while the patent misuse doctrine and the antitrust laws may cover similar conduct, each set of rules was to be interpreted independently.[87] Therefore, the Federal Circuit's interpretation of the 1988 amendment brings to life an outcome that Congress sought to bury.

Finally, the Federal Circuit's holding made a finding of antitrust liability impossible when there is a patent grant at issue, a result that is wholly inconsistent with the 1988 amendment of Section 271(d).[88] This is because the courts would not conduct an antitrust refusal-to-deal analysis in patent cases unless they clearly identify misuse –the "illegal extension of the patent grant." But the amended Section 271(d)(4) clearly states that "no patent owner . . . shall be . . . deemed guilty of misuse . . . by reason of hav-

85. *In re* Indep. Serv. Orgs. Antitrust Litig. v. Xerox Corp., 203 F.3d 1322, 1327-28 (Fed. Cir. 2000).

86. *Id.* at 1328.

87. *See* Richard Calkins, *Patent Law: The Impact of the 1988 Patent Misuse Reform Act and Noerr-Pennington Doctrine on Misuse Defenses and Antitrust Counterclaims,* 38 DRAKE L. REV. 175, 196 (1988-89) ("Certain conclusions can be reached concerning Congress' rejection of Senate Bill 438. . . [O]ther than one narrow exception in the new law, misuse defenses will continue to be tested by public policy standards underlying the patent laws *rather than by antitrust standards.*" (emphasis added)).

88. *Xerox*, 203 F.3d at 1327-28.

ing . . . refused to license or use any rights in the patent."[89] In other words, the *Xerox* court conditions a finding of antitrust liability on an inquiry that the statute does not allow it to make.

b) Supreme Court Precedents Treat Intellectual Property and Other Property Rights as Equals

The Supreme Court has never explicitly addressed whether intellectual property and other property rights should be treated similarly in the antitrust unilateral-refusal-to-deal context. Supreme Court case-law, however, suggests that the right to exclude in intellectual property is similar in scope as the right to exclude in tangible property rights. Furthermore, in order to preserve dynamic efficiency, the Supreme Court's recent decision in *Trinko* required a showing of anticompetitive intent in antitrust challenges of unilateral refusals to deal.[90]

Several Supreme Court cases set forth the proper scope of exclusionary rights in the intellectual property context. First, the Court's holding in *Continental Paper Bag* suggests a parallel between the right to exclude in intellectual property and tangible property. Justice McKenna stated in dictum that "exclusion [from the use of a new patent] may be said to have been the very essence of the right conferred by the patent, as it is the privilege of any owner of property to use it or not to use it, without question of motive."[91] Cases like *Line Material*,[92] *Precision Instruments*,[93] and *United Shoe*,[94] further defined patents as exceptions from a freely competitive market.[95] Yet, none addressed allegations of illegal refusals to deal. Furthermore, "the language used in these cases reflected the Court's contemporaneous view of all forms of private property, not special rules for IP,"[96]

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89. *See supra* note 72 and accompanying text.

90. Verizon Communications Inc. v. Law Offices of Curtis V. Trinko, LLP, 124 S. Ct. 872, 880 (2004).

91. Cont'l Paper Bag Co. v. E. Paper Bag Co., 210 U.S. 405, 429 (1908).

92. United Stated v. Line Material Co., 333 U.S. 287, 309-10 (1948) ("[I]t is crystal clear from the legislative history and accepted judicial interpretations of the Sherman Act that competition on prices is the rule of congressional purpose and that, where exceptions are made, Congress should make them. . . . The monopoly granted by the patent laws is a statutory exception to this freedom for competition.").

93. Precision Instruments Mfg. Co. v. Auto. Maint. Mach. Co., 324 U.S. 806, 816 (1945) ("[A] patent is an exception to the general rule against monopolies and to the right to access to a free and open market.").

94. United States v. United Shoe Mach. Corp., 247 U.S. 32, 57 (1918) ("[T]he right to exclude others from the use of the invention . . . within the field covered by the patent law is not an offense against the Anti-Trust Act.").

95. *See, e.g.*, Gleklen, *supra* note 9, at 5.

96. Melamed & Stoeppelwerth, *supra* note 17, at 413.

further suggesting that the scope of exclusionary rights is similar in intellectual property and tangible property. Because the Supreme Court caselaw unequivocally establishes that the right to exclude in tangible property is qualified, the exercises of these rights may become illegal exclusionary conduct when undertaken by a monopolist to exclude competitors.[97] In light of these tangible-property cases and *Continental Paper Bag*, the exact same principles and qualifications apply to patent and other intellectual property laws.

Finally, does motivation behind the refusal matter? It is important to bear in mind that *Continental Paper Bag* was decided in 1908. The Supreme Court has since decided cases like *Aspen* and *Trinko*, which stand for the proposition that motivation does matter when a monopolist refuses to deal.[98] Furthermore, in *Trinko*, Justice Scalia stated in dictum that "[t]o safeguard the incentive to innovate, the possession of monopoly power will not be found unlawful unless it is accompanied by an element of anticompetitive *conduct*."[99] This statement contradicts the holding in *Xerox* that no inquiry will be made into intellectual property owners' motivation for refusing to deal, "even though his refusal to sell or license his patented invention may have an anticompetitive effect."[100] Therefore, dynamic efficiency concerns are not specific to intellectual property, and, in all cases, motivation is central to the finding of anticompetitive exclusion.

2. *Intellectual Property and Other Property Rights are Equivalent for Purposes of the Essential Facilities Doctrine*

The essential facilities doctrine originated from the *Terminal Railroad* case.[101] The Seventh Circuit later articulated the concept of "essentialness" by way of a four-part test in *MCI*.[102] Under the *MCI* test, it is illegal to refuse to grant access to a given facility if the access-seeker proves: "(1)

97. *See* Lorain Journal Co. v. United States, 342 U.S. 143 (1951); Aspen Skiing Co. v. Aspen Highlands Skiing Corp., 472 U.S. 585 (1985).

98. *See Aspen*, 472 U.S. at 611 ("Ski Co. was not motivated by efficiency concern and . . . was willing to sacrifice short-run benefits and consumer goodwill in exchange for a perceived long-run impact on its smaller rivals."); Verizon Communications Inc. v. Law Offices of Curtis V. Trinko, LLP, 124 S. Ct. 872, 880 (2004) (refusing to sanction the refusal to deal at issue as anticompetitive because "the defendant's prior conduct sheds no light upon the motivation of its refusal to deal—upon whether its regulatory lapses were prompted not by competitive zeal but by anticompetitive malice").

99. *Trinko*, 124 S. Ct. at 879 (emphasis in original).

100. *In re* Indep. Serv. Orgs. Antitrust Litig. v. Xerox Corp., 203 F.3d 1322, 1327 (Fed. Cir. 2000).

101. Unites States v. Terminal R.R. Ass'n, 224 U.S. 383 (1912).

102. MCI Communications Corp. v. AT&T Co., 708 F.2d 1081 (7th Cir. 1983).

control of the essential facility by a monopolist; (2) a competitor's inability practically or reasonably to duplicate the essential facility; (3) the denial of the use of the facility to a competitor; and (4) the feasibility of providing the facility."[103] The essential facilities doctrine has been advanced by parties in intellectual property cases, although never successfully in the sense that it never helped to win the case. Meanwhile, the courts have never explicitly rejected this doctrine as applicable in the intellectual property context either. In *Intergraph,*[104] the plaintiff claimed Intel microprocessors, technical assistance and consumer benefits were essential facilities because they were necessary for Intergraph to compete in the workstation market.[105] Although the Federal Circuit did not review the essential facility claim on the merits of the "essentialness" standard, it did not exclude the possibility that the doctrine may be applied to intellectual property.[106] In *Aldridge*,[107] the plaintiff argued that Microsoft's Windows 95 operating system was an essential facility because any piece of software (in the case, disk cache programs, which are products designed to improve the speed at which a computer functions) that cannot function under Windows 95 would be useless to most computer owners.[108] The district court refused to brand Windows 95 as "essential" because the sole purpose of the plaintiff's product was to correct a flaw in the operating system.[109] In that sense, since the plaintiff's product was useful only if the operating system function inefficiently, and since Microsoft had solved the problem by improving Windows 95, deciding otherwise would have punished the manufacturer for upgrading its own product.[110] It would also have defined as essential a facility even if, although vital for the defendant, the facility was not essential for competition on the disk cache program market,[111] thus failing the first element of the *MCI* test.

Some scholars advocate a per se ban of applying the essential facilities doctrine to intellectual property cases.[112] Central to their suggestion is the

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103. *Id.* at 1132-33.

104. Intergraph Corp. v. Intel Corp., 195 F.3d 1356 (Fed. Cir. 1999).

105. *Id.* at 1356.

106. *Id.* at 1357-58 (refusing to apply the essential facilities doctrine in a situation where the two parties were not competitors).

107. David L. Adridge Co. v. Microsoft Corp., 995 F. Supp. 728, 751 (S.D. Tex. 1998).

108. *Id.* at 751.

109. *Id.* at 753-54.

110. *Id.* at 753.

111. *Id.*

112. *See, e.g.*, HOVENKAMP ET AL., *supra* note 9, at 13-16; *see also* Abbott B. Lipsky, Jr. & J. Gregory Sidak, *Essential Facilities,* 51 STAN. L. REV. 1187 (1999).

argument that the doctrine, if applied to intellectual property, would likely disrupt the system of incentives put in place by the intellectual property laws because intellectual property owners would be "ripped-off" by a duty to share.[113] It is indeed problematic that the intellectual property owners would be vulnerable of antitrust liability just when the ideas and innovations protected by patents or copyrights are most valuable and confer market power to their owners, simply because they become "essential" as well to the owners' competitors. There would be a significant threat to stifle innovation by forcing innovative firms to share their competitive advantage.

Yet such arguments overlook the fact that the essential facilities doctrine only applies to vertical relationships between an upstream market, where access to the facility at issue is supplied, and a downstream market. One cannot enter the downstream market without access to the facility, hence the facility's essentialness. The essential facilities doctrine generally applied would not make sense, as opposed to limiting it to vertical relationships, and would produce anticompetitive results.[114] The reason the doctrine is not applied to single market situations is to avoid, for tangible property, imposing restrictions on the use of assets conducive of competitive advantages. In a single market context, antitrust law rather seeks to encourage the acquisition/creation of such facilities.[115] The same rationale is applicable to intellectual property: antitrust law encourages innovation, and should not impose duties to share when the refusal is proper exercise of exclusionary IP-related privileges. On the other hand, imposing duties to share on downstream markets does not "rip-off" the owner of the facility because the innovator's legal reward is not altered in the primary market for the product embodying its intellectual property.[116]

113. *See, e.g.*, Lipsky & Sidak, *supra* note 112, at 1219.

114. *See e.g.*, John Temple Lang, *The Principle of Essential Facilities in European Community Competition Law – The Position Since Bronner*, 1(4) J. NETWORK INDUSTRIES 375 (2000); Paul D. Marquart & Mark Leddy, *The Essential Facilities Doctrine and Intellectual Property Rights: A Response to Pitofsky, Patterson, and Hooks*, 70 ANTITRUST L.J. 847 (2003).

115. *See, e.g.*, Fishman v. Estate of Wirtz, 807 F.2d 520, 540 (7th Cir. 1986) ("The point of the essential facilities doctrine is that a potential market entrant should not be forced simultaneously to enter a second market, with its own large capital requirements.").

116. *Compulsory Licensing of Intellectual Property in European Community Antitrust Law*, Hearings on Refusals to License and Compulsory Licensing in the European Union, Canada and Australia before the DoJ/FTC 13 (May 22, 2002) (testimony of John Temple Lang) ("[I]f a license could be given for an input in a separate market, and this could be done without affecting the right owner's statutory monopoly in the market to which the right primarily and directly relates, a compulsory license may be ordered if the

Both policy and law demand an equivalent treatment of intellectual and tangible property in the context of unilateral refusals to deal. The rule applicable to intellectual property therefore should embody a rule of reason similar to the one applied to tangible property.

III. THE RULE OF REASON INQUIRY FOR UNILATERAL REFUSALS TO DEAL IN INTELLECTUAL PROPERTY AS A CHANNEL FOR OPTIMALITY

The per se legality rule for unilateral refusals to deal in intellectual property overlooks marginal costs that may offset marginal benefits and under-deters significant anticompetitive conduct. As previously described, unilateral refusals to deal are held to be illegal exclusionary behavior when they originate from monopolists, are likely to result in anticompetitive effects, and are without valid business justifications.[117] In reference to this general test, Part A of this Section examines the nature of potential anticompetitive harm inflicted by refusals to deal in intellectual property. Part B details the tests applicable in courts to uncover illegal refusals to deal in intellectual property under § 2 of the Sherman Act.

A. The Potential Harmful Effects of Unilateral Refusals to Deal in Intellectual Property

The *Xerox* holding grants absolute antitrust immunity throughout the scope of the patent. Even if we ignore the difficulties of defining such scope, it is unclear why the entire scope should be exempt from antitrust scrutiny. To assess the potential anticompetitiveness of a challenged refusal to deal in intellectual property, the analysis should rather focus on what the prospective licensee wants and ask whether his request really amounts to an appropriation of a reward to which only the intellectual property holder would normally be entitled.

When the firm under examination has market power, courts should consider two types of anticompetitive conduct: (1) whether exclusionary privileges are manipulated to leverage market power in markets unrelated to the patented or copyrighted product; (2) whether refusals to deal in intellectual property block rivals entry or to thwart their productive effort. If the answer to either of these questions is yes, then the conduct should not be shielded from liability because the intellectual property owner does not

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other requirements of the essential facilities principle are met."), *available at* http://www.ftc.gov/opp/intellect/020522langdoc.pdf (last visited Apr. 19, 2004).

117. Aspen Skiing Co. v. Aspen Highlands Skiing Corp., 472 U.S. 585, 608 (1985).

purport to reap the reward to which he is legally entitled. Hence, in such cases, antitrust liability does not run counter to the incentive system put in place by the intellectual property law.

1. *Monopoly Leveraging by Refusing to Deal in Intellectual Property*

Patent or copyright owners may refuse to deal in order to extend their dominance in the market for the product embodying their intellectual property right into another market.[118] I illustrate this point by presenting typical forms of intellectual property leveraging. Next, I rationalize the illegality of refusals to deal when the IP owner leverages market power.

a) Typical Situations Where Market Power Gained Through Intellectual Property is Leveraged

In copyright law, courts have disapproved attempts to use copyrighted elements of a certain good to control the market for compatible products when compatibility requires access to the copyrighted expression.[119] This is a form of leveraging in which copyright owners take advantage of interoperability requirements and use the exclusionary rights inherent in the copyright grant to gain market power for components that are part of the same system as the product embodying the copyright, but that bear no relation to the protected creative expression.

In *Sega*,[120] Accolade, an independent video game developer and producer, abandoned its effort to secure a licensing agreement with Sega because the agreement would have required Sega to be the exclusive manufacturer of the games developed by Accolade.[121] Rather, Accolade chose to reverse-engineer Sega's game programs to discover the compatibility requirements of Sega's Genesis console:[122] Accolade's employees disassembled the copyrighted object code to discern the functional requirements for compatibility.[123] The court upheld that conduct as fair use and held that "not all copyrighted works are entitled to the same level of protection."[124] Ideas are not protected under copyright law, and to the extent

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118. Leveraging is the use of market power gained through natural or legal advantage—such as a patent or a copyright—to expand dominance into another market. *See* Times-Picayune Pub. Co. v. United States, 345 U.S. 594, 611 (1953).

119. *See, e.g.*, Sega Enters. Ltd. v. Accolade, Inc., 977 F.2d 1510 (9th Cir. 1992); Alcatel USA Inc. v. DGI Tech., Inc., 166 F.3d 772 (5th Cir. 1999).

120. *Sega*, 977 F.2d 1510.

121. *Id.* at 1514.

122. *Id.*

123. *Id.* at 1514-15.

124. *Id.* at 1524.

that a work is functional it may be lawfully copied.[125] Because the copying of protected data was necessary to reach the unprotected functional elements during the reverse engineering process, the court refused to hold Accolade guilty of infringement.[126] The court held that absolute protection of a copyrighted work, which means that copying as a way to accessing unprotected data would be prohibited, would allow the copyright holder to leverage monopoly power in the market: Sega would be able to block any competing game-cartridge manufacturer.[127]

In *Alcatel,*[128] the plaintiff (then DSC) produced and sold "switches," which are devices that route long-distance telephone calls to their destinations. These switches were controlled by copyrighted operating system software, which DSC did not sell but granted licenses for, with the express provision prohibiting copying or disclosing the software to third parties.[129] DGI, DSC's aspiring competitor in the market for "switch cards," which are devices used to expand switches' call-handling capacities, developed and marketed a "microprocessor card," which downloaded DSC's copyrighted software upon its installation on a switch.[130] To ensure compatibility with DSC's switches DGI had to test its own cards on a DSC switch, which required copying DSC's copyrighted operating system code.[131] Finding that a prohibition of such copying would prevent the emergence of any competing cards the court held that DSC's license agreement for its operating system constituted copyright misuse.[132]

These two cases, although decided on different grounds, illustrate the ways in which copyright owners may exploit their rights on one component in order to expand their control from that component to the entire system. Merges articulated a theory of "disproportionate leverage" in the misuse and fair use contexts[133] based on the idea that courts prohibit hold-

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125. 17 U.S.C. § 102(b) (1994) ("In no case does copyright protection for an original work of authorship extend to any idea, procedure, process, system, method of operation, concept, principle, or discovery, regardless of the form in which it is described, explained, illustrated, or embodied in such work.").

126. Sega Enterprises Ltd. v. Accolade, Inc., 977 F.2d 1510, 1527-28 (9th Cir. 1992).

127. *Id.* at 1526.

128. Alcatel USA Inc. v. DGI Tech., Inc. 166 F.3d 772 (5th Cir. 1999).

129. *Id.* at 777.

130. *Id.* at 778.

131. *Id.* at 793-94.

132. *Id.* at 793.

133. Merges, *supra* note 1. Arora later suggested application to the unilateral refusal to deal context. Ashish Arora, *Refusals to License: A Transaction Based Perspective* (Apr. 28, 2002), *available at* http://www.ftc.gov/opp/intellect/020501arora1.pdf (last visited Apr. 19, 2004).

ers of "small" property rights, such as copyrights, to leverage large markets.[134] Disproportionate or not, the message in those two cases above is that copyright owners cannot refuse access to their intellectual property when such access conditions the development of interoperable uncopyrighted elements of the same system.

By contrast, in the area of patents, under the *Xerox* rule, owners could integrate patented elements arbitrarily into their output so that they could refuse to deal with impunity. In *Aspen*, a case involving two companies that together controlled four ski areas in one resort, the Supreme Court denounced a refusal to continue a joint offering of an "all-Aspen" ticket by Ski Co., who controlled three out of the four areas, to the detriment of the Highlands Skiing Co., who only controlled one.[135] MacKie-Mason suggested that the *Xerox* rule, if endorsed by the Supreme Court, would hypothetically have had an impact on the outcome of this case had the defendant integrated a patented gear mechanism in its ski lifts. It seems that, in this hypothesis, the Federal Circuit's rule would indeed warrant an outcome opposite to the actual Supreme Court decision in *Aspen,* because the Federal Circuit refuses to inquire into a patentees' "subjective motivation for exerting [their] statutory rights, even though [their] refusal to sell or license [their] patented invention may have anticompetitive effect."[136] In the end, the Supreme Court found it illegal for Ski Co. to stop offering the all-Aspen ticket because it was not motivated by efficiency but rather by the perceived long-term impact of gaining monopoly power in the market.[137] The Supreme Court's holding hinged on efficiency arguments, which suggested that the All-Aspen ticket was a preferable option because it enhanced product quality (it added flexibility, expanded vista, etc) and enlarged the market.[138]

The *Aspen* Court did not consider *ex ante* incentives to acquire property. But imposing a duty to share non-natural resources might raise the concern that *ex ante* incentives to acquire them could be adversely affected. This concern was recently articulated in dictum by Justice Scalia in *Trinko.*[139] Why then should such concerns serve as an absolute shield for

134. Merges*, supra* note 1, at 4.

135**.** Aspen Skiing Co. v. Aspen Highlands Skiing Corp., 472 U.S. 585, 589-93 (1985).

136. *In re* Indep. Serv. Orgs. Antitrust Litig. v. Xerox Corp., 203 F.3d 1322 (Fed. Cir. 2000).

137. *Aspen*, 472 U.S. at 608.

138. *Id.* at 605-07.

139. Verizon Communications Inc. v. Law Offices of Curtis V. Trinko, LLP, 124 S. Ct. 872, 879 (2004) ("Compelling . . . firms to share the source of their advantage is in some tension with the underlying purpose of antitrust law, since it may lessen the incen-

intellectual property owners against antitrust liability where similar use of tangible property is deemed illegal? The clash seems unavoidable, and remains even under MacKie-Mason's hypothetical: no matter how much incentive to innovate in the area of ski-lift gear mechanisms is required, consumers end up with the product and are vulnerable to supra-competitive pricing. Therefore, MacKie-Mason is probably correct in asserting that simply incorporating protected components in designs would be an easy way for firms to escape antitrust liability under the *Xerox* rule.[140]

The cases discussed above suggest that, under the *Xerox* rule, patentees and copyright owners may get away with leveraging market power in violation of antitrust principles. This result is not warranted by the policies behind the grant of intellectual property.

b) The Rationale for Illegality

In accordance with the policy considerations underlying grants of copyright and patent protection, such as patentees and copyright owners being allowed to appropriate the revenues stemming from their inventions or creations, refusals to deal should be deemed legal when they purport to protect the owner's lawful return. To prohibit property owners from "reap[ing] where they have sown"[141] is to negate their property rights, and is to incur the kind of cost that the antitrust principles seek to avoid.[142] Cases of alleged monopoly leveraging by unilateral refusals to deal should therefore turn on the scope of the reward to which the intellectual property owner is legally entitled. Under the intellectual property laws, this reward comes in the form of benefits flowing from exploitation of exclusive rights conferred by the innovation or creation.[143] Take the facts of *Xerox*, if the scope of a patent is not market control, but only control over an invention, then it does not follow that a patent on a copier's functional element should allow a monopoly on the market for repair-services.

In cases where an intellectual property owner/defendant claims protection of its intellectual property as a justification for a unilateral refusal to

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tive for the monopolist, the rival, or both to in-vest in those economically beneficial facilities.").

140. MacKie-Mason, *supra* note 17, at 7-8.

141. LANDES & POSNER, *supra* note 22, at 13.

142. *See, e.g.*, *Trinko*, 124 S. Ct. at 882 ("Mistaken inferences and the resulting false condemnations 'are especially costly, because they chill the very conduct the antitrust laws are designed to protect'." (citing Matsushita Elec. Indus. Co. v. Zenith Radio Corp., 475 U.S. 574, 594 (1986))).

143. *See* 35 U.S.C. § 154(a)(1) (2000) (patents); 17 U.S.C. § 106(1)-(3) (1994) (copyrights).

deal, plaintiffs should be able to show that demand for the product embodying the intellectual property is not the demand for intellectual property and a deal would not allow the plaintiffs to free-ride on the owner's innovation, and therefore would not threaten the owner's lawful return. Mark Patterson distinguishes between the "subject matter" of intellectual property and the end-product in which it is "materialized."[144] He argues that the Federal Circuit erred by confusing the scope of a patent (control over the invention), the relevant market for the products in which the asset embodying the patent competes (replacement parts), and the product itself.[145] It is the relevant market, the "economic monopoly," as opposed to the "patent monopoly," i.e., the control over the invention as defined in the patent claims, that matters for antitrust.[146] Patterson suggests that intellectual property owners should be required to support claims of intellectual property protection in refusal-to-deal cases by showing that the market power they acquired on the secondary market (e.g., the repair-service market) flows directly from their intellectual property.[147] In *Xerox*, in the presence of unpatented alternatives, the demand for Xerox's parts is a demand for patented assets. But in the absence of market alternatives it is simply a demand for replacement parts.[148] In the latter situation, the patent monopoly plays no role because it is not the patented characteristic that is desired.

On the other hand, the absence of market alternatives may simply be the result of a highly valuable patent. Then, the demand may come from the fact that the product is patented. But such arguments are misleading. In *Xerox* the reason why the ISOs needed Xerox's parts was not because these parts were patented, but because they were the only parts available to service Xerox's copiers. In using them to service Xerox copiers' end-users, the ISOs did not appropriate Xerox's legal reward, because the ISOs did not benefit from the invention, the end-users did. In refusing to deal with anyone but the end-users, Xerox necessarily imposed itself as the only service provider, since the ISOs had no access to parts.[149] Thus, Xerox foreclosed and monopolized a market unrelated to its intellectual

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144. Mark R. Patterson, *When is Property Intellectual? The Leveraging Problem*, 73 S. CAL. L. REV. 1133 (2000).

145. *Id.* at 1155-56.

146. *Id.* at 1156.

147. *Id.* ("In order to be allowed to defend its leveraging by pointing to a legal right, Xerox should be required to show that it is in fact that legal right that is the source of its economic leveraging power.").

148. *Id.*

149. *In re* Indep. Serv. Orgs. Antitrust Litig. v. Xerox Corp., 203 F.3d 1322, 1324 (Fed. Cir. 2000).

property, using means that had nothing to do with the reward it was legally entitled to secure.

In the copyright context, the law makes a similar distinction between an idea and its expression, comparable to the distinction Patterson makes between a patent and an end-product. By refusing to call Accolade's reverse-engineering infringement, the court in *Sega* rejected an attempt to claim a legal right over unprotected aspects of the product. Therefore, the rationale for illegality seems to be based on the proposition that intellectual property owners must not use their property as a device to appropriate more than that to which they are legally entitled, consistent with a Lockean view that intellectual property serves to prevent parties from reaping profits where they have not sown.[150] This formulation of intellectual property rights is applicable to rivals who seek to free-ride on an innovator's efforts through copyright or patent infringement or misappropriation.[151] The same logic applies to intellectual property owners who purport to extend the reach of their entitlements.

2. *Interfering With Rivals' Production or Entry by Refusing to Deal In Intellectual Property*

In addition to monopoly leveraging, a market player can manipulate exclusionary privileges to block rivals' entry or expansion. But outside the leveraging context, the conduct takes place within what constitutes prima facie legal patent and copyright exploitation. Indeed, the whole point of granting a patent or a copyright is to enable the inventor or creator to freely exploit it. However, plaintiffs should be able to refute business justifications when the refusal-to-deal is intended to block entry or adversely affect rivals' production. The case-law suggests that this intent is not subjective but objective, testing when the rationale for the conduct at issue is anticompetitive, and excludes competitors in a way that furthers or maintains monopoly power.[152] Protecting valid intellectual property rights thus constitutes competition on the merits, but manipulating intellectual property rights to control or impede rivals' production, so as to preserve or extend a dominant position, would be considered anticompetitive and illegal.

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150. *See, e.g.*, Int'l News Serv. v. Associated Press, 248 U.S. 215, 239 (1915).

151. *See, e.g.*, *id.* at 240.

152. *See* Aspen Skiing Co. v. Aspen Highlands Skiing Corp., 472 U.S. 585, 602 (1985); *see also* United States v. Aluminum Co. of Am., 148 F.2d 416, 432 (1945) ("To read [the intent to monopolize requirement under section 2 of the Sherman Act] as demanding any 'specific' intent, makes nonsense of [the intent requirement], for no monopolist monopolizes unconscious of what he is doing.").

First, if the legal requirements for the granting of patents are loosely applied,[153] certain markets may potentially be flooded by patents, leading to more vulnerability for innovative firms in these markets. The current flood of patents in the semiconductors, biotechnology, and computer software industries creates patent thickets in the sense that new products in these industries are very likely to infringe the existing patents.[154] Accordingly, in a market where one or more firms control those patents that are necessary to make a certain product (e.g., a patented process), rivals could not create substitutes to the patentee's end-product absent access to the patented process. With such dependence, competitors are forced to either get a license or exit the market. The patentee is at a competitive advantage such that it can "holdup" rivals and impose high rates.[155] But the intellectual property holder may also refuse to deal, sue its rivals for infringement and be granted injunctive relief. In this case the rival's costs are *de facto* increased, either decreasing its profitability (and the quantity of its output) or simply be driven out of the market.

Setting an industry standard can also achieve a similar result because some standards require access to certain "essential" patents, in the sense that they are necessary to meet the standard's requirements. However, most standard-setting organizations require participants to agree to license all essential patents.[156] Nevertheless, they rarely sanction unreasonable licensing terms for fear of antitrust liability for price-fixing.[157] In most situations, patent holders are likely to exploit their bargaining power to impose high rates, which constitutes a type of fair use of their intellectual property rights. But one could also imagine patent holders setting prohibitive rates, which would increase costs to a point where rivals could not expect any reasonable profit, and where the rivals suffer consequences that are *de facto* similar to the effects of unilateral refusals to deal. This strategy could be all the more profitable if the standard works as a highly visible quality signal to consumers. This standard would in turn impede rivals' access, either driving them out of the market or forcing them to create a costly substitutive standard.

153. Carl Shapiro, *Navigating the Patent Thicket: Cross Licenses, Patent Pools, and Standard Setting, in* INNOVATION POLICY AND THE ECONOMY 119 (Adam B. Jaffe et al. eds., 2000). Shapiro criticizes the PTO's admission of patents on business methods. *Id.* at 120 ("[The PTO] does indeed seem to have allowed a number of patents on ideas that would not appear offhand to meet the usual standards for novelty and nonobviousness.").

154. *Id.* at 119.

155. *Id.* at 125.

156. *Id.* at 128.

157. *Id.*

Standard setting might be used anticompetitively[158] in the particular context of markets characterized by strong network externalities,[159] such as the computer industry. Mark Lemley and David McGowan argue that standard-setting is particularly conducive to non-price predatory behavior in these settings because the price increases following a rival's exit from the market will discourage other companies from entering the market, largely because consumers will inevitably become reluctant to abandon the dominant standard.[160] This makes recouping the initial investment easier for those companies that remain in the market after the rival's exit.[161]

Finally, the *Aspen* refusal-to-deal used past collaboration to harm the only competitor in the market.[162] Jonathan Baker illustrated this anticompetitive effect in the intellectual property context in his rationalization of the Arrow model.[163] Baker is concerned that, in situations where a dominant firm and its fringe rivals are either engaged in collaborative relationships or are merely selling complementary products, the dominant firm will have the means to impede its rivals' innovations[164] by, for example, refusing to license its intellectual property. Collaboration enables the dominant firm to threaten to end its relationship with other firms, thus restricting access by producers of complementary products, be these mountains (as in *Aspen*) or patented parts for photocopiers (as in *Xerox*). The dominant firm might also reduce competition by creating incompatibilities.

B. The Test for Liability under the Rule of Reason

While there is no reason why a firm with monopoly power should not be entitled to claim the exercise of its intellectual property rights as a business justification for refusing to deal, plaintiffs should be allowed to challenge this defense by demonstrating that the intellectual property

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158. Mark A. Lemley & David McGowan, *Could Java Change Everything? The Competitive Propriety of a Propriety Standard,* 3-4 THE ANTITRUST BULLETIN 715 (1998).

159. Network externalities are defined, in the context of the software market, as "the utility that a user derives from consumption of 'software' increases with the number of other agents consuming the good." Michael L. Katz & Carl Shapiro, *Systems Competition and Network Effects,* 8 J. ECON. PERSP. 93 (1994).

160. Lemley & McGowan, *supra* note 158, at 725.

161. *Id.*

162. Aspen Skiing Co. v. Aspen Highlands Skiing Corp., 472 U.S. 585, 608 (1985).

163. Baker, *supra* note 40. The Arrow model stipulates that firms in competitive markets have greater incentives to innovate than monopolists. *See* discussion *supra* Part II.A.2.

164. Baker, *supra* note 40, at 519.

claim is a pretext, or is constitutive of predatory behavior. Easy cases will be when plaintiffs are unable to rebut the presumption that the exercise of intellectual property rights to exclude by the right owner is valid. More difficult cases will require that plaintiffs demonstrate a net anticompetitive effect such that the lawful right to exclude cannot justify the exclusionary detriment caused by the refusal to deal.

In *Kodak I*, the Supreme Court employed the framework of analysis used in *Aspen* to impose a duty-to-deal with Kodak's direct rival and added the proviso that liability turned on whether a valid business justification could explain Kodak's actions.[165] No inquiry into the harm to competition was required at that stage.[166] This is what Baker called a "truncated rule" for liability.[167] The question of how to proceed when faced with a valid justification was left unanswered. Indeed, the Court did not have to face the issue for this particular case,[168] nor did it suggest a proper route of inquiry in dictum.

The framework set by the Supreme Court in *Kodak*,[169] *Aspen*,[170] and *Trinko*[171] and Court of Appeals decisions on unilateral refusals to deal in intellectual property[172] suggest a two-step analysis:

> (1) Monopoly power and exclusionary behavior without valid business justifications violate the Sherman Act. Business justifications are rebuttable upon a showing of anticompetitive intent.[173]
>
> (2) Excluding rivals from intellectual property is a presumptively valid business justification.

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165. Eastman Kodak Co. v. Image Technical Servs., Inc., 504 U.S. 451, 483 (1992) [hereinafter *Kodak I*].

166. Baker, *supra* note 40, at 496.

167. *Id*.

168. The Court did not face the issue since the assessment of Kodak's proffered business justification was sent back on remand to the lower court. *See Kodak,* 504 U.S. at 486.

169. *Id.*

170. Aspen Skiing Co. v. Aspen Highlands Skiing Corp., 472 U.S. 585 (1985).

171. Verizon Communications Inc. v. Law Offices of Curtis V. Trinko, 124 S. Ct. 872 (2004).

172. *See* Data Gen. Corp. v. Grumman Sys. Support Corp., 36 F.3d 1147, 1184 (1st Cir. 1994); *Kodak II*, 125 F.3d 1195, 1214 (9th Cir. 1997).

173. *See Aspen,* 472 U.S. at 608, 610-11 (demonstrating that, absent efficiency justifications, unilateral termination of a joint offering was sufficient evidence of intent to forsake short term profits to exclude a competitor and anticompetitively increase market shares in the long run).

I propose adding a third step to the above two-step analysis:

(3) The presumption of valid business justification in the second step can be rebutted: applying the rule of reason, the business justification is overturned when the anticompetitive effects of the exclusion from the intellectual property outweigh the pro-competitive ones, i.e., when the harm to competition outweighs the benefits, or if the harm could be avoided by using a less restrictive alternative. The inquiry should focus on the monopolist's intent in their refusal to deal in order to reveal whether the intellectual property justification is a façade. This is central to the question whether the refusal to deal can be considered exclusionary, engendering a net anticompetitive effect. Finally, in light of the recent emphasis put by the Supreme Court on the preservation of *ex ante* incentives in unilateral refusals-to-deal cases,[174] I address the expected effect of such a rule of reason on the incentives to innovate.

1. *What Are Pretextual Intellectual Property Claims?*

Intellectual property may be used as a pretext for monopolization in situations where the owner's purpose can be divorced from seeking appropriation of his lawful reward.[175] Intent is central to the legal inquiry,[176] whether the inquiry legitimizes behavior in a given market or invalidates it.[177] Following Patterson's guidelines,[178] plaintiffs can expose pretext by demonstrating that the refusal is not related to legitimate exploitation of intellectual property, or that the refusal in fact implements a price-discrimination scheme that does not aim at distinguishing between different valuators of intellectual property.

a) Pretext #1: When Refusals to Deal are Unrelated to Intellectual Property

Protection of intellectual property rights is a pretext when the refusal does not enable the owners to appropriate a return within the legal grant.

174. *Trinko,* 124 S. Ct. at 872.

175. *Kodak II*, 125 F.3d at 1219.

176. *See Trinko,* 124 S. Ct. at 879-80.

177. The *Image Technical Servs. v. Eastman Kodak* holding is often read as imposing an inquiry into subjective motivation. But all that the court stated was that "[e]vidence regarding the state of mind of Kodak employees *may* show pretext." *Kodak II*, 125 F.3d at 1219 (emphasis added). Therefore, such investigation into subjective motivation is not necessarily the only analysis for pretextual intellectual property justifications.

178. Patterson, *supra* note 144 (Patterson argues that intellectual property owners claiming that market power obtained in a leveraged market is linked to their legal property should be required to show the causal link between their legal right and their leveraging power).

Copyright law limits the scope of protection to an author's expression, and does not protect the author's ideas.[179] In *Sega*,[180] the defendant's verbatim copying of copyrighted data was upheld by the Ninth Circuit as fair use based on this idea/expression dichotomy: copying copyrighted elements was necessary to access functional—and thus unprotectable—elements, which are necessary for interoperability. Applying this dichotomy to our debate, the copyright holder's entitlement does not extend to the right to use his intellectual property rights to prevent access to a business area that the copyright holder is not entitled to control.

Patent law does not recognize such a dichotomy; although an abstract idea is not patentable, "a new device by which it may be made practically useful is."[181] The line between an abstract idea and a new device embodying such an idea is blurry, and the distinction renders analysis of the scope of the patent grant more difficult. Following Patterson, the test for legality of refusals to deal is based upon the notion that the patent grant protects only the invention, and not the end-product embodying it.[182] According to Patterson, leveraging cases should turn on whether the use of the property sought by the prospective licensee is attached to the IP-protected elements.[183] But one can also state the issue in terms of the nature of the reward the IP owners have sought in refusing to deal.[184] For instance, in *Xerox*, since the benefits flowing from the innovative components in the spare parts would only benefit end-users, the refusal to deal did not really deny the ISOs access to intellectual property, but instead only denied them the access to the end-users who worked with these ISOs. The difference is that the ISOs received no additional revenue for using Xerox's patented parts, contrary to a situation where they would have been able to get unpatented parts from another manufacturer, while still demanding Xerox's patented parts. Why then would Xerox refuse to deal other than to foreclose the market for service? In *Kodak II*, this argument is even easier to make, since among the parts that Kodak had refused to sell to the ISOs,

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179. 17 U.S.C. § 102(b) (1994).

180. Sega Enters. Ltd. v. Accolade, Inc., 977 F.2d 1510 (9th Cir. 1992).

181. Rubber-Tip Pencil Co. v. Howard, 87 U.S. 498, 507 (1874).

182. Patterson, *supra* note 144, at 1134-35 ("[I]ntellectual property rights should provide special protection from the antitrust laws only when the owner of the rights is truly denying access to its intellectual property. That will never be the case when the owner's property is denied to one who will not use the intellectual property.").

183. *Id.* at 1135.

184. *Id.* at 1140 ("[B]y focusing on the one to whom the work would be denied rather than the owner of the work, the proposal seeks to ensure that the return on intellectual property is related to its value.").

only 65 were patented.[185] In that circumstance, the refusal to deal was clearly divorced from the entitlement to appropriate the reward from innovative activity, and the protection of intellectual property rights had crossed the line and become a pretext for anticompetitive market foreclosure.

b) Pretext #2: Price Discrimination Indirectly Related to Intellectual Property[186]

Several authors have addressed the issue of the antitrust approach of price discrimination schemes.[187] Recent scholarship demonstrates price discrimination schemes can be pro-competitive. Elhauge argues that common costs, which are incurred by offering the products or services regardless of the number of customers, can be efficiently recouped using price discrimination. The higher valuators of the product can be charged a disproportionate share of the common costs to balance the lower share paid by low-valuators.[188] This enhances the customer-base and increases output. Elhauge's analysis suggests that price discrimination is not incompatible with a competitive marketplace. Although firms are enabled to maximize revenues by price discriminating between consumers who value the product differently, their total revenue will not exceed their total cost (i.e., fixed cost plus marginal cost) thus excluding the possibility of supra-competitive profits.[189] Therefore the hostility toward price discrimination is indeed misplaced because price discrimination can be a pro-competitive means to reap return on *any* kind of property.[190]

If so, then price discrimination may be justified and constitutes a pro-competitive means for intellectual property owner to maximize revenue generated by an intangible asset. On the other hand, schemes that do not purport to achieve such maximization are not justifiable under this model.

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185. *Kodak II*, 125 F.3d 1195, 1214 (9th Cir. 1997).

186. In economic theory, perfect price discrimination occurs when sellers with market power are able to distinguish different consumers' price elasticity: by charging the highest price for the output each consumer is willing to pay, the seller appropriates the totality of consumers' surplus and extends the quantity of output to the competitive level. This increases the seller's return and increases the user base.

187. *See, e.g.*, Patterson, *supra* note 144; Benjamin Klein & John Shepard Wiley Jr., *Competitive Price Discrimination as an Antitrust Justification for Intellectual Property Refusals to Deal,* 70 ANTITRUST L.J. 599 (2003).

188. Einer Elhauge, *Why Above-Cost Price Cuts to Drive Out Entrants are Not Predatory—And the Implications for Defining Costs and Market Power*, 112 YALE L.J. 681, 734 (2003).

189. *Id.* at 733.

190. Klein & Wiley, *supra* note 187, at 608-21.

In that sense, Patterson argues that the denial of access to the patented parts in *Xerox* was not meant to achieve price discrimination between different valuators of the innovation.[191] He argues that excluding the ISOs from access to parts allowed Xerox to impose a higher mark-up on services, thus increasing revenues from heavy users.[192] Rather than reflecting discrimination based on the valuation of intellectual property, this kind of exclusion reflects discrimination based on valuation of the equipment as a whole.[193] To discriminate between different valuations of intellectual property would have required Xerox to impose higher prices on parts.[194] The best proxy for metering different valuators of intellectual property is parts, as opposed to services, because consumers' service needs are not linked to their valuation of the innovation embodied in the parts.[195]

Forceful arguments can be made, however, in favor of allowing intellectual property owners to shift some of the return from their intellectual property to the aftermarket.[196] Klein and Wiley argue that such a shift enables intellectual property owners to increase their return by lowering the price they charge for their equipment, which would in turn increase the user-base for the equipment,[197] and to reduce the difference that would otherwise exist between the price for equipment and the price for services.[198] This would be efficient since intellectual property incurs high fixed costs and low marginal costs. If companies could only recoup their investment in R&D through equipment sales, equipment would be overpriced because the gap between equipment price and marginal cost would be greater than the gap between service price and service marginal cost.[199] However, such a price discrimination scheme poses several problems. First, the "overprice" reflects the part's higher value because of its innovative character. Second, the intellectual property grant is not a grant of market power that can be used to increase price on whatever element the manufacturer wants. On the contrary, the rationale underlying intellectual property grants is that their owners should appropriate revenues flowing from their innovations and the return should be proportionate to the social

191. Patterson, *supra* note 144, at 1143.
192. *Id.*
193. *Id.*
194. *Id.*
195. *Id.* (stating that "service pricing would be an inaccurate discrimination device to the extent that consumers' valuations of the inventions were not exactly correlated with their service needs").
196. Klein & Wiley, *supra* note 187, at 613.
197. *Id.*
198. *Id.* at 614.
199. *Id.*

value of the innovations.[200] Allowing Klein and Wiley's price manipulation scheme would amount to giving intellectual property owners a license to pass on the price surcharge reflecting their private valuation of the innovation to services on the patented product. The value of repair service is not linked to the innovation, and certainly should not be protected by the intellectual property laws.

For that reason, such a scheme seems to run counter the policies underlying the intellectual property laws. Klein and Wiley's proposal cannot be used to distinguish between different valuators of intellectual property. Neither would this scheme protect the innovator's intellectual property, or even maximize its return on a product incorporating intellectual property. Instead, the scheme would maximize the return on a package of products and services that happen to include innovative components. And for the scheme to work, the independent service providers must be excluded from the aftermarket, although lower equipment prices has increased the user-base and made the aftermarket attractive for entry. As far as refusal-to-deal cases are concerned, it is not convincing for a defendant to argue that such exclusion was justified because it was necessary to recoup revenues that were forgone to increase market exposure of the defendant's equipment in the first place. This argument would also appear anticompetitive. It may be true that allowing such a scheme would increase incentives to innovate *ex ante*, but even Klein and Wiley acknowledged that increasing intellectual property owners' return may result in a net social cost,[201] especially when these innovators privately value their investments higher than the social value brought to bear by their innovation.[202] Klein and Wiley raised doubt that firms would exaggerate the value of their investment in innovation under their scheme because imperfect appropriability leads firms to underestimate their innovation's value.[203] But such doubts are far-fetched because, under their scheme, anticipated return will surely increase, and investors will have an incentive to overestimate their innovation's value.

Therefore, even if there was a price-discrimination scheme going on in *Xerox* or in *Kodak II*, there was no separation of the valuators for the inventions. The scheme would have been a business decision unrelated to intellectual property, because monopolization of the aftermarket would be unnecessary to protect statutory intellectual property rights. Therefore the

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200. *See* Motion Picture Patents Co. v. Universal Film Mfg. Co., 243 U.S. 502, 513 (1917).

201. Klein & Wiley, *supra* note 187, at 617.

202. *Id.*

203. *Id.* at 618.

promotion of a discriminatory pricing scheme through services is not justifiable, because services bear little relationship to the value consumers attach to the inventions.

2. *Showing Anticompetitive Exclusionary Behavior*

Antitrust law limits exclusionary privileges inherent in private property when monopolists use these privileges to exclude rivals on basis other than competition on the merits.[204] However, there does not seem to be a simple explanation of what makes exclusionary behavior anticompetitive. The Supreme Court in *Aspen* used a broad formulation, referring to the conduct's impact on rivals, its impact on consumers, and its impact on competition in general to assess whether the behavior at issue can be deemed exclusionary.[205] Arguing against the Ordover-Willig standard,[206] which mandates that conduct is predatory when it constitutes an immediate sacrifice of profit in order to exclude rivals and consequently regain market power,[207] Elhauge explains that focusing on profit sacrifice at one point in order to reap monopoly profits later in time is misguided because

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204. *See* Verizon Communications Inc. v. Law Offices of Curtis V. Trinko, 124 S. Ct. 872, 879 (2004).

205. Aspen Skiing Co. v. Aspen Highlands Skiing Corp., 472 U.S. 585, 605 (1985). The Court reasoned:

> The question whether [the] conduct may properly be characterized as exclusionary cannot be answered by simply considering its effect on [rivals]. In addition, it is relevant to consider its impact on consumers and whether it has impaired competition in an unnecessary way. If a firm has been 'attempting to exclude rivals on some basis other than efficiency,' it is fair to characterize its behavior as predatory.

Id.

206. Janusz A. Ordover & Robert D. Willig, *An Economic Definition of Predation: Pricing and Product Innovation*, 91 YALE L.J. 8, 9-10 (1981). Ordover & Willig suggest:

> [A]lthough a practice may cause a rival's exit, it is predatory only if the practice would not be profitable without the additional monopoly power resulting from the exit. . . . [T]he profitability of the incumbent's actual and alternative responses should be assessed on the assumption that the rival reacts to them in a competitive fashion.. . . Therefore, the proposed standard does not penalize the incumbent for legitimate competitive responses, even if they damage the rival, and the standard does not protect a rival that can not prosper under competitive circumstances.

Id.

207. Melamed & Stoepellwerth, *supra* note 17, at 419 ("[A]nticompetitive conduct is conduct that serves no legitimate purpose, or is itself unprofitable, and is undertaken in order to exclude or weaken competitors in anticipation of increased market power and resulting supracompetitive recoupment.").

such a focus ignores the incentives that foster pro-competitive behavior.[208] In his view, courts should instead focus on whether the means chosen to exclude rivals are "undesirable in a way antitrust law can regulate without having unduly negative effects on other desirable conduct."[209] This seems to be the Supreme Court's motivation behind its holding in *Aspen.* The *Aspen* Court refused to limit exclusionary behavior to instances where there is a direct impact on competitors; instead, the Court extended the inquiry to situations where there is harm to consumers and competition in general.[210] The holding is not a guideline, however, it is rather a reminder that exclusionary behavior should not be strictly defined so that practices that do not immediately harm rivals can still be properly deterred, while keeping the door open for efficiency justifications.

Therefore the nature of the anticompetitive harm exclusionary practices might bring about in the area of intellectual property is not limited to a specific set of injury and, according to *Aspen*, antitrust liability should not be limited to cases where there is proven direct harm to consumers, particularly in the form of output limitation. Fox argues that the *Microsoft* case[211] could serve as a template for analyzing unilateral exclusionary practices in the new economy.[212] Accordingly, the touchstone for anticompetitiveness in *Microsoft* was market foreclosure. Output limitation was not necessary for a finding of illegality.[213] The fact that Microsoft foreclosed an "important route of access to the browser market"[214] was enough. This is consistent with the holding in *Aspen* that the basis for illegality was the characterization of the conduct as designed to harm or exclude a competitor, thus harming consumers not by restricting output, but by decreasing quality and flexibility.[215]

Thomas Krattenmaker and Steven Salop proposed a two-part test for illegal exclusions:[216] (1) does the conduct unavoidably and significantly increase rivals' costs, and (2) does the conduct results in an acquisition of monopoly power, i.e., the power to fix supra-competitive prices, for the

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208. Elhauge, *supra* note 188, at 702.
209. *Id.*
210. Aspen Skiing Co. v. Aspen Highlands Skiing Corp., 472 U.S. 585, 605 (1985).
211. United States v. Microsoft Corp., 253 F.3d 34 (D.C. Cir. 2001).
212. Eleanor M. Fox, *What is Harm to Competition? Exclusionary Practices and Anticompetitive Effect*, 70 ANTITRUST L.J. 371, 384-92 (2002).
213. *Id.* at 387.
214. *Id.*
215. Aspen Skiing Co. v. Aspen Highlands Skiing Corp., 472 U.S. 585, 608 (1985).
216. *See* Thomas G. Krattenmaker & Steven C. Salop, *Anticompetitive Exclusion: Raising Rivals' Costs to Achieve Power over Price,* 96 YALE L.J. 209 (1986).

excluding firm.[217] This test is problematic for two reasons. First, relying on a determination of the competitive price by the courts is unrealistic. Second, this test misinterprets the legitimacy of property rights.[218] By definition, owning property raises rivals' costs for using the goods protected by the right to exclude, because the rivals must pay for the goods. In this sense, the property is a necessary tool for exchange and competition. Therefore thinking of anticompetitive exclusion merely in terms of raising rivals costs in general is not helpful. The focus should instead be on which specific costs may or may not be legitimate.[219]

Courts need to conduct a case-by-case inquiry in rival exclusion cases. The Ordover-Willig test poses over-deterrence problems,[220] while Kattenmaker and Salop's reliance on courts' ability to determine the competitive price on every market is unrealistic.[221] Many intertwined rationales exist for non-price predatory behavior: foreclosing competitors from distribution channels and sources of supplies, raising rival's costs, and deterring new competitors from market entry. The only way to determine whether a defendant's exclusion is anticompetitive is to examine whether the potential benefits of the conduct offset the costs to allocative efficiency. Elhauge argues that exclusionary conducts should only be condemned when they enhance or preserve a monopolist's market power regardless of any improvement in the monopolist's efficiency.[222] But when the competitors' exclusion depends on the monopolist improving its own efficiency, the behavior at issue should be deemed legal.[223] This is consistent with the holding in *Trinko,* which emphasized the notion that the attainment of monopoly power through legal means is pro-competitive:[224] when the gain of market power is unrelated to the monopolist's "growth or development as a consequence of a superior product [or] business acumen,"[225] it is anticompetitive. In the case of intellectual property, net anticompetitive effect may be proven by showing the unilateral refusal to deal at issue does not reflect the owner's intention to appropriate his lawful reward. Rebutting the presumption that use of intellectual property is a valid

217. *Id.* at 214.
218. Wesley J. Liebeler, *Exclusion and Inefficiency*, 11 REGULATION 34 (1987).
219. *Id.* ("The real question is *which* rivals' costs *should* be raised.").
220. *See* Elhauge, *supra* note 188, at 701-2.
221. Liebeler, *supra* note 218, at 38.
222. Einer Elhauge, *Defining Better Monopolization Standards*, 56 STAN. L. REV. 253, 323-30 (2003).
223. *Id.* at 316-20.
224. Verizon Communications Inc. v. Law Offices of Curtis V. Trinko, 124 S. Ct. 872, 879 (2004).
225. United States v. Grinnell Corp., 384 U.S. 563, 571 (1966).

business justification on that basis simply reveals the fallacy of arguments claiming that the refusal was necessary to preserve *ex ante* incentives to innovate, because the innovation at issue had little to do with the market that is monopolized. In this sense, the rule of reason does not sanction a monopolist's legitimate use of its intellectual property.

3. *Why the Rule of Reason Does Not Deter Desirable Incentives to Innovate*

The Supreme Court in *Trinko* determined that safeguarding *ex ante* incentives to innovate required a clear proof of anticompetitive conduct on the part of the defendant,[226] and emphasized the necessary caution courts must exercise in finding the duties to deal.[227] There are two important concerns when applying the rule of reason to unilateral refusals to deal in intellectual property: that proper use of intellectual property is not sanctioned, and that pro-competitive incentives are preserved.

First, the rule of reason applied in unilateral refusal-to-deal cases is a cautious one and plaintiffs must overcome many hurdles before establishing that the intellectual property at issue has been improperly used. The plaintiff's burden of proof is substantial: it must demonstrate the defendant's possession of monopoly power, its exclusionary behavior, and finally overcome the presumption that the defendant is properly using its lawful right to exclude. Therefore the rule of reason does not open the door to open-ended balancing. Because the exercise of intellectual property rights should presumptively justify refusals to deal, plaintiffs who are unable to prove that the refusal was not linked to intellectual property will not be successful in the courts. This is consistent with the *Grinnell* test for monopolization, which protects monopoly power resulting from a superior product.[228] Applying antitrust principles to bind intellectual property owners does not limit their legal entitlements to efficiently exclude others from their property. It merely limits those actions taken solely to foreclose markets in ways unrelated to their intellectual property.

The *Trinko* opinion is thus consistent with the case-law discussed in part II.B. of this Article because it requires a showing by the plaintiff of anticompetitive exclusionary behavior and an anticompetitive intent on the part of the defendant.[229] This warrants the inquiry into the causal link between the refusal to deal and the preservation of the reward generated by

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226. *Trinko*, 124 S. Ct. at 879-80.
227. *Id.* at 879.
228. *Grinnell*, 384 US at 571.
229. *Trinko,* 124 S. Ct. at 880.

the intellectual property. Though the *Trinko* Court describes *Aspen* as relying on a sacrifice-of-profit test to prove anticompetitive intent,[230] the opinion does not exclude alternative ways to prove such intent.[231] The Court's decision in *Trinko*, then, gives implicit support to the pretext test for unilateral refusals to deal in intellectual property.

Second, the rule of reason would only deter anticompetitive incentives. Antitrust liability is carefully constructed to preserve the perspective of attaining monopoly power by legal means. The Supreme Court explicitly endorsed this view in *Trinko*,[232] but it is a standard antitrust policy that underlies the *Grinnell* test for monopolization.[233] Antitrust liability does not destroy the prospect of being able to exclude rivals from one's property and charge a price that will generate profits. Rather the liability destroys the incentives to use intellectual property rights to behave anticompetitively, or in ways that are inconsistent with the policies underlying the grant of intellectual property in the first place.

This notion is supported by empirical evidence showing that compulsory licensing have little, if any, effects on the incentives to innovate.[234] In his 1977 study, F.M. Scherer concludes that there is "no indication that mandatory licensing ha[s] an adverse effect on R&D investment."[235] Scherer's conclusions are based on his own study on compulsory licensing, conducted in 1958 as a student at the Harvard Business School[236] and statistics he had generated from a Business Week compilation of privately-financed R&D expenditures for some 730 U.S. corporations.[237] Scherer offers several justifications for his conclusion that all appear to be industry and/or firm-specific.[238]

From an *ex post* standpoint, Scherer concluded that compulsory licensing had little effect on the incentives to innovate in industries where companies operating under a compulsory-license decree must maintain a high

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230. *Id.*

231. *Id.* at 879-80.

232. *Id.* at 879 ("The mere possession of monopoly power, and the concomitant charging of monopoly prices, is not only not unlawful; it is an important element of the free market system.").

233. *Grinnell*, 384 US at 571 (defining exclusionary conduct as "the willful acquisition or maintenance of [monopoly] power as distinguished from growth or development as a consequence of a superior product, business acumen, or historic accident").

234. F. M. SCHERER, THE ECONOMIC EFFECTS OF COMPULSORY PATENT LICENSING (1977).

235. *Id.* at 63.

236. F. M. SCHERER ET AL., PATENTS AND THE CORPORATION 91 (2d ed. 1959).

237. SCHERER, *supra* note 234, at 67.

238. SCHERER, *supra* note 234, at 63.

level of R&D to remain competitive, regardless of the particular antitrust policy. These compulsory licenses also had little effect on industries where the ability of competitors to "invent around" patents diminished the use of patent protection.[239]

Scherer also observed that the only industries where compulsory licensing was feared to have an effect on R&D investment were industries that had not actually experienced antitrust imposition of compulsory licensing.[240] Thus, from an *ex ante* perspective, the prospect of compulsory sharing raises concerns. Nevertheless, Scherer's study clearly concludes that those concerns did not translate into lower incentives when firms eventually had to share, because other factors came into play, such as the necessity to keep innovating to maintain a market position, or the fact that exclusion did not impair rivals' ability to invent around the patent and achieve the same result. Moreover, Scherer's study does not suggest that the fear of the adverse effect of compulsory licensing on investment lowered investment before compulsory licensing was, in fact, imposed.[241] The study therefore reflected the notion that only the inexperienced industries had concerns, while compulsory licensing did not in fact lower investment incentives in experienced industries because other competitive requirements fueled the need to keep innovating.

Finally, in studying R&D investment patterns for the year 1975, and comparing firms subjected to compulsory licensing under antitrust decrees to comparable companies not so constrained, Scherer observed that there was "no significant indication that [the] 44 companies subjected to compulsory patent licensing . . . sustained less intense R&D efforts."[242] If anything, he observed the opposite tendency.[243] His conclusion also suggests that the constraints on comparable companies in the form of duties to license did little to deter unconstrained companies from investing.

Therefore compulsory patent licensing has negligible effect on the incentives to innovate. Unfortunately, this lack of effect on the incentives to innovate, which is likely the industrial reality, has been largely overlooked, in an effort to lighten the load on judges and juries.

239. *Id.*
240. *Id.*
241. *See* SCHERER, *supra* note 234, at 64 (stating that although he speculated that uncertainty with respect to antitrust liability may marginally weaken reliance on patents and thus adversely affect R&D expenditures, empirical evidence does not support this view).
242. *Id.* at 75.
243. *Id.*

IV. CONCLUSION

Per se legality for refusing to deal in intellectual property would deny antitrust plaintiffs the chance to demonstrate potential adverse impacts on competition resulting from unilateral refusals to deal in intellectual property. Courts routinely engage in this kind of analysis when other property rights are at issue. Proponents of per se legality justify their position by the stringent utilitarian principle that underlies grants of intellectual property. The intangible nature of intellectual property should not be neglected, but it does not necessitate a weakened antitrust analysis. Any private property grant is based on utilitarian principles.[244] Any private property grant also seeks to allow its owner to appropriate returns flowing from its use, and thus provide incentives for the creation or acquisition of such assets.

Xerox should be overruled to solve the major under-deterrence caused by an immunity rule. The arbitrary distinction between intellectual property and other property rights for purposes of antitrust analysis should not perpetuate. It is not enough that the courts recognize that holding intellectual property rights does not demonstrate monopoly power for antitrust purposes; it should also be reaffirmed that intellectual property grants do not establish a monopoly grant immune from antitrust liability. The Supreme Court plainly stated this proposition a long time ago, through the words of Justice Clarke who defined the patent grant in *Motion Picture Patents Co.* as giving

> the inventor the exclusive use of just what his inventive genius has discovered. It is all the statute provides shall be given to him and it is all that he should receive, for it is the fair as well as the statutory measure of his reward for his contribution to the public stock of knowledge. If his discovery is [. . .] unimportant, he should not be permitted by legal devices to impose an unjust charge upon the public in return for the use of it.[245]

To Justice Clarke, the statute's language[246] "is so plain that to argue it would obscure it."[247] In reality, the plain language of the law has been ob-

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244. *See* LANDES & POSNER, *supra* note 22, at 13.

245. Motion Picture Patents Co. v. Universal Film Mfg. Co., 243 U.S. 502, 513 (1917).

246. 35 U.S.C. § 154(a)(1) (2000). The language of the statute reads:

> Every patent shall contain a short title of the invention and a grant to the patentee, his heirs or assigns, of the right to exclude others from making, using, offering for sale, or selling the invention throughout the United States or importing the invention into the United States, and, if the invention is a process, of the right to exclude others from using, of-

scured and distorted by the *Xerox* rule. Intellectual property rights have been transformed from a means to put creators of certain intangible assets on equal footing with owners of other property rights, into a vehicle for asserting monopolistic control over markets. The transformation is unwarranted and is critical to the current state of affairs, and proponents of an expanding conception of intellectual property are sitting on the Court of Appeals for the Federal Circuit. The time may have come for a fresh reading of the law and a return to the simple, yet accurate guidelines as set forth by Justice Clarke eighty-six years ago.

> fering for sale or selling throughout the United States, or importing into the United States, products made by that process, referring to the specification for the particulars thereof.

Id.

247. *Motion Picture Patents*, 243 U.S. at 513.