Liability Rules, Property Rules, and Incentives Not to Bargain: The Effect of Competitive Rivalry on the Protection of Legal Entitlements

*David W. Melville** *

I. INTRODUCTION

Since the publication in 1972 of Guido Calabresi and A. Douglas Melamed's landmark Article, *Property Rules, Liability Rules, and Inalienability: One View of The Cathedral,*[1] scholars have examined the propriety of rules used to protect legal entitlements in light of the costs that would normally have been incurred if the parties had instead bargained for the right to the entitlement. Under the traditional understanding of Calabresi and Melamed's theory, transaction costs dictate whether society will protect an entitlement by either a property rule, a liability rule, or, less frequently, inalienability.[2] Thus far, the literature sparked by Calabresi and Melamed's theory has considered the question almost exclusively in terms of atomized individuals, that is, individuals whose course of dealing with each other is limited, for the most part, to the particular economic transaction at hand.[3] These individuals have no particular relationship or course of dealing, either before or after the transaction. The result of considering

---

[1] 85 HARV. L. REV. 1089 (1972). The term *"Cathedral* rules" refers to the theories developed by Calabresi and Melamed in their 1972 Article. *See id.* at 1089-90 n.2. Calabresi and Melamed's explain that their use of the term "Cathedral" refers to Claude Monet's series of paintings depicting the Cathedral at Rouen — each individual painting provides only one view of the Cathedral. *See id.*

[2] *See id.* at 1106-15.

[3] *See* A. Douglas Melamed, *Property Rules, Liability Rules, and Inalienability: A Twenty-Five Year Retrospective: Remarks: A Public Law Perspective,* 106 YALE L.J. 2209, 2211-12 (1997).

only atomized individuals is that, although many scholars have examined the potential effects of legal rules on the willingness of parties to bargain in the abstract, the effects of underlying relationships on the proper scope of protection have not yet been explored.[4] Thus, a considerable portion of the *Cathedral* still remains hidden in shade.

The nature of the relationship between the parties is a critical, yet overlooked, factor in determining when and how the traditional *Cathedral* rules should apply. For instance, it has been suggested that a practice of, or potential for, repeat transactions between the parties is likely to have a substantial impact on bargaining strategies.[5] This Article demonstrates that just as a pattern of repeat bargaining can alter bargaining strategies, a pattern of mutual antagonism can also alter the way in which parties view their interests. Market competition may encourage a firm to refuse to bargain with rivals in order to raise their costs.[6]

As this Article will demonstrate through examples taken from the law of trade secrets, circumstances surrounding the parties' relationship to each other can dramatically alter the common understanding of how to structure entitlements in order to achieve Pareto efficiency.[7] Market competition may create instances in which parties

---

[4] *See* Guido Calabresi, *Property Rules, Liability Rules, and Inalienability: A Twenty-Five Year Retrospective: Remarks: The Simple Virtues of the Cathedral*, 106 YALE L.J. 2201, 2204 (1997). The author states:

> I have relatively little patience with the debate over which is more efficient, a property rule or a liability rule when transaction costs are high or low. This debate is certainly worth having, but it is not as interesting as the question of when we want to use one remedy rather than the other for broader reasons.

Id.

[5] *See* Melamed, *supra* note 3, at 2111.

[6] *Cf.* Thomas G. Krattenmaker & Steven C. Salop, *Anticompetitive Exclusion: Raising Rivals' Costs to Achieve Power Over Price*, 96 YALE L.J. 209, 214 (1986) (arguing in the antitrust context that through vertical restraints on dealers, competitors may attempt to raise rival's costs).

[7] Pareto efficiency is an equilibrium of individual preferences, such that "it is impossible to change it so as to make at least one person better off (in his own estimation) without making another person worse off (again, in his own estimation)." ROBERT COOTER & THOMAS ULEN, LAW AND ECONOMICS 12 (2d ed. 1997). "[S]cores of legal scholars have interpreted Calabresi and Melamed to be saying that property rules are more efficient when transaction costs are low." Ian Ayres & J.M. Balkin, *Legal Entitlements as Auctions: Property Rules, Liability Rules, and Beyond*, 106 YALE L.J. 703, 706 n.9 (1996). "[T]he familiar piece of conventional wisdom . . . amounts to a virtual doctrine." James E. Krier & Stewart J. Schwab, *Property Rules and Liability Rules: The Cathedral in Another Light*, 70 N.Y.U. L. REV. 440, 451 (1995). *See generally, e.g.*, Richard A. Epstein, *A Clear View of the Cathedral: The Dominance of Property Rules*, 106 YALE L.J. 2091 (1997) (arguing that property rules facilitate bargaining better than liability rules).

may refuse to engage in profit-maximizing bargaining simply to harm their competitors, and as a result, an entitlement may not flow to the individual who values it most. In this situation, the traditional preference for protecting property rights by property rules under the Calabresi and Melamed framework is inefficient. Despite transaction costs which are otherwise low, in certain situations liability rules rather than property rules may increase expected social welfare. In the case of secret business information, properly constructed liability rules may induce the competitor who values the entitlement most to appropriate the information nonconsensually and to pay damages to the holder. This result allows consumers to enjoy the benefits of information held by a competitor who is more efficient in exploiting it, and it does not affect the original holder's decision to invest in developing the information. Consequently, the nature of the parties' relationship can be a crucial factor in determining how the *Cathedral* rules apply.

Part II of this Article sets forth the significant principles from the traditional understanding of Calabresi and Melamed's theory and critiques subsequent developments of that understanding, including a recent challenge to its central premise. Part III examines the effect of competitive rivalry on bargaining behavior and efficient protection of entitlements. Part IV then applies this understanding to the law of trade secrets and illustrates how the nature of competition may alter our preference for protecting some entitlements with property rules.

II. THE PRESENT STATE OF THE *CATHEDRAL*

A. *The Traditional Framework*

The right to a legal entitlement is nothing more than society's allocation of the right to prevail should a conflict regarding the entitlement arise.[8] Calabresi and Melamed recognized that entitlements generally fall into three categories: those protected by liability rules, those protected by property rules, and those that are inalienable.[9] Liability rules protect entitlements by requiring that one who takes the entitlement pay to the victim damages equivalent to the harm.[10] Property rules deter prospective takers from taking the entitlement by setting sanctions so high that few would take the entitlement non-

---

[8] *See* Calabresi & Melamed, *supra* note 1, at 1092.

[9] *See id.* at 1105-15.

[10] *See id.*

consensually.[11] Thus, one who would gain from another an entitlement protected by a property rule must bargain for the right to take it.[12] This bargaining "leads each of the parties to say how much the entitlement is worth to him, and gives the seller a veto if the buyer does not offer enough."[13] In the common parlance, liability rules are remedies at law, while property rules are equitable relief.[14] The distinction between which rule applies is a critical one. If a property rule protects an entitlement, the entitlement cannot be taken without the holder's consent. If a liability rule protects the entitlement, the entitlement is vulnerable to nonconsensual taking.[15]

The central insight of Calabresi and Melamed can be summarized in a few sentences: When transaction costs are low, property rules are the most efficient means of protecting an entitlement.[16] They force the buyer to bargain for the right to take the entitlement in a situation in which it is feasible to do so.[17] When transaction costs are high, liability rules are the most efficient means of protecting an entitlement.[18] Bargaining is not feasible, and therefore, the state sets an objectively determined value equivalent to the price at which the court deems the original holder would have sold the entitlement.[19] Less frequently, rules of inalienability are used to protect an entitlement when the state, acting *parens patriae*, decrees that the entitlement should not be bargained for at all.[20]

A few examples make the point clear. If *B* desires *A*'s automobile, there is but one *B* and one *A*. The costs of bargaining between *B* and *A* are low. Thus, a property rule forcing *B* to bargain rather than to take nonconsensually is in order. If, however, *B* and *A* are beneficiaries of entitlements not to be maimed or accidentally in-

---

[11]   *See* Ayres & Balkin, *supra* note 7, at 705.

[12]   *See* Calabresi & Melamed, *supra* note 1, at 1092.

[13]   *Id.*

[14]   *See* Ian Ayres & Eric Talley, *Solomonic Bargaining: Dividing a Legal Entitlement To Facilitate Coasean Trade*, 104 YALE L.J. 1027, 1030-31 (1995).

[15]   *See* Calabresi & Melamed, *supra* note 1, at 1092-93.

[16]   *See id.* "Just as Coase never formally stated the Coase Theorem in Ronald N. Coase, *The Problem of Social Cost*, 3 J.L. & ECON. 1 (1960), Calabresi and Melamed never succinctly stated what has been taken to be their primary normative conclusion." Ayres & Balkin, *supra* note 7, at 706 n.9.

[17]   *See* Calabresi & Melamed, *supra* note 1, at 1092.

[18]   *See id.*

[19]   *See id.*

[20]   *See id.* at 1111-15. An example of an inalienable entitlement is the right to sell oneself into slavery. *See id.* Inalienability rules are beyond the general scope of this Article. For an extensive treatment of the subject, see Susan Rose-Ackerman, *Inalienability and the Theory of Property Rights*, 85 COLUM. L. REV. 931 (1985).

jured while driving, pre-accident negotiations for the "right to knock off an arm or a leg" are prohibitively high.[21] As a result, society fashions a liability rule requiring *B* to pay *A* an objectively determined value for appropriation of *A*'s leg.[22] The judgment award represents the price at which the court presumes *A* would have sold *B A*'s leg.[23]

The *Cathedral* rules have since been applied to various causes of action. For example, intellectual property rights have generally been classified as a regime for which property rules should be the standard form of protection.[24] Some commentators have noted that

> [Intellectual property entitlements] fit the criteria set up by Calabresi and Melamed for application of a property rule: (1) there are only two parties to the transaction; (2) the costs of a transaction between the parties are otherwise low; and, most importantly, (3) a court called on to set the terms of the exchange would have a difficult time doing so quickly and cheaply, given the specialized nature of the assets and the varied and complex business environments in which they are deployed .... Hence, the parties should be left to make their own deal.[25]

While most actions have been considered as falling squarely within one rule or the other, the proper protection for some entitlements, such as contract rights, has caused considerable debate.[26] Despite occasional disagreements over the result of the inquiry, however, the *Cathedral* model's elegance lies in its ability to channel concerns about the scope of a particular legal entitlement into the essential question:[27] How should protection be structured to insure that scarce resources are allocated efficiently?[28]

---

[21] Calabresi & Melamed, *supra* note 1, at 1108-09.

[22] *See id.*

[23] *See id.*

[24] *See, e.g.,* Roger D. Blair & Thomas F. Cotter, *An Economic Analysis of Damages Rules in Intellectual Property Law,* 39 WM. & MARY L. REV. 1585, 1615-17 (1998); Robert P. Merges, *Of Property Rules, Coase, and Intellectual Property,* 94 COLUM. L. REV. 2655, 2664 (1994); Maureen A. O'Rourke, *Rethinking Remedies at the Intersection of Intellectual Property and Contract: Toward a Unified Body of Law,* 82 IOWA L. REV. 1137, 1148 (1997).

[25] Merges, *supra* note 24, at 2664.

[26] *See generally, e.g.,* Anthony T. Kronman, *Specific Performance,* 45 U. CHI. L. REV. 351 (1978); Thomas S. Ulen, *The Efficiency of Specific Performance: Toward a Unified Theory of Contract Remedies,* 83 MICH. L. REV. 341 (1984); Edward Yorio, *In Defense of Money Damages for Breach of Contract,* 82 COLUM. L. REV. 1365 (1982).

[27] *See* Calabresi, *supra* note 4, at 2202-03 ("[T]he model's lack of complexity has been one of the reasons why The Cathedral has had so much influence.")

[28] *See* COOTER & ULEN, *supra* note 7, at 380. The authors state that
people who disagree about the best rule for resolving their current dispute may yet agree about the best rule for resolving future disputes. If the prospective application of a new rule makes some people better

B. Adequacy of the Traditional View

For nearly twenty-five years, while applied extensively, the *Cathedral* rules themselves went basically unchallenged and gathered the force of "virtual dogma."[29] Recently, however, a small number of scholars has begun to examine the accuracy of the prevailing assumptions. It has been argued that property rules may be the more efficient remedy when transaction costs are high, as costs in assessing the objective value of the taking may be higher still.[30] In addition, the rule at issue in this Article — that property rules should prevail when transaction costs are low — has recently been examined by two pairs of scholars who have arrived at contrary conclusions.[31]

While Louis Kaplow and Steven Shavell favor liability rules over property rules to control harmful externalities such as pollution,[32] they argue that a property rule should apply when the entitlement involves a "possessory right[] in things."[33] In their view, liability rules will result in a system of reciprocal takings, a "tug-of-war" over the right to possession where the first possessor will take back the entitlement from the original taker.[34] In addition, they postulate that liability rules will cause parties to overprotect assets from theft to the extent that courts undervalue them.[35]

Ian Ayres and Eric Talley, on the other hand, have argued that liability rules may be more likely to lead to a Pareto efficient result.[36] Essentially, they argue that liability rules foster two-way bargaining.[37] The holder of the entitlement will have an incentive to bribe the potential taker not to take the entitlement when the court sets damages at a value less than her own, and the potential taker will bargain for the right to take the entitlement if both he and the potential victim value it less than the court is likely to set an award.[38] Liability rules, it is argued, are more likely to force the parties to divulge private in-

---

off and no one worse off, we will say that the new rule is an improvement by the *ex ante* Pareto standard.")

Id.

[29] Krier & Schwab, *supra* note 7, at 453.

[30] *See id.* at 453-57.

[31] *Compare* Louis Kaplow & Steven Shavell, *Property Rules Versus Liability Rules: An Economic Analysis*, 109 HARV. L. REV. 713, 715 (1996) *with* Ayres & Talley, *supra* note 14 at 1030-31.

[32] Kaplow & Shavell, *supra* note 31, at 721.

[33] *See id.* at 723.

[34] *See id.* at 722, 768-69.

[35] *See id.* at 768-69.

[36] *See* Ayres & Talley, *supra* note 14, at 1033.

[37] *See id.* at 1039-46.

[38] *See id.* at 1042-43.

formation, because depending on whether the court sets the value too high or too low, either the potential victim or the potential taker are constrained in the ability to make credible threats.[39] In a later article, Ayres dismisses the problem of reciprocal takings by treating them as auctions, where the parties may engage in multiple rounds of takings, but the award increases at each level to ensure that the entitlement ends up in the hands of the party who values it most.[40]

Objections to the Ayres and Talley view are principally two. First, the assessment costs of ascribing value to multiple levels of taking are likely to be significant.[41] In fact, it may be that in many situations the costs of assessing continuing levels of awards outweigh any relevant Pareto gains. To quote Justice Brandeis, "[I]n most matters it is more important that the [matter] be settled than that it be settled right."[42] Second, and more importantly, most individuals are risk averse.[43] Today's nonconsensual taker may be tomorrow's victim. Thus, it is not altogether clear that many would choose to live in such a regime if cloaked behind a veil of ignorance.[44] Moreover, the potential for significant social friction between takers and victims cannot be ignored.[45] No doubt, because of the potential for adverse consequences, Ayres and Talley clearly premise their findings by concluding that bargaining under the shadow of liability rules may not be advantageous in all circumstances.[46]

While Kaplow and Shavell's viewpoint buttresses the traditional wisdom, it addresses transactions from the abstract perspective of potential takers and victims who have no other course of dealing with each other. In addition, the transactions take place in circumstances

---

[39] *See id.* at 1044-45.

[40] *See* Ayres & Balkin, *supra* note 7, at 708-09.

[41] *See* Krier & Schwab, *supra* note 7, at 453 (arguing that assessment costs may cause liability rules to be inefficient in the other context, where liability rules are used when transaction costs are thought to be high). *But see* Ian Ayres & Eric Talley, *Distinguishing Between Consensual and Nonconsensual Advantages of Liability Rules*, 105 YALE L.J. 235, 243-46 (1995) (arguing that litigation costs do not affect the inquiry).

[42] Burnet v. Coronado Oil & Gas Co., 285 U.S. 393, 406 (1932) (Brandeis, J., dissenting).

[43] *See* COOTER & ULEN, *supra* note 7, at 44-48.

[44] Kaplow and Shavell make a similar but distinct point, noting that owners may be risk averse in the sense that they will be uncertain of the amount of damages that they will be awarded if an entitlement is taken. *See* Kaplow & Shavell, *supra* note 31, at 770.

[45] *See id.* at 767 (noting that reciprocal takings may lead to the use of force).

[46] *See* Ayres & Talley, *supra* note 14, at 1036 (noting that property rules may still remain the best means of facilitating Coasean trade in some situations, depending on the underlying nature of the transaction costs).

wherein other competing incentives cannot be seen.[47] As such, both views assist in illustrating factors that are important to the inquiry, but as the remainder of this Article suggests, the rule that promotes Pareto efficiency in the taking of things depends foremost on the nature of the thing and the nature of the relationship between the parties who are doing the taking. Thus, the *Cathedral* rules are useful as defaults or guideposts, but it is also clear that the rules cannot be applied without due consideration to the way typical parties to particularized transactions behave. The weighing of social costs and varied incentives in normative cases simply cannot be replaced.

III. COMPETITION AND BARGAINING

The difficulty in viewing the *Cathedral* rules apart from the nature of relationships that are typically involved with allocation of entitlements is aptly illustrated by parties who are business competitors. This section examines the nature of competition and concludes that significant incentives not to bargain can arise despite transaction costs that are otherwise low.[48] It concludes that the nature of the parties may be the most important factor regarding the feasibility of a transaction; yet, it can often be very difficult to predict the outcome in individual cases.

A. *The Nature of Competition*

Although competition among businesses generally promotes societal welfare by increasing the quantity and quality of goods, by lowering prices, and by fostering the efficient allocation of economic resources,[49] this is merely a beneficial side effect of the incentive of each individual competitor to maximize her own welfare. In order for society to obtain the desired benefits of competition, it must allow individual businesses the freedom to compete. That freedom "necessarily contemplates the probability of harm to commercial relations of other participants in the market."[50] Simply stated, the nature of competition is to gather resources for oneself while prohibiting competitors from gaining them instead. Business competition requires that competitor *A* harm competitor *B*'s welfare by diverting *B*'s prospective customers to *A*'s own business in order that *A* reap

---

[47] *See* Kaplow & Shavell, *supra* note 31, at 768-69.

[48] *See* COOTER & ULEN, *supra* note 7, at 84-86 (identifying a number of transaction costs, including hostility between parties).

[49] *See* RESTATEMENT (THIRD) OF UNFAIR COMPETITION § 1 cmt. a (1993).

[50] *Id.*

the gains of trade rather than B.[51] Intentional injury of other competitors is an inherent part of the process.[52] Consequently, individual firms exist in an atmosphere of mutual antagonism rather than cooperation.

As part of the incentive to further their own welfare at the expense of competitors, firms have an incentive to raise their rivals' costs.[53] By raising rivals' costs, competitor A obtains a significant advantage over competitor B, because competitor B's price structure will be less competitive.[54] As a result, assuming that other factors are equal, it will cost B more than A to produce the same good or service. Thus, A forces B either to maintain the same price for the good as A and exact a smaller profit on each unit sold (thereby diminishing B's return on the investment and B's ability to reinvest those returns in the business) or to raise the price above A's and lose customers to A, who can furnish the identical good or service at a lower price. In doing so, competitor A expands market share and, presumably, increases the return on investment.[55] Moreover, by taking actions to raise rivals' costs, A may erect a barrier to entry against competitor C, who has been preparing to enter the market but has not yet done so.[56]

Actions to raise rivals' costs can be undertaken by several different means. In some instances, a small group of competitors may enter into an agreement for the purpose of raising rivals' costs.[57] For example, in *Fashion Originator's Guild of America (FOGA) v. Federal Trade Commission*[58] a group of garment designers and manufacturers agreed not to sell their "original creations" to retailers who dealt with other manufacturers who copied designs from FOGA members.[59] The agreement effectively cut off non-FOGA-members from access to retailers as long as they copied member clothing designs.[60] The prac-

---

[51] *See id.*

[52] *See* Zechariah Chafee, Jr., *Unfair Competition*, 53 HARV. L. REV. 1289, 1304 (1940).

[53] *See* Krattenmaker & Salop, *supra* note 6, at 224 ("Raising rivals' costs can be a particularly effective method of anticompetitive exclusion.").

[54] *See id.*

[55] *See id.* at 225.

[56] *See* GEORGE J. STIGLER, THE ORGANIZATION OF INDUSTRY 67 (1968) (defining an entry barrier as "a cost of producing (at some or every rate of output) which must be borne by a firm which seeks to enter an industry but is not borne by firms already in the industry.").

[57] *See, e.g.,* Klor's, Inc. v. Broadway-Hale Stores, Inc., 359 U.S. 207, 209 (1959).

[58] 312 U.S. 457 (1941).

[59] *See id.* at 461.

[60] *See id.*

tice of copying competitor's designs had earlier been held to be completely lawful because the designs were not eligible for protection under federal copyright law.[61] As a result, non-FOGA-members' production costs increased considerably because they were now forced to obtain clothing designs using means other than copying.[62] The Supreme Court held that this action violated the Sherman Anti-Trust Act.[63] Although many examples of attempts to raise rivals' costs, such as the concerted refusal to deal in *Fashion Originator's Guild,*[64] involve collusion between some competitors, collusion is by no means a necessary ingredient of such schemes.

Strategies exist by which a single firm may seek to raise rivals' costs without collusion. A large company may engage in strategic bargaining with labor unions designed to increase wages market-wide.[65] A firm may obtain patents on an array of marginal inventions in order to force competitors to design around the patent or litigate their validity.[66] A large competitor may petition the government to enact industry regulations that might have a greater impact on smaller competitors.[67] For instance, a large airline may petition the government to require for safety reasons that three-person flight crews be used in all commercial aircraft, which would disadvantage airlines with smaller planes flying shorter routes.[68] Vertical agreements between a firm and its suppliers can also be used by a single firm to raise rivals' costs.[69] Competitors must then purchase necessary resources from suppliers who charge more for their products or services.[70] For example, a firm can foreclose the supply of essential resources by obtaining an exclusive right to purchase from low-cost suppliers.[71] Furthermore, many vertical agreements aimed at raising rivals' costs do not require market dominance or short-term losses in order to achieve their desired effect.[72]

---

[61]   *See* Cheney Bros. v. Doris Silk Corp., 35 F.2d 279, 280 (2d Cir. 1929).

[62]   *See Fashion Originator's Guild,* 312 U.S. at 465.

[63]   *See id.*

[64]   *See id.*

[65]   *See* HERBERT HOVENKAMP, FEDERAL ANTITRUST POLICY: THE LAW OF COMPETITION AND ITS PRACTICE 286 (1994).

[66]   *See generally* Richard J. Gilbert & David M.G. Newbery, *Preemptive Patenting and the Persistence of Monopoly,* 72 AM. ECON. REV. 514 (1982).

[67]   *See* Hovenkamp, *supra* note 65, at 285.

[68]   *See id.*

[69]   *See* Krattenmaker & Salop, *supra* note 6, at 224.

[70]   *See id.*

[71]   *See id.*

[72]   *See id.* at 224-25.

In addition to raising rivals' costs, firms may attempt to force rival competitors to lower their prices below their marginal costs. So-called "predatory pricing" requires competitor *A* to cut prices below short-term marginal costs, in hope of forcing competitor *B* to follow suit, or risk losing significant market share.[73] Competitor *A* hopes to advance its long-term gain by forcing *B* into a price war in which both will suffer short-term losses, but *A* wagers that it will be left standing while *B* will eventually founder under the financial pressure. Predatory pricing serves as a notable instance wherein a firm may be willing to engage in an activity that will clearly damage the firm's financial stability in the short-term, evidencing an important aspect of the competitive environment: Sometimes competitors may be willing to forgo normal profit-maximizing behavior in order to achieve other objectives.

B.   Bargaining Between Competitors

The traditional *Cathedral* rules as enunciated by Calabresi and Melamed rely on notions of bargaining in the abstract. The model approaches transactions from the perspective of individuals who engage in short-term, limited transactions, divorced from ongoing relationships. As the above discussion demonstrates, however, parties who are in direct, or even indirect, competition may forgo short-term gains in order to further other goals. They may engage in transactions or other behavior for the sole or primary purpose of raising their rivals' costs of production, and they may even operate at a loss in order to harm other competitors.[74] The question then must be asked: Will parties engaged in an ongoing competitive relationship bargain with each other, even when it is in their best interests to do so? Sometimes the answer is no, they will not. Competitor *A* may decide it is in its best interest to refuse to deal with competitor *B*, even where *A* would profit from the transaction. Other incentives, such as the opportunity to raise competitor *B*'s costs, may dominate, even though the result is economically inefficient both for the parties' welfare and the welfare of society as a whole.

---

[73] *See generally* Phillip Areeda & Donald F. Turner, *Predatory Pricing and Related Practices Under Section 2 of the Sherman Act*, 88 HARV. L. REV. 697 (1975). Several circuits have adopted the Areeda and Turner approach to calculating marginal costs. *See, e.g.*, Kelco Disposal, Inc. v. Browning-Ferris Indus., 845 F.2d 404, 407 (2d Cir. 1988); Barry Wright Corp. v. ITT Grinnell Corp., 724 F.2d 227, 231 (1st Cir. 1983).

[74] *See supra* Part III.A.

As an example, in *Feist Publications, Inc. v. Rural Telephone Service Co.*[75] the plaintiff, Rural Telephone Co. (Rural), operated in several communities in northwest Kansas.[76] As a part of its services, Rural published a telephone directory, consisting of white pages listing the names, addresses, and telephone numbers of individuals in Rural's service area, and yellow pages, consisting of business advertisements.[77] Rural distributed its telephone directory free of charge, but earned revenue from the business advertisements.[78] The defendant, Feist Publications (Feist), specialized in publishing telephone directories that were much larger in geographic scope.[79] The two companies engaged in vigorous competition for advertising revenue.[80] Because Feist was a publishing company, not a telephone company, it did not have independent access to the subscriber information.[81] As such, it had to pay local phone companies for that information.[82] Feist attempted to negotiate such an arrangement with Rural, but Rural refused.[83] By doing so, Rural hoped to create a large geographical gap in Feist's area-wide telephone directory, thus making it less attractive to advertisers.[84] Feist, however, copied the listings without permission, and Rural sued for copyright infringement.[85]

The Supreme Court found that the alphabetical telephone listings failed to satisfy the originality requirement of the Copyright Act.[86] As such, Feist was free to copy this directory and subsequent directories without permission.[87] *Feist* serves as a noteworthy example of a situation in which one competitor may refuse to bargain with another competitor for the sole purpose of raising the other's costs. In *Feist*, rather than agree to a mutually beneficial licensing agreement, Rural engaged in several years of expensive litigation, pursued an appeal to the United States Supreme Court, and eventually lost both the battle and the war.[88] Clearly, not all competitors will refuse

---

[75]   499 U.S. 340 (1991).

[76]   *See id.* at 342.

[77]   *See id.*

[78]   *See id.*

[79]   *See id.* at 342-43.

[80]   *See id.* at 343.

[81]   *See Feist,* 499 U.S. at 343.

[82]   *See id.*

[83]   *See id.*

[84]   *See id.*

[85]   *See id.* at 343-44.

[86]   *See id.* at 363-64; *see also* Copyright Act, 17 U.S.C. §§ 101-500 (1993).

[87]   *See Feist,* 499 U.S. at 363-64.

[88]   *See id.*

to deal when it is in their short-term interest to do so,[89] but cases such as *Feist* suggest that some will.

In a highly competitive environment with many firms, the decision whether to bargain likely rests on a number of conditions that vary between markets. Predicting whether a firm will bargain is not necessarily an easier endeavor as the number of firms decreases, however. It is well known that the behavior of oligopolies is difficult, if not almost impossible, to predict:

> Economists have developed literally dozens of oligopoly pricing theories — some simple, some marvels of mathematical complexity. This proliferation of theories is mirrored by an equally rich array of behavioral patterns actually observed under oligopoly. Casual observation suggests that virtually anything can happen . . . .[90]

As a result, in a competitive market, bargaining between competitors is an uncertain proposition, regardless of the number of competitors in the market.

Under the traditional understanding of Calabresi and Melamed, property rules are generally said to be the most efficient remedy because they encourage bargaining.[91] It should be apparent, however, that co-existing incentives not to bargain create a difficulty for the application of the traditional *Cathedral* rules. This difficulty is further exacerbated where it is uncertain whether parties will be inclined to bargain. As a result, the common assumption that property rules should be used to protect entitlements held by competitors may not hold true once the nature of the relationship and the nature of the entitlement are considered. This subject is considered in the following section.

IV. ILLUSTRATION THROUGH THE LAW OF TRADE SECRET

A. *Microeconomic Decision-Making Regarding Appropriation of Secret Information*

A competitor may protect the secrecy of "any information that can be used in the operation of a business or other enterprise and that is sufficiently valuable and secret to afford an actual or potential

---

[89] Other local telephone companies in *Feist* did license their information to the publishing company. *See id.* at 343.

[90] F.M. SCHERER, INDUSTRIAL MARKET STRUCTURE AND ECONOMIC PERFORMANCE 151 (2d ed. 1980).

[91] *See, e.g.,* Epstein, *supra* note 7, at 2096-2105.

economic advantage over others."[92] Secret information has become an increasingly important aspect of intellectual property as technology continues its rapid advance.[93] Its existence can be particularly important for technology firms.[94]

When a firm develops secret information that has significant economic value, others who have a use for the information may seek to license it from the developer.[95] If the developer and other potential users are competitors, however, the developer has a strong incentive to keep the information exclusively for its own use. If competitor *A* develops secret information in a competitive field of several suppliers and competitor *B* wishes to bargain for the right to use that information, it may be in the best interests of both parties for an agreement to be reached. As demonstrated above, however, it is unclear that bargaining will be successful. Unlike a transaction between parties who are not in competition, competitor *A* has other incentives that may affect its bargaining strategy or its decision to bargain at all.

Competitor *A* has an interest in maintaining a lower cost-structure than *B*, a counter-incentive which does not exist if the parties are not in competition. Competitor *A* may make a decision based on a computation that the value of damaging *B*'s cost structure

---

[92]   RESTATEMENT (THIRD) OF UNFAIR COMPETITION § 39 (1995).

[93]   *See, e.g.,* Rockwell Graphic Sys., Inc. v. DEV Indus., Inc., 925 F.2d 174, 180 (7th Cir. 1991) (noting that trade secret is "a form of property that is of growing importance to the competitiveness of American industry").

[94]   *See* MELVIN F. JAGER, TRADE SECRET LAW § 1.02 (1998).

[95]   *See generally id.* §§ 15.01-15.08 (describing the advantages and aspects of licensing agreements). One commentator has suggested that transaction costs for trade secrets licensing are high. *See* Robert G. Bone, *A New Look at Trade Secret Law: Doctrine in Search of Justification,* 86 CAL. L. REV. 241, 280 (1998). The high costs are due to Arrow's Information Paradox, the dilemma that "[a] trade secret owner generally is reluctant to reveal the secret unless the potential licensee first promises not to use it in the event that a license is not negotiated. The licensee, on the other hand, is not likely to make such a promise without first learning the secret." *Id.* (citing Kenneth J. Arrow, *Economic Welfare and the Allocation of Resources for Invention, in* NATIONAL BUREAU OF ECONOMIC RESEARCH, THE RATE AND DIRECTION OF INCENTIVE ACTIVITY 609, 614-16 (1962)). While the Information Paradox may create difficulties in structuring licensing transactions with independent inventors, *see, e.g.,* Smith v. Snap-On Tools Corp., 833 F.2d 578, 578 (5th Cir. 1987) (idea submission from a customer), the problem seems much less acute for competitors. Who else is in a better position to evaluate the likely value of *A*'s information other than a competitor? Moreover, *B* likely learned of the existence of the secret when the new goods or services that incorporate the information were brought to market. As such, *B* is in an even better position to assess the value of the secret, because *B* can see firsthand its effect on the value of the goods or services and can examine trends in the market. Thus, the usual difficulty imposed by the Information Paradox — that the potential buyer cannot estimate the value of the information until it has been purchased — is significantly diminished.

is more economically satisfactory than licensing the information to *B*. *A* may gain more in profits from exclusive exploitation than a license with *B* is likely to produce.[96] Even if *A* determines that licensing the information to *B* might result in greater income, however, *A* still may refuse to negotiate. Competitor *A* may believe that maintaining exclusive secrecy will harm *B* enough that the loss of licensing revenue is outweighed. In short, refusal to bargain can be an effective means of raising a rival's costs.[97]

The efficacy of this strategy in part turns on the nature of the secret. If the information essentially consists of a manufacturing process that lowers *A*'s costs, *A* may have a substantial incentive to refuse to bargain. Processes that confer greater production efficiency are generally difficult to reverse-engineer.[98] Therefore, *A* will be most concerned with *B*'s ability to develop the process by independent means.[99] If *A* thinks it unlikely that *B* will be able to do so for some time, *A* can essentially raise *B*'s cost-structure, along with those of *A*'s other competitors, by cutting its own. If *A* refuses to license the information to *B*, *B* will be at a competitive disadvantage relative to *A*. Competitor *A* may lower its price, and *B* will either have to follow *A*'s lead and make less profit on each unit, or maintain its price at the cost of a portion of its market share. On the other hand, competitor *A* may choose instead to maintain its price and make more on each unit than *B*.[100] If *A* is intent on raising *B*'s costs, *A* will likely choose the first strategy because it decreases *B*'s profit, marketshare, or perhaps both. This strategy is more likely to dispose of *B* as a competitor. Depending on future market conditions, *A* may then be able to raise its price in the future if *A* acquires market power and the secret still remains secret.[101]

---

[96] Competitor *A* is likely to be in a better position to assess the value of the information than competitor *B*. *A* may have a better understanding of the limitations and benefits that the information confers. *A* is also in the best position to determine whether precautions would be effective in maintaining secrecy.

[97] *Cf.* Krattenmaker & Salop, *supra* note 6, at 223-26.

[98] *See* Bone, *supra* note 95, at 313 n. 173 (noting that some inventions, such as manufacturing processes, are typically difficult to reverse-engineer).

[99] *See generally* American Can Co. v. Mansukhani, 742 F.2d 314 (7th Cir. 1984); Texas Urethane, Inc. v. Seacrest Marine Corp., 608 F.2d 136 (5th Cir. 1979).

[100] Here, *A* will decide whether the profits or the license are more likely to give a greater return, and *A* will choose whether or not to license accordingly. In this example, *A* is not raising *B*'s costs in the same sense as if *A* drops its price, because *B* will be making the same return as before. *B* will not make as much on each unit as *A*, but *B* is less likely to be driven out of the market in the short term.

[101] *See supra* note 73 and accompanying text (explaining predatory pricing).

If the secret information is of the type that improves the product itself (as opposed to simply increasing A's efficiency), A must be concerned about how easy it will be for competitors to reverse-engineer it.[102] Assuming that A decides that reverse-engineering is not an immediate threat, A again faces a series of choices. Competitor A can exploit the secret exclusively and perhaps raise the price if the quality of its goods in comparison to that of A's competitors has been enhanced. On the other hand, A can maintain its price and hope to gain a greater share of the market. A could instead license the information to B if A believes that doing so will bring a greater return. In this case, however, A has more reason not to do so. If A refuses to license, maintains its price, and forces B to produce inferior goods, A may hope to damage B's reputation as a producer and drive down B's marketshare to the point that B can no longer compete. If future market conditions are favorable and the information remains secret, A may eventually be able to obtain market power.

In summary, depending on the nature of the product or services and the conditions of the market, one competitor may choose not to bargain with another competitor to license secret information as part of a strategy to raise rivals' costs.

B.   Achieving Efficient Allocation of Resources

In order to maximize social welfare, legal rules should be structured so that resources work their way into the hands of those who value them most.[103] In the case of a competitor who refuses to deal with another competitor in order to raise the rival's production costs, the valuable information will not change hands. Failure to reach an agreement hurts not just the parties, but society as a whole.

If competitor A, who developed the secret information, is nonetheless an inefficient producer relative to competitor B, who desires the information, a market failure will occur. It will be in both parties' best interest for A to negotiate a license with B. Because of the nature of their relationship as competitors, however, this may not happen. Consequently, society is deprived of the optimal use of the information, because the information remains in the hand of A, the less efficient producer. Consumers will receive fewer goods produced with benefit of the information, and these goods may be of a lesser quality.[104]

---

[102] *See* SI Handling Sys. v. Heisley, 753 F.2d 1244, 1262-63 (3d Cir. 1988); Chicago Lock Co. v. Fanberg, 676 F.2d 400, 404 (9th Cir. 1982).

[103] *See* COOTER & ULEN, *supra* note 7, at 380.

[104] *Cf.* ROBERT P. MERGES ET AL., INTELLECTUAL PROPERTY IN THE NEW TECHNO-

Under the Calabresi and Melamed framework, protection of such a trade secret by a property rule will not serve the interests of efficiency. While there are only two parties to the transaction and other costs involved with negotiation would otherwise seem to be low,[105] competitor *A* may refuse to bargain even though competitor *B* values the information more and the general welfare would be best served if *B* had that information. Thus, a liability rule may better serve the interests of efficiency.

In terms of ex post invention, this appears to be the case. A property rule will set the price of a nonconsensual taking so high that competitor *B* is very unlikely to take nonconsensually.[106] The high price of the property rule will stop competitor *B* from appropriating the trade secret. Assuming that a reasonable chance of detection of the appropriation exists, there is simply nothing for *B* to gain.[107] A liability rule, on the other hand, may induce *B* to take. The liability would be set at the amount that the court thinks *B* would have paid had *A* not refused to bargain.[108] If *B* believes the amount of the damages would be less than the value of the entitlement, *B* will take steps to appropriate the secret. From a pure ex post standpoint, this will be the Pareto efficient result. *B* is now able to exploit the information in a way that best satisfies the demands of consumers.

Current trade secret rules are not designed in this regard, however. The Restatement (Third) of Unfair Competition provides:

> One who is liable to another for an appropriation of the other's trade secret . . . is liable for the pecuniary loss to the other caused by appropriation or for the actor's own pecuniary gain resulting from the appropriation, whichever is greater . . . .[109]

LOGICAL AGE 80, 114 (1997) (questioning whether a concept equivalent to "efficient breach" in contract law might have an analogous application to trade secrets and questioning whether search costs for finding information in the public domain may be lessened resulting in efficiency). *But see* Friedman et al., *Some Economics of Trade Secret Law*, 5 J. ECON. PERSPECTIVE 61, 62 (1991) (arguing that protection for trade secrets prohibits costly means of obtaining competitors' information, but encourages less expensive forms of obtaining information, such as reverse-engineering).

[105] *See* MERGES ET AL., *supra* note 104, at 114.

[106] *See* Ayres & Balkin, *supra* note 7, at 705.

[107] *See id.; see also* Edmund W. Kitch, *The Law and Economics of Rights in Valuable Information*, 9 J. LEGAL STUD. 683, 700-23 (1980) (arguing that information is actually difficult to steal, difficult to use, and has a high depreciation rate).

[108] *See* Calabresi & Melamed, *supra* note 1, at 1092. Some trade secret cases set damages at the plaintiff's loss, *see, e.g.,* Tri-Tron Int'l v. Velto, 525 F.2d 432, 436 (9th Cir. 1975), while others set damages at the market value of the information, *see, e.g.,* Goldberg v. Medtronic, Inc., 686 F.2d 1219, 1229 (7th Cir. 1982); Precision Plating & Metal Finishing Inc. v. Martin-Marietta Corp., 435 F.2d 1262, 1263 (5th Cir. 1970). The relative efficiency of these formulations is discussed *supra* at note 95.

[109] RESTATEMENT (THIRD) OF UNFAIR COMPETITION § 45(1) (1995); *see also* Blair &

Thus, a potential victim of a nonconsensual taking is able to recover restitutionary relief against a would-be taker.[110] The traditional measure for such relief is an accounting of the taker's profits on all sales attributable to use of the trade secret.[111] Once the plaintiff has established the amount of the defendant's sales, the defendant must then establish the portion of his sales not attributable to the taking.[112]

Consequently, from a perspective ex ante the taking, the amount of damages recoverable by the defendant is set too high. Competitor *B*, the would-be taker, understands that if he is correct in his assessment of the value of the secret and takes it nonconsensually, the court may force him to disgorge all of his profits, placing the burden on him to show what part of his earnings is not attributable to the theft.[113] Competitor *B* will have no incentive to take. Moreover, if he overestimates the value of the secret and his gain is less than competitor *A*'s loss, he must pay all of *A*'s losses.[114] Again, *B* will have no incentive to take. The property rule protecting trade secrets therefore results in allocative inefficiency, viewed ex ante the taking and ex post the invention.

Furthermore, injunctive relief is also available, and competitor *A*, the victim, may obtain an injunction prohibiting competitor *B*'s use of the secret in addition to money damages.[115] Several methods of calculating the duration of the injunction exist. One method determines duration according to how long a third party would take to develop the information by independent means.[116] Another ap-

---

Cotter, *supra* note 24, at 1693 (arguing that damages for all intellectual property doctrines should be set at the greater of the plaintiff's damages or the defendant's profits).

[110] *See, e.g.*, Salsbury Lab., Inc. v. Merieux Lab., Inc., 908 F.2d 706, 713 (11th Cir. 1990); Telex Corp. v. International Bus. Machs. Corp., 510 F.2d 894, 932 (10th Cir. 1975); Clark v. Bunker, 453 F.2d 1006, 1011 (9th Cir. 1972); Schreyer v. Casco Prods. Corp., 190 F.2d 921, 923 (2d Cir. 1951); Carter Prods., Inc. v. Colgate-Palmolive Co., 214 F. Supp. 383, 394 (D. Md. 1963); Jet Spray Cooler, Inc. v. Crampton, 385 N.E.2d 1349, 1358-59 (Mass. 1979); Julius Hyman & Co. v. Velsicol Corp., 233 P.2d 977, 1007-08 (Colo. 1951).

[111] *See* RESTATEMENT (THIRD) OF UNFAIR COMPETITION § 45 cmt. f.

[112] *See id.* (citing USM Corp. v. Marson Fastner Corp., 467 N.E.2d 1271, 1277 (Mass. 1984); *Julius Hyman & Co.*, 233 P.2d at 1007-08).

[113] *See* RESTATEMENT (THIRD) OF UNFAIR COMPETITION § 45 cmt. f.

[114] *See id.* § 45 cmt. b.

[115] *See id.* § 44 cmt. c. (1995); JAGER, *supra* note 94, § 7.01, at 7-2; *see also* Kodekey Elecs., Inc. v. Mechanex Corp., 486 F.2d 449, 458 (10th Cir. 1973); Jennings v. McCall Corp., 224 F. Supp. 919, 922 (W.D. Mo. 1963); Harris Mfg. Co. v. Williams, 157 F. Supp. 779, 787 (W.D. Ark. 1957); Rexnord, Inc. v. Ferris, 657 P.2d 673, 675 (Or. 1983).

[116] *See, e.g.*, Lamb-Weston, Inc. v. McCain Foods, Ltd., 941 F.2d 970, 974-75 (9th Cir. 1991); Sugidev Corp. v. Eye Tech., Inc., 828 F.2d 452, 456 (8th Cir. 1987); Visco-

proach determines duration according to the length of time it would take the defendant to acquire the information by legitimate means.[117] A final approach grants a perpetual injunction against the taker's use, even after the secret has been reasonably ascertainable.[118] Viewed ex post taking, an order enjoining use of any sort is inefficient. The information is now in the hands of competitor *B*, the person who values it most, but an injunction prohibits *B*'s use. As such, consumers will not enjoy the benefits that *B* might confer on them.[119]

In summary, viewed after the invention, present trade secret remedies are clearly inefficient because they will not induce the optimal level of trade secret misappropriation, and consumers are harmed as a result.

C. Ex Ante Invention Considerations

The previous section of the Article demonstrated that liability rules, not property rules, are the most efficient remedy to protect trade secret entitlements viewed ex post invention because the nature of the competitive relationship between the parties involves strong incentives not to bargain. The question whether liability or property rules is the most efficient remedy ex ante invention still remains.

In economic terms, trade secret protection has been justified as a means of encouraging innovation by allowing firms to capture the value produced by investment in research and development.[120] It is by no means clear that protecting the entitlement through a property rule is more efficient than protection by means of a properly con-

fan, S.A. v. United States Int'l Trade Comm., 787 F.2d 544, 547-51 (Fed. Cir. 1986); Sigma Chemical Co. v. Harris, 794 F.2d 371, 374-75 (8th Cir. 1986).

[117] *See* RESTATEMENT (THIRD) OF UNFAIR COMPETITION § 44 cmt. f; D. Kirk Jamieson, *Just Deserts: A Model To Harmonize Trade Secret Injunctions,* 72 NEB. L. REV. 515, 539-40 (1993) (noting that "[t]he objective approach thus undercompensates the trade secret holder if the misappropriator has less of the necessary resources than the legitimate competitors or the 'average' competitor, and it overcompensates if the misappropriator has greater resources.")

[118] *See* Franke v. Wiltschek, 209 F.2d 493, 496 (2d. Cir. 1953); Valco Cincinnati, Inc. v. N & D Machining Serv., Inc., 492 N.E.2d 814, 820 (Ohio 1986); *see also* Ruth E. Leistensnider, *Trade Secret Misappropriation: What is the Proper Length of an Injunction After Public Disclosure?,* 51 ALB. L. REV. 271, 274-75 (1988) (advocating perpetual injunctions in the case of "willful and malicious" appropriation, even after public disclosure, on grounds of deterrence).

[119] The same can be said of punitive damages and criminal penalties. *See, e.g.,* Clark v. Bunker, 453 F.2d 1006, 1011-12 (9th Cir. 1972) (approving the award of punitive damages); Sperry Rand Corp. v. A-T-O, Inc., 447 F.2d 1387, 1394-95 (4th Cir. 1971) (same); *see also* The Economic Espionage Act, 18 U.S.C. § 1831 (1996).

[120] *See* Kewanee Oil Co. v. Bicron Corp., 416 U.S. 470, 483 (1974); Rockwell Graphic Sys. v. DEV Indus., 925 F.2d 174, 178 (7th Cir. 1991); CVD, Inc. v. Raytheon Co., 769 F.2d 842, 850 (1st Cir. 1985).

structed liability rule. If competitor *A* is considering investing significant resources in developing its product or process, *A*'s first concern is not likely to be the manner by which its interest, if successful, will be protected; rather, *A* must decide whether the investment is worth the price it will cost to obtain it, measured against the probability of success in obtaining it, times the likely benefit that an expected breakthrough will convey.[121] If the law provided no remedy against appropriation by *B*, this would arguably factor into *A*'s decision whether to invest.[122] But is it necessarily true that the availability of a property remedy will weigh more heavily in *A*'s decision than a liability remedy?

If *B* takes *A*'s secret information nonconsensually under a liability rule regime, the court will set an award equivalent to the amount for which *A* would have sold the entitlement.[123] If *A* would have instead bargained with *B*, she would theoretically be no better off. Thus, *A* has lost nothing other than the opportunity to raise rivals' costs. As discussed earlier, however, that result is inefficient because consumers will not recover the benefits that *B*, the most efficient producer, could have conferred upon them.

On the other hand, if a property rule protects competitor *A*'s entitlement, competitor *B* has no incentive to take. Competitor *A* will still have an entitlement, but has neither a bargain (because *A* refuses to bargain) nor damages in the amount of the objective worth of the secret. Only if *B* acts irrationally and takes the property-rule-protected entitlement will *A* be better off. This recovery is merely a windfall, however. *A* receives *B*'s profits, which will likely be in excess of *A*'s damages. This recovery, nevertheless, requires that *B* act against the property rule and risk deterrent sanctions. In terms of efficiency, any windfall benefits to *A* will likely be more than offset by the loss of *B*'s production that would otherwise have been enjoyed by

---

[121] *Cf.* United States v. Carrol Towing Co., 159 F.2d 169, 173 (2d Cir. 1947) (introducing the Hand formula for negligence).

[122] *But see* Bone, *supra* note 95, at 313 (concluding that "[t]he efficiency consequences of adopting trade secret law are indeterminate").

[123] *See* Calabresi & Melamed, *supra* note 1, at 1092; *see also* COOTER & ULEN, *supra* note 7 at 306-11. Arguably, an even more efficient ex post invention remedy would be competitor *A*'s actual loss, rather than its likely selling price, because the loss is likely to be less than the selling price. This might provide further incentive for *B* to take, because *B*'s damages would be less. When *A*'s ex ante invention incentives are considered, however, *A* is not likely to invent if *A* can recover only its loss. *A* has no incentive to invent because *A* gains nothing. Under a regime where damages are fixed according to *A*'s sale price, *A* can still expect to gain, even if *B* takes the entitlement. Thus, setting liability at *B*'s selling price (if *A* had chosen to bargain) is the more efficient remedy.

consumers.[124] That *A* might hope that *B* nonconsensually takes under a property rule is speculative. Thus, *A*'s decision whether to invest should not be affected by whether *A*'s entitlement will be protected by either a property-rule regime or a liability-rule regime. If *A* believes that the investment in research and development will result in sufficient benefits for its own sake, *A* will invent. Therefore, ex ante considerations remain unaltered.

D.   *Other Considerations*

Thus far, it appears that protecting trade secrets with a liability rule, at least where the rivals are competitors, serves the interests of ex post invention efficiency and does not harm ex ante invention efficiency. Other considerations must now be examined.

First, protection by a liability rule will not cause a reciprocal-takings problem. The specter of reciprocal takings, an incentive for the original holder to take back the entitlement nonconsensually, thereby causing multiple rounds of takings to ensue, weighs heavily in favor of protection by property rules in most instances.[125] The very nature of information as a public good eliminates this concern, however.[126] Once competitor *B* has appropriated secret information from competitor *A*, both *A* and *B* can hold and use the information at the same time without interfering with the other's possessory right.[127] Competitor *A* has no incentive to take back the entitlement from *B*, because *A* already holds everything that *B* does.[128] Consequently, multiple rounds of socially disruptive takings will not ensue.

Second, a limited injunction against *B* can protect *A* against collateral interference with its right of possession. If *B* takes the entitlement and then discovers it is not as valuable as originally believed, *B* may suffer from buyer's remorse. In that event *B* may have an incentive to leak the information in order to injure *A* or so that *B* no longer has to pay royalties to *A* if the court invokes a "reasonable roy-

---

[124]   Competitor *A* may recover litigation costs in the form of attorney's fees, under section 40 of the Uniform Trade Secrets Act. *See* Boeing Co. v. Sierracin Corp., 738 P.2d 665, 682 (Wash. 1987); Aries Info. Sys. v. Pacific Management Sys., 366 N.W.2d 366, 369 (Minn. Ct. App. 1985). Detection costs are discussed in the following section.

[125]   *See* Kaplow & Shavell, *supra* note 31, at 768-69; Ayres & Balkin, *supra* note 7, at 708.

[126]   *See* Arrow, *supra* note 95, at 615 (explaining that information may be simultaneously consumed by several people without depletion).

[127]   *See id.*

[128]   *See* Kaplow & Shavell, *supra* note 31, at 767.

alty" system of damages.[129] Thus, it may be appropriate for the court to grant a limited-scope injunction to guard against the moral hazard that *B* will leak the information to other competitors so that it becomes reasonably ascertainable. If *B* is successful in exploiting the information, however, no such injunction will be necessary because *B* has no more incentive to disclose the secret publicly than does *A*.

Third, it has been argued that liability protection of "things" will cause parties to waste resources because they will take extraordinary measures to protect entitlements.[130] As a practical matter, this objection is irrelevant for secret information, because a trade secret, at least under most formulations, requires the owner to take reasonable efforts to maintain secrecy as a prerequisite to finding a legal entitlement to the information.[131] Thus, in order to recover, competitor *A* must make reasonable efforts to maintain secrecy. It seems unlikely that *A* would choose to incur additional protection costs beyond what is reasonable to safeguard the entitlement, because at that point *A* will be entitled to recover damages should *B* appropriate the information. If the cost of taking additional precautions outweighs the benefits, a rational competitor is unlikely to take them.[132] Moreover, competitor *B* may be found to have misappropriated the secret even if *B* obtains it by means that are not independently tortious or do not cause a breach of a confidential relationship, as long as the appropriation could not have been prevented by reasonable precautions.[133] It therefore seems unlikely that protection by a liability rule will induce a competitor to take unreasonable precautions to protect secret information.

---

[129] Courts in trade secret cases occasionally consider a "reasonable royalty" system where "other theories would result in no recovery or when the parties actually had or contemplated a royalty arrangement." Pioneer Hi-Bred Int'l v. Holden Found. Seeds, Inc., 35 F.3d 1226, 1244 (8th Cir. 1994). *See generally* RESTATEMENT (THIRD) OF UNFAIR COMPETITION § 45 cmt. g.

[130] *See* Kaplow & Shavell, *supra* note 31, at 768-69.

[131] *See* Uniform Trade Secrets Act § 1(4)(ii). *See, e.g.,* Rockwell Graphic Sys. v. DEV Indus., 925 F.2d 174, 178 (7th Cir. 1991).

[132] *See Rockwell,* 925 F.2d at 180 (stating that the question in determining reasonable precautions is whether "the additional benefit in security would have exceeded the cost of additional precautions."); *see also* MERGES ET. AL., *supra* note 104, at 56-57 (postulating that the existence of trade secret protection reduces protection costs).

[133] *See, e.g.,* E.I. du Pont de Nemours & Co. v. Christopher, 431 F.2d 1012, 1016 (5th Cir. 1970) (finding that the defendants misappropriated the plaintiff's trade secret by taking photographs of equipment to be used in a secret process for producing methanol while the plaintiff was building a roof over the equipment).

V. CONCLUSION

The nature of the relationship between parties is a critical aspect in determining the proper form of protecting an entitlement. As illustrated by entitlements to secret information, competition creates incentives not to bargain with competitors. A competitor may choose not to engage in normal profit-maximizing behavior in order to raise rivals' costs. Thus far, applications of the *Cathedral* rules often have ignored the relationship of the parties and the nature of the entitlement. As can be seen, however, the effect of these factors can often alter intuitive judgments about the application of Calabresi and Melamed's theory. Only by considering problems in bargaining among parties typical to specific entitlements can the *Cathedral* rules serve as useful models for the efficient resolution of particular cases.