Defining Better Monopolization Standards

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DEFINING BETTER MONOPOLIZATION STANDARDS

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We've all gotten used to a little vagueness in law. Sometimes you just can't foresee or account for the full complexity of life, and when that is so, the best the law can do is define some general guidelines for courts and juries to apply to particular facts. But for decades monopolization doctrine has been governed by standards that are not just vague, but vacuous.

Vague standards might be uncertain around the edges as applied to tough facts, but at least offer genuinely guiding normative principles. We may not be able to define precisely how many hairs one needs to lose before one turns bald, but we all understand the general concept of baldness and what moves you closer or further from that state. Vacuous standards, in contrast, are utterly conclusory, failing to identify a coherent norm that provides any real help in distinguishing bad behavior from good or even in knowing which way certain factual conclusions cut. That is the sad state in which current monopolization doctrine finds itself, employing conclusory labels that offer little insight into which forms of conduct should and should not be deemed undesirable or illegal.

Current proposals by academics and enforcement officials to rectify the problem focus on redefining monopolization in terms of whether the defendant sacrificed short-term profits in order to reap long run monopoly returns by excluding rivals. But this profit-sacrifice test only replicates the underlying problem in another form, for whether or not short run profits were sacrificed in this way turns out to have no logical connection to whether the conduct was undesirable. Nor does it explain the pattern of cases that have been held illegal by current precedent. Delayed gratification is not an antitrust offense, nor is it necessary for committing one.

Other doctrinal strands seem to focus on the efficiency of the relevant conduct. This helpfully begins to point us in the right direction, but has so far failed to grapple with two important baseline problems. First, conduct that is inefficient *ex post* to a firm's investment in creating, enhancing or maintaining the sort of intellectual or physical property that is valuable enough to confer monopoly power is often efficient when viewed *ex ante*. Second, in many cases the sorts of efficiencies cited by defendants – such as economies of scale or network effects – can be achieved only by denying those same efficiencies to rivals. Failure to grapple with these two baseline issues turns out to often be functionally equivalent to wrongly focusing on whether short-term profits were sacrificed.

I will advocate that the proper monopolization standard should focus on whether the alleged exclusionary conduct's ability to further monopoly power depends on the defendant improving its own efficiency, or whether it would do so by impairing the efficiency of rivals whether or not defendant efficiency were enhanced. Where the defendant has improved its own efficiency in order to make a better or cheaper product, it should be free to sell that product at any above-cost price it wants, even though that may shrink rival market share to a size leaves rivals less efficient. The key

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is that this conduct can successfully impair rival efficiency only as a byproduct of the defendant improving its own efficiency, which enhances the market options available to consumers. Similarly, when a defendant has increased its own efficiency by investing in its intellectual or physical property, a refusal to share that property with rivals should generally be legal because it rewards the improvement in defendant efficiency in a way necessary to maintain *ex ante* incentives for investment. The one exception is when the defendant discriminates by refusing to do business with rivals – or those who deal with rivals -- on the same terms as the defendant does business with other outsiders. Such discrimination on the basis of rivalry is not necessary to support optimal *ex ante* investment incentives, and its success depends not on increasing the value of the property and the efficiency of the monopolist, but rather on selectively impairing the efficiency of rivals.

Exclusionary conduct should be illegal if it would further monopoly power by impairing the efficiency of rivals even if the defendant did not successfully enhance its own efficiency. Pricing below cost, for example, seeks to reap sales beyond any those earned by a monopolist's successful efforts to make itself more efficient, and can thus divert sales from rivals in a way that impairs rival efficiency even if the defendant never made itself more efficient than its rivals. Likewise, exclusionary conditions that discriminate against rivals or those who deal with them can foreclose resources, suppliers or outlets in a way that impairs the efficiency of rivals by denying them economies of scale, scope, learning or network effects. Where those various "economies of share" reach their minimum at a market share below 50%, then we have a relatively easy case, for the defendant cannot gain any similar economies by using exclusionary conduct to attain or maintain a monopoly share considerably above that 50% figure. Where those economies of share continue beyond 50%, then we might seem to have a more difficult case because exclusionary conduct that assures a higher share to the defendant can simultaneously enhance the monopolist's efficiency and impair the efficiency of rivals. But allowing such efficiencies to justify exclusionary conditions proves to be conceptually identical to the commonly rejected claim that a monopolist can defend its conduct by showing that the industry is a natural monopoly. Further, in such cases achieving those efficiencies by internal expansion will generally be a less restrictive alternative to achieving them with exclusionary conditions. Thus, rather than requiring antitrust courts and juries to engage in open-ended balancing in such cases, such exclusionary conduct should be illegal. This conclusion can easily be reached under my proposed standard because this conduct can successfully enhance monopoly power by impairing the efficiency of rivals whether or not it enhances the monopolist's efficiency.

While existing doctrine on monopoly power is not as problematic, it too suffers from great ambiguities, including difficulty dealing with the ubiquitous pricing discretion of firms in modern brand-differentiated markets, vague references to a "substantial" degree of a power that itself only exists when substantial, and an underlying split over whether pricing discretion or market share is the underlying variable whose substantiality matters. I will show that proper economic analysis of how to judge the exclusionary conduct that must be causally connected to that monopoly power explains why monopoly power requires showing *both* (a) a market share above 50% and (b) an ability to either influence marketwide prices or impose significant marketwide foreclosure that impairs rival efficiency.

I will further argue that these proposed standards would not only provide a more coherent

and desirable standard for guiding lower courts and juries, but better explain the actual pattern of Supreme Court case results. But to consider all these issues, we need to first understand the nature of the problems with current doctrine.

I. The Problems with Current Doctrine

The current problems start at the top. The fundamental standard, articulated by the U.S. Supreme Court in *Grinnell*, is:

> The offense of monopoly under § 2 of the Sherman Act has two elements: (1) the possession of monopoly power in the relevant market and (2) the willful acquisition or maintenance of that power as distinguished from growth or development as a consequence of a superior product, business acumen, or historic accident.[1]

This standard has been reaffirmed by the Court in recent decades.[2] Yet both elements suffer from an uncertainty that is as extensive as it is unnecessary.

A. The Monopoly Power Element

The first element is actually the less problematic of the two, for while it verges on vacuity, it does not quite attain that status. But because its near miss with vacuity contributes to a great deal of unnecessary vagueness, the problems with this element are worth considering. The Court defines "monopoly power" as "the power to control prices or exclude competition."[3] The reason this definition raises a problem is that the standard economic definition of any "market power" is a power to raise prices over the competitive level.[4] Given this, doesn't *all* market power necessarily give a defendant "control" over its prices and thus make it a monopolist? Apparently not, because the Court has stressed: "Monopoly power under § 2 requires, of course, something greater than market power under § 1."[5] But then, just what is the difference?

To an economist, the distinction is theoretically puzzling: a firm either enjoys a downward-sloping demand curve or it doesn't. But courts and regulators sensibly recoil from that conclusion because it would make antitrust far too sweeping given that, in our brand-differentiated world, just about every producer has a brandname that enables it to enjoy a downward-sloping demand curve and thus has some pricing discretion.[6] This is a problem that has only gotten worse over time, as

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[1] United States v. Grinnell Corp., 384 U.S. 563, 570-571(1966).

[2] *See* Eastman Kodak Co. v. Image Technical Services, Inc., 504 U.S. 451, 481 (1992); Aspen Skiing Co. v. Aspen Highlands Skiing Corp., 472 U.S. 585, 596 n.19 (1985).

[3] *Kodak*, 504 U.S. at 481 (quoting United States v. E.I. du Pont de Nemours & Co., 351 U.S. 377, 391 (1956)); *Grinnell*, 384 U.S. at 571 (same).

[4] *See* 1992 Horizontal Merger Guidelines, 57 Fed. Reg. 41,552 §§ 1.0-1.22 (Sept. 10, 1992); PHILLIP AREEDA & LOUIS KAPLOW, ANTITRUST ANALYSIS 556 (5th ed. 1997); CARLTON & PERLOFF, MODERN INDUSTRIAL ORGANIZATION 92 (3rd ed. 2000); JEAN TIROLE, THE THEORY OF INDUSTRIAL ORGANIZATION 284 (1988); DON E. WALDMAN & ELIZABETH J. JENSEN, INDUSTRIAL ORGANIZATION 40, 437, 667 (2d ed. 2001); William M. Landes & Richard A. Posner, *Market Power in Antitrust Cases*, 94 HARV. L. REV. 937, 939 (1981).

[5] *See Kodak*, 504 U.S. at 481.

[6] See, e.g., James A. Keyte, *Market Definition and Differentiated Products: The Need for a Workable Standard*, 63 ANTITRUST L.J. 697, 701-02 (1995).

we have moved from an economy that tends to focus on mass-produced homogeneous commodities to an economy that focuses on providing not only brand-differentiated products but services and experiences that inevitably enjoy some pricing discretion.[7] Likewise, the price discrimination normally taken to evidence market power is so ubiquitous that it would indicate market power exists everywhere.[8] The logical purity of the economist's test must thus be rejected, for it would disable the monopoly power element from serving its intended function of limiting antitrust challenges to unilateral conduct to a subset of cases where the potential harm to markets is gravest.

The usual reaction is to cut down on this excessive potential sweep by defining monopoly power to be a "significant" or "substantial" degree of market power.[9] But this raises three problems. The first is rather predictable: this approach is vague about how much power it takes to cross this line of "substantiality." The second problem is more comical. To avoid excessive sweep even under §1, market power itself is normally defined as not just any ability to raise prices above competitive levels but an ability to raise prices "substantially" over those levels.[10] We are thus left with a standard that defines itself as requiring a substantial degree of a sort of power that is itself defined to exist only when substantial. This builds vagueness upon vagueness. It reminds me of the story of the flat-earth adherent who insisted the earth rested on the back of giant turtle, and when asked what held up the turtle, answered that from then on, "it's turtles all the way down."[11] Substantial turtles, one supposes.

The third problem is more serious: this standard fails to even define which variable is having its "substantiality" judged. One could imagine, as Landes and Posner advocate, deciding the monopoly power issue based directly on whether a particular firm's individual demand curve has an elasticity lower than some defined number X, or an ability to raise prices more than Y% over the competitive level, with less demanding Xs and Ys being used to define market power.[12] But while considering such issues, courts generally seem moved more by the linguistic understanding that, since the dictionary definition of a "monopoly" is a market with only one firm, one has to prove a market share that can arguably be said to approach 100%, with the classic formulation being that 90% is certainly enough, 33% is certainly not, and 60-64% is close to the line.[13] Nor is the market share approach supported by only statutory text, for a pure firm demand elasticity approach could

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[7] *See* FTC Commissioner Thomas B. Leary, *The Significance of Variety in Antitrust Analysis,* 68 ANTITRUST L.J. 1007 (2001); B. JOSEPH PINE, ET AL., THE EXPERIENCE ECONOMY (1999).

[8] *See* Einer Elhauge, *Why Above-Cost Price Cuts to Drive out Entrants Do Not Signal Predation or Even Market Power – and the Implications for Defining Costs,* 112 YALE LAW JOURNAL 681, 726-28, 732-54 (2003) [hereinafter "Elhauge, *Why Above-Cost Price Cuts Are Not Predatory*"].

[9] AREEDA & KAPLOW, *supra* note , at 448; IIIA AREEDA & HOVENKAMP, ANTITRUST LAW ¶801, at 318 (2002). E.C. courts use the similar concept that to have a dominant position a firm's discretionary power must be "appreciable." Hoffmann-LaRoche & Co. AG v. Commission, [1979] 3 C.M.L.R. 211, ¶ 38.

[10] IIA AREEDA & HOVENKAMP, ANTITRUST LAW ¶502, at 90 (2002).

[11] *See* Roger C. Cramton, *Demystifying Legal Scholarship*, 75 GEO. L.J. 1, 2 n.4 (1986).

[12] *See* Landes & Posner, *supra* note .

[13] *See* United States v. Alcoa, 148 F.2d 416, 424 (2d Cir. 1945) (Hand, J.). *See also Kodak*, 504 U.S. at 481 (proving 80-95% market share is enough to survive summary judgment, and describing a prior case as holding that "over two-thirds of a market is a monopoly"); *Grinnell*, 384 U.S. at 571 ("The existence of such [monopoly] power ordinarily may be inferred from the predominant share of the market. . . . In the present case, 87% [share of the business] leaves no doubt that . . . defendants have monopoly power . . . if that business is the relevant market.")

still sweep in firms with brands that enjoy considerable pricing discretion but compete vigorously with other brands. It would also cause legal rules to vary from day to day with shifts in demand, costs, or rival abilities, and would subject different firms that engage in the same anticompetitive conduct to acquire the same high market share to different rules depending on the degree of demand elasticity in their industry. On the other hand, a market share test is problematic because high market shares may not indicate much ability to raise prices over competitive levels, which is the economic injury of concern.[14]

We are thus left uncertain about just what to do when our inferences from market share conflict with those from firm-specific demand elasticity. Further, this underlying divergence disables courts from specifying more precise criteria for "significance." Courts can't say that the significance line is crossed by a demand elasticity of X, or a market share of Y, because either effort to devise a more precise standard could lead to absurd results under the other method. A firm may have 99% market share, but no power to raise prices at all if the rivals comprising the other 1% can instantly expand to supply the entire market if the 99% firm tried to raise prices. And even Landes and Posner recoil from the fact that their test would indicate most firms that make a brand of orange juice, coffee, beer and other similar products have monopoly power (despite their small market shares) because their firm demand elasticities usually range from 2.5 to 5, implying a price 25-67% over marginal cost.[15] In these cases, they say, "mechanical application of [their test] would incorrectly suggest the existence of a monopoly problem," but they provide no theory to determine what the criteria are for nonmechanical application or how to determine when conclusions created by their test are incorrect.[16]

Still, while verging on vacuity, the current monopoly power standard is, in the end, merely vague. Why? Because at least we all have a sense of what sort of evidence moves us closer to a conclusion of monopoly power: more market share or more discretion over prices makes it more likely a firm has monopoly power. Sometimes these two standards diverge, but it is not the case that the sort of evidence that affirmatively supports a monopoly power conclusion under one standard actually cuts against that conclusion under the other standard. And often the same sort of evidence supports a monopoly power conclusion under either standard. While we may not know how many lost hairs it takes to become bald, and have some conflict in beliefs about what precisely constitutes a hair, most of the time that variation in belief does not matter much because the same sorts of things are judged a hair under either belief.

Nonetheless, the underlying unresolved divergence in methodology does prevent us from reducing the vagueness in the current monopoly power standard, and thus does produce a vagueness that is unnecessarily large. Accordingly, while not the primary focus of my inquiry, I will offer some tests for reducing this unnecessary vagueness. But let me defer those issues until Part IV, for it turns out that the answers flow in part from clarifying which exclusionary conduct merits condemnation.

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[14] *See* AREEDA & KAPLOW, *supra* note , at 564-72; Landes & Posner, *supra* note .

[15] *See* Landes & Posner, *supra* note , at 956-957.

[16] *Id.* at 957.

B. The Bad Conduct Element

It is the second element of improper conduct that is truly vacuous. Leaving aside cases where monopoly is acquired by historic accident, the Court never explains what distinguishes "the willful acquisition or maintenance of [monopoly] power" from "growth or development as a consequence of a superior product [or] business acumen."[17] It seems obvious that often firms willfully acquire or maintain monopoly power precisely through business acumen or developing a superior product. The two are not at all mutually exclusive concepts. And while cases of historic accident can be distinguished because they are not willful, it is hard to think of cases where a firm really has a monopoly thrust upon it without the aid of any willful conduct.

One might be tempted to adopt a more charitable reading, concluding that the Court did not really think willfulness was distinct from using business acumen or making a superior product, but meant to exempt from its prohibition any conduct that falls within the category of a "superior product" or "business acumen." But *Grinnell* itself indicates it does not share this reading, holding that because the "monopoly power was consciously acquired, we have no reason to reach" the issue whether defendants had proven "that their dominance is due to skill, acumen, and the like."[18] Further, in other cases, the Court has held that a firm that develops a superior product must sometimes share it with its rivals.[19]

The lower federal circuits have also all recognized an antitrust duty to deal with rivals when sharing is feasible and a monopolist has developed a product that is *so* superior that it is "essential" for rivals to compete and cannot practicably be duplicated.[20] True, many scholars conclude this essential facilities doctrine is misguided.[21] And this doctrine has not yet been accepted by the Supreme Court.[22] But the concern that the essential facilities doctrine might misguidedly extend *beyond* the Supreme Court's antitrust duty to deal rests on the mistaken premise that this doctrine requires sharing even when the Supreme Court would hold that a refusal to deal was justified. In fact, the lower courts applying the essential facility doctrine have interpreted its element requiring that sharing be "feasible" to mean the same set of open-ended factors that the Court examines to

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[17] *Grinnell*, 384 U.S. at 570-571.

[18] *Id.* at 576 n.7; *see also id.* a 571 ("this second ingredient presents no major problem here, as what was done in building the empire was done plainly and explicitly for a single purpose")

[19] *See Kodak*, 504 U.S. at 483 & n.32*; Aspen*, 472 U.S. at 600-611; Otter Tail Power v. United States, 410 U.S. 366 (1973).

[20] See Interface Group v. Massachusetts Port Authority, 816 F.2d 9, 12 (1st Cir. 1987); Twin Labs. v. Weider Health & Fitness, 900 F.2d 566, 568-69 (2d Cir.1990); Ideal Dairy Farms v. John Labatt, 90 F.3d 737, 748 (3d Cir.1996); Laurel Sand v. CSX Transp., 924 F.2d 539, 544 (4th Cir. 1991); Mid-Texas Communications Sys. v. AT&T, 615 F.2d 1372, 1387 n.12 (5th Cir.), cert. denied, 449 U.S. 912 (1980); Directory Sales Mgmt. v. Ohio Bell Tel., 833 F.2d 606, 612 (6th Cir.1987); MCI Communications Corp. v. AT&T, 708 F.2d 1081, 1132-33 (7th Cir.1983); Willman v. Heartland Hospital, 34 F.3d 605, 613 (8th Cir.1994); Ferguson v. Greater Pocatello Chamber of Commerce, 848 F.2d 976, 983 (9th Cir.1988); McKenzie v. Mercy Hospital, 854 F.2d 365, 369 (10th Cir.1988); Covad Commun. v. BellSouth, 299 F.3d 1272, 1286-88 (11th Cir.2002), cert. pending, 71 U.S.L.W. 3640 (2003); Caribbean Broadcasting v. Cable & Wireless, 148 F.3d 1080, 1088 (D.C.Cir.1998); Intergraph Corporation v. Intel Corporation, 195 F.3d 1346, 1356-57 (Fed. Cir. 1999). E.C. law has a similar essential facilities doctrine. See Case 7/97, Oscar Bronner GmbH & Co. KG v Mediaprint Zeitungs, 1 E.C.R. 7791 (1998); John Temple Lang, The Principle of Essential Facilities in European Community Competition Law – The Position Since Bronner, 1(4) JOURNAL OF NETWORK INDUSTRIES 375 (2000).

[21] *See, e.g.,* IIIA AREEDA & HOVENKAMP, ANTITRUST LAW ¶¶ 770e, 771b-c, 773a (2002); Werden, *The Law and Economics of the Essential Facility Doctrine*, 32 St. Louis U. L.J. 433, 479-80 (1987).

[22] *See Aspen,* 472 U.S. at 611 n.44; AT&T Corp. v. Iowa Utils. Bd., 525 U.S. 366, 428 (1999) (Breyer, J., concurring in part and dissenting in part)(calling the essential facilities doctrine "an antitrust doctrine that this Court has never adopted").

decide whether a refusal to deal is justified.[23] This, if anything, makes the essential facilities doctrine *narrower* than the Supreme Court doctrine, which has required sharing even in cases like *Aspen* where the denied facility, while helpful, was clearly not essential for the rival to compete, since it did so without it.[24] In any event, whether broader or narrower than the Supreme Court's doctrine, the point here is that the persistence of the essential facilities doctrine in the lower courts demonstrates that the Supreme Court's more general monopolization standards have not provided sufficient guidance to make it clear that antitrust duties to deal do not apply to monopolists who develop "superior" products.

Perhaps in these other cases, the courts mean to rest on the linguistic distinction that the wrongful act was not the development of the superior product, but the willful refusal to share it with rivals who need it. But if a superior product always had to be shared with rivals whenever nonsharing would lead to a monopoly, then a superior product could never lead to the "development" of monopoly power, which would logically be inconsistent with the notion this exception defines a protected activity that does lead to that development. In any event, no firm invests in developing a superior product in order to share it with rivals; firms do so in order to reap the profits that come from producing a product that is sufficiently superior to what rivals can provide that it reaps monopoly profits. We thus need a coherent theory for determining when sharing a superior product is required and when it isn't, which we shall see the Supreme Court has yet to provide.

Nor does the Court's test offer any norms for defining what a "superior product" or "business acumen" mean. Why isn't it just good "business acumen" to refuse to share one's superior product with rivals in order to drive it out of the market? If a firm designs its product in a way that makes it hard for buyers to use rival products, why isn't that just good "business acumen" or even a "superior" product in the business sense that it brings in more profits?[25] If a firm bundles its monopoly power product with another product in a way that prevents rivals from gaining enough market share in the latter to increase their ability to compete with the former, why isn't that just good "business acumen" or maybe even a "superior product" in the business sense?[26] If a firm lowers prices whenever rivals enter the market in order to drive those rivals out and restore monopoly prices, is that succeeding by "business acumen" or a "superior product" if the lowered prices are above cost?[27] If a firm instead offers discounts conditioned on the buyer giving it a large share of their business, thus assuring itself economies of scale and denying them to rivals, is that just

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[23] *See Illinois v. Panhandle Eastern Pipe Line,* 935 F.2d 1469, 1483 (7th Cir. 1991); *Abcor Corp. v. AM Int'l,* 916 F.2d 924 (4th Cir. 1990); *Oahu Gas v. Pacific Resources*, 838 F.2d 360, 368-70 (9th Cir. 1988); *MCI*, 708 F.2d at 1132, 1137-38; *Laurel Sand*, 924 F.2d at 545; *Willman,* 34 F.3d at 613; *Southern Pacific v. AT&T,* 740 F.2d 980, 1009 (D.C. Cir. 1984).

[24] *Aspen*, 472 U.S. at 594-95 (rival was not driven out of the market though its market share declined to 11%).

[25] *See* X AREEDA, ELHAUGE, & HOVENKAMP, ANTITRUST LAW ¶1757, at 335-41 (1996) (collecting cases that sometimes condemn such conduct as monopolization and sometimes don't).

[26] *See* Microsoft v. U.S., 253 F.3d 34 (D.C. Cir. 2001) (en banc) (condemning such conduct), cert. denied, 122 S. Ct. 350 (2001); X AREEDA, ELHAUGE, & HOVENKAMP, ANTITRUST LAW ¶1746, at 224-29 (1996) (collecting cases that sometimes condemn such conduct as monopolization and sometimes don't).

[27] *Compare* Aaron S. Edlin, *Stopping Above-Cost Predatory Pricing*, 111 Yale L.J. 941 (2002) (concluding such conduct constitutes monopolization), *with* Einer Elhauge, *Why Above-Cost Price Cuts Are Not Predatory*, *supra* note __ (concluding it doesn't).

good business acumen or a bad willful acquisition and maintenance of monopoly power?[28]

Without an underlying normative theory, the Court's test offers no way for resolving such questions about what a "superior product" and "business acumen" might be. Even if we could get past the above problems, the *Grinnell* test would offer no help for addressing conduct that does not neatly fall into the categories of business acumen or a superior product, but nonetheless does seem a desirable way of willfully acquiring or maintaining monopoly power.

Courts and commentators have offered other formulations to get around these problems with the *Grinnell* test. One stresses that the condemned conduct must be "anticompetitive or exclusionary," which the *Aspen* Court defined (borrowing the famous formulation of Professors Areeda and Turner) as conduct that "(1) tends to impair the opportunities of rivals, but also (2) either does not further competition on the merits or does so in an unnecessarily restrictive way."[29] Likewise, in their parallel doctrine, E.C. courts have defined an abuse of a dominant position as conduct by a dominant firm that (1) hinders its competition and (2) does not reflect "normal competition."[30] Unfortunately, neither the term "exclusionary" nor factor (1) provide serious help with the above questions because vigorous competition often does exclude or impair the opportunities of rivals, such as when the firm builds a better mousetrap and excludes rivals from the patents they need to make a competitive mousetrap and thus drives them out of the market.[31] The term "anticompetitive" might look more promising, but isn't. By "anticompetitive" conduct, the Court cannot mean whatever conduct reduces market rivalry, for that would preclude the very possibility the Court is trying to distinguish – the possibility that desirable conduct can achieve or maintain a monopoly that extinguishes competition. Further, the Court has held that sometimes a monopolist is affirmatively *obliged* to diminish market rivalry by cooperating with rivals by giving them access to its product, squarely rejecting the notion that vigorously competing with rivals by refusing to share its product could never be characterized as "anticompetitive or exclusionary."[32]

Accordingly, which way this test comes out boils down to the mystery of which forms of competition will be judged "on the merits" (or "normal competition") and which won't be, and the even greater mystery of when conduct that *is* competition on the merits can nonetheless be judged unnecessarily restrictive of competition. The utter vacuity of this sort of standard is neatly illustrated by the fact that the same conduct – using above-cost price cuts to drive out rivals – has been labeled "competition on the merits" in the United States,[33] and not "normal competition" in

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[28] *Compare* LePage's v. 3M, 324 F.3d 141 (3rd Cir. 2003) (en banc) (condemning such conduct as monopolization), *with Concord Boat Corp. v. Brunswick Corp.,* 207 F.3d 1039, 1061-62 (8th Cir.) (not condemning it), *cert. denied,* 531 U.S. 979 (2000).

[29] *Aspen*, 472 U.S. at 595-96, 605 n.32 (1985) (quoting 3 AREEDA & D. TURNER, ANTITRUST LAW 78 (1978)).

[30] Hoffmann-LaRoche, [1979] 3 C.M.L.R. 211, ¶ 91.

[31] In fact, when earlier cases did articulate the test as whether monopoly power was created by conscious conduct that "excluded competition," they concluded a firm could thus be guilty of monopolization *even if* its conduct was "honestly industrial" and not "actuated solely by a desire to prevent competition." American Tobacco Co. v. United States, 328 U.S. 781, 813-14 (1946) (quoting and "welcom[ing] this opportunity to endorse" these statements from United States v. Alcoa, 148 F.2d 416 (2d Cir. 1945)). *See also* United States v. Griffith, 334 U.S. 100, 105-07 (1948) (favorably citing these passages from both *American Tobacco* and *Alcoa* and holding that therefore monopolization proven simply by the "existence of power 'to exclude competition when it is desired to do so' . . . coupled with the purpose or intent to exercise that power").

[32] *Aspen*, 472 U.S. at 600-04.

[33] Brooke Group v. Brown & Williamson, 509 U.S. 209, 223 (1993).

Europe.[34] Something is driving these conclusions, but it is not the determinate meaning of terms like "exclusionary," "competition", "merits" or "normal."

Another formulation, originating in *Griffith* but reaffirmed by the *Kodak* Court, defines monopolizing conduct as "the use of monopoly power 'to foreclose competition, to gain a competitive advantage, or to destroy a competitor.'"[35] But this does not eliminate the problems with the prior formulations; indeed it exacerbates them. It does not eliminate the problems because perfectly desirable competitive behavior can "foreclose competition" and "destroy a competitor," such as when a firm figures out how to make a better or cheaper product and thus takes away market sales from rivals and drives them out of the market. It exacerbates these problems because it suggests that the mere "use" of monopoly power to foreclose or exclude rivals or even just gain a "competitive advantage" can be illegal. That test would not only fail to distinguish desirable "uses" like reaping superior efficiencies, but would condemn them far more often since such uses almost always meet the weak standard of conferring a mere "competitive advantage." Further, that test would eliminate any requirement to prove a causal connection between the alleged misconduct and the existence of the monopoly power in question.

A final set of formulations stresses that a firm does not engage in monopolization if its conduct is motivated by "valid business reasons," a "normal business purpose," or "legitimate competitive reasons."[36] But each of these formulations turns on what content one gives to the key placeholder term – "valid," "normal," or "legitimate."[37] Without any specification of the criteria used to distinguish the invalid, abnormal, or illegitimate, these criteria leave the standard completely vacuous because those terms can be filled in with opposing normative conceptions. The same goes for attempted monopolization cases, which have defined the prohibited conduct as "conduct which *unfairly* tends to destroy competition," but neglected to define just what fairness means.[38] None of these conclusory labels aids the substantive inquiry. We are left uncertain about not only how many hairs you needed not to be bald, but even whether the existence of particular kind of follicle cut for or against a conclusion of baldness. This is particularly alarming because the Court has now twice indicated that it is only the existence of such valid or legitimate reason that determines whether a monopolist even has the right to compete rather than cooperate with its rivals by refusing to give rivals access to their product.[39]

All this would be bad enough if it merely meant future decisions would be determined by whatever underlying norms will be applied by Supreme Court justices, a slowly changing group about whose normative preferences one can make an educated guess. But what makes this all worse is that in the vast bulk of cases such decisionmaking under these vacuous standards will instead be

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[34] Joined Cases T-24/93, T-25/93, T-26/93 & T-28/93, Compagnie Maritime Belge Transps.SA v. Commission, 1996 E.C.R. II-1201 ¶¶ 130, 144-45, 148, 153 (Ct. First Instance).

[35] *Kodak*, 504 U.S. at 482-83 (quoting United States v. Griffith, 334 U.S. 100, 107 (1948)); *See also Aspen*, 472 U.S. at 595-96 (quoting jury instructions that made illegal the anticompetitive or exclusionary "use" of monopoly power).

[36] *Kodak*, 504 U.S. at 483 & n.32; *Aspen*, 472 U.S. at 605, 608.

[37] The same is true for other formulations that try to distinguish between "improper conduct" and "honestly industrial" conduct. *Aspen*, 472 U.S. at 596 (quoting jury instructions).

[38] Spectrum Sports v. McQuillan, 506 U.S. 445, 458 (1993) (emphasis added). *See also id.* at 459 (defining prohibited conduct as "'unfair' or 'predatory' tactics).

[39] *Kodak*, 504 U.S. at 483 & n.32; *Aspen*, 472 U.S. at 605, 608.

made by randomly selected lower court judges and jurors operating without any coherent guidance. Whether judges conclude the evidence satisfies standards for summary judgment or directed verdict will turn on whatever implicit norms they use (consciously or not) to fill in the placeholder terms in particular cases. And if the judges don't decide the issue, the same problem will infect jury verdicts, for the typical set of jury instructions states the above sorts of standards and then leaves it up to the jury to divine the metaphysical difference between acquiring or maintaining monopoly power through (1) willful, anticompetitive or exclusionary means or purposes, and (2) business acumen, superior products, competition on the merits, or valid and legitimate business reasons.[40] Without more guidance, different jurors are likely to be guided with completely different normative understandings about what all these terms mean. Indeed, the *Aspen* Court itself acknowledged that "contrary inferences might reasonably be drawn" about whether the conduct in that case could "fairly be characterized as exclusionary,"[41] thus suggesting it would have affirmed a jury verdict in either direction.

The notion that juries applying vacuous standards are likely to be upheld no matter what they decide provides cold comfort to firms trying to plan their conduct. It means firms must operate under the risk that the actual criteria by which their conduct will be judged will depend largely on the happenstance of which judge and jurors are selected in a trial a great number of years later that will retroactively decide whether to assess multimillion or even multibillion dollar treble damages. Further, firms run the risk that different juries will reach inconsistent conclusions about the legality of their conduct based on different implicit normative criteria. These sort of risks cannot help but chill investments to create product offerings with a sufficient quality or cost advantage over pre-existing market options to enjoy monopoly power.

The great indeterminancy of its exclusionary conduct standard has not escaped the Court. To the contrary, the Court has twice acknowledged that under its test: "It is sometimes difficult to distinguish robust competition from conduct with long-term anticompetitive effects," and has thus consciously focused on using the market power requirements of §2 to prevent its vacuous exclusionary conduct standard from chilling desirable market conduct throughout our economy.[42] But this strategy has two problems. First, as noted above, the monopoly power requirement is not exactly clear. Second, even if that element were clear, this inability to distinguish desirable from undesirable conduct will chill desirable conduct by monopolists or – worse -- firms aspiring to become monopolists through innovation or investments, which are probably the greatest engine for economic progress.

But it would be unfair to blame this problem on the courts, for the fact is that so far antitrust scholars have yet not provided them with much help. To the contrary, scholars have so far also been unable to devise administrable standards for sorting out desirable from undesirable conduct that tends to exclude rivals.[43] Moreover, while the standards articulated by the U.S. Supreme Court have

[40] *Aspen*, 472 U.S. at 595-97 (1985) (recounting a typical set of court-approved jury instructions).

[41] *Id.* at 604.

[42] *Spectrum Sports*, 506 U.S. at 458-49; Copperweld Corp. v. Independence Tube Corp., 467 U.S. 752, 767-68 (1984).

[43] This was acknowledged in a recent amicus brief by prominent antitrust economists William Baumol, Janus Ordover, Warren-Boulton, and Robert Willig, who state that courts and legal and economic scholars had not yet been able to solve the "vexing problem" of developing "workable standards" for determining when conduct was exclusionary so that there is not yet any "universal

been conclusory, I will show below that the actual results of its cases do fit a consistent economic logic.[44] It is high time to see if we can articulate a sound economic theory that makes sense of this caselaw and can be fashioned into an administrable standard that provides more meaningful guidance to lower courts and juries.

II. THE PROBLEMS WITH FOCUSING ON WHETHER THE CONDUCT SACRIFICED PROFITS

Oddly, the one exception to the current vacuity of monopolization standards may be the most maligned area of monopolization law – predatory pricing doctrine. You may love it or you may hate it, but at least you now have some idea what the doctrine means. Indeed, that may be what makes this doctrine the most vulnerable to criticism: it provides some defined target to take shots at.[45] If you price below your incremental costs and have enough market power to make it reasonably likely you can recoup your losses by raising prices after you have disciplined or driven out your rival, then you have engaged in predatory pricing.[46] If you price above cost, you are home free. We may have a lot of uncertainty around the edges, including what precise measure of costs to use.[47] But we can spot the bald man and the above-cost pricer without difficulty in most cases, and can at least tell in which direction it cuts to have evidence of an increase or decrease in either costs or the ability to recoup profits in the long run.

It did not always used to be that way. Once upon a time, predatory pricing doctrine was governed by a standard as vacuous as any. Whether a price was predatory turned mainly on whether it was "intended" to harm rivals.[48] The problem is that all desirable procompetitive behavior and innovation is intended to harm rivals – driving those rivals out of the market by making a cheaper or better product is how firms earn the monopoly profits that reward their investments and

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economic litmus test" for judging this question. *See* Brief of *Amici Curiae* Economics Professors in Support of Respondent 3-4, Verizon Communications v. Law Offices of Curtis V. Trinko, (U.S. Supreme Court) (No. 02-682) (July 25, 2003).

[44] Some have wondered how I can claim that current doctrine is incoherent while I also claim to offer a coherent standard that is consistent with current doctrine. But there is no inconsistency for my only claim is that the *standards* articulated by the Court lack content, not that the Court's judgment about how to dispose of individual cases is unsound. As in many areas, the actual results reached by courts can often be explained by theories they themselves did not articulate, perhaps because they rested on intuitive judgments courts could not fully explain, or because underlying theoretical concerns cause parties not to present certain arguments. In such cases, courts often have more confidence in the result than in the general theory that justifies it, and sensibly resolve cases with a conclusory standard that provides a placeholder for a theory to be provided later. But at some point that theory must be provided, or else lower courts and juries will simply be left with an open-ended delegation to make up standards as they go.

[45] The shots have been taken from both sides. For the argument that below-cost pricing should never be considered monopolization, see Easterbrook, *Predatory Strategies and Counterstrategies,* 48 U. Chic. L. Rev. 263, 269-304, 333-37 (1981); Ordover, *Predatory Pricing* in 3 THE NEW PALGRAVE DICTIONARY OF LAW & ECONOMICS 77, 79 (ed. Newman 1998) (collecting critiques). For the argument that above-cost pricing should sometimes be considered predatory, see Edlin, *supra*, note, at 945-46; Baumol, *Quasi-Permanence of Price Reductions*, 89 YALE L.J. 1, 2-3 (1979); Williamson, *Predatory Pricing,* 87 YALE L.J. 284, 290-92 (1977).

[46] Brooke Group v. Brown & Williamson, 509 U.S. 209, 222-25 (1993).

[47] For an article reviewing the issue, and arguing that the measure should be the actual cost variation caused by whatever output increase is allegedly predatory, see Elhauge, *Why Above-Cost Price Cuts Are Not Predatory*, *supra* note , at 703-26.

[48] *See, e.g.,* Moore v. Mead's Fine Bread Co., 348 U.S. 115, 118 (1954); Forster Mfg. Co. v. FTC, 335 F.2d 47, 52 (1st Cir. 1964), cert. denied, 380 U.S. 906 (1965); Maryland Baking Co. v. FTC, 243 F.2d 716, 718 (4th Cir. 1957); E. B. Muller & Co. v. FTC, 142 F.2d 511, 517 (6th Cir. 1944).

innovations in lowering costs and raising quality. Thus, this standard helped not a whit in sorting out bad pricing from good. This sort of vacuity has remained omnipresent for the rest of monopolization doctrine, but was stamped out of predatory pricing doctrine by the concrete test requiring below-cost pricing and likely recoupment.

This relative success with predatory pricing doctrine has led courts and commentators to try to generalize it into a global standard for determining what conduct meets the second element of the monopolization test. These courts and scholars use the term "predatory" conduct to describe the second element,[49] and then define it to be conduct that involves a sacrifice of short-run profits that would not be profitable unless it reaped long run monopoly returns by excluding or disciplining rivals.[50] The one who did the most to popularize this as a monopolization test was Robert Bork, who did so first as a scholar in his acclaimed book *The Antitrust Paradox*, and then as a judge elevated this test into law, stating:

> [P]redation involves aggression against business rivals through the use of business practices that would not be considered profit maximizing except for the expectation that (1) actual rivals will be driven from the market, or the entry of potential rivals blocked or delayed, so that the predator will gain or retain a market share sufficient to command monopoly profits, or (2) rivals will be chastened sufficiently to abandon competitive behavior the predator finds threatening to its realization of monopoly profits.[51]

Other courts have focused even more explicitly on short-term profit-sacrifice as a test for proving the improper conduct element of monopolization,[52] and the Supreme Court in *Aspen* summarized

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[49] *Aspen*, 472 U.S. at 602 (noting that these scholars seem to favor the term "predatory" to the term "exclusionary.")

[50] This general sort of standard was used in the original Areeda-Turner article that first set forth a concrete cost-based test for predation. See Areeda & Turner, *Predatory Practices under Section 2 of the Sherman Act*, 88 HARV. L. REV. 697, 698 (1975).

[51] Neumann v. Reinforced Earth Co., 786 F.2d 424, 427 (D.C. Cir. 1986) (Bork, J.); ROBERT BORK, THE ANTITRUST PARADOX 144 (1978) (stating a nearly identical test). Although commonly read to require proof of a short-term sacrifice in profits, one could instead read this language to require only that the conduct would sacrifice profits (in the short or long run) unless it harmed to rival competition. Other cases commonly cited for the profit-sacrificing test are even more clearly limited to this proposition. *See Stearns Airport Equip. Co. v. FMC Corp.*, 170 F.3d 518, 523-524 (5th Cir. 1999); *General Indus. Corp. v. Hartz Mountain Corp.*, 810 F.2d 795, 803 (8th Cir. 1987). These cases thus could all be interpreted as consistent with the showing below in Section II.C that some undesirable exclusionary conduct can increase monopoly profits even in the short run by hampering rival competition, and thus should be condemned even if it involves no overall sacrifice in short-term profits. However, this interpretation of the standard in these cases would remain inconsistent with the showing below in Sections II.A and II.B that desirable conduct (like above-cost price cuts and innovation) often would not be profit-maximizing unless it enabled the firm to drive out rivals, and thus should not be condemned even if it does involve such a profit-sacrifice. Such an interpretation of the profit-sacrifice standard would also undermine any administrability benefit it might otherwise seem to offer, for reasons explained in Section II.D.

[52] *See* Advanced Health-Care Serv. v. Radford Com. Hosp., 910 F.2d 139, 148 (4th Cir.1990) ("For example, if a plaintiff shows that a defendant has harmed consumers and competition by making a short-term sacrifice in order to further its exclusive, anti-competitive objectives, it has shown predation by that defendant."); LePage's v. 3M, 324 F.3d 141, 164 (3rd Cir. 2003) (en banc) ("exclusionary practice has been defined as 'a method by which a firm ... trades a part of its monopoly profits, at least temporarily, for a larger market share, by making it unprofitable for other sellers to compete with it.' Once a monopolist achieves its goal by excluding potential competitors, it can then increase the price of its product to the point at which it will maximize its profit.") (quoting RICHARD A. POSNER, ANTITRUST LAW: AN ECONOMIC PERSPECTIVE 28 (1976)). One should not, however, oversell these statements. The statement in *Advanced Health-Care* indicates the court believed such a profit-sacrifice was sufficient to show predation, but not that it was necessary, and even that sufficiency seems limited by a requirement to also show harm to consumers, and its statement that the ultimate benchmark is whether "the exclusion was based on superior efficiency." 910 F.2d at 147. Likewise, *LePage's* also stated that "a defendant's assertion that it acted in furtherance of its economic interests does not constitute the type of business

its conclusion in a way that seemed to look favorably on such a test as at least one possible way of proving monopolization.[53] Likewise, numerous scholars have approved such a general test of what constitutes predation.[54]

Joining this bandwagon, the Department of Justice and Federal Trade Commission are currently pushing this profit-sacrificing conduct test in their legal briefs in monopolization cases. The Department of Justice did so in their two most prominent recent monopolization cases: the Microsoft litigation[55] and the American Airlines predatory pricing case.[56] And both agencies have also done so in an amicus brief in the first monopolization case to be granted certiorari by U.S. Supreme Court in 11 years.[57] A recent government speech indicates that these are not just three isolated positions, but reflect a common and considered agency position.[58]

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justification that is an acceptable defense to § 2 monopolization." 324 F.3d at 163. This indicated that the *LePage*'s court thought the fact that conduct increased rather than sacrificed profits would not be any defense, which suggests this court may have also believed such a profit sacrifice was sufficient but not necessary to show monopolization. Further, it too suggested that efficiency and the effect on consumer welfare was the ultimate barometer. *Id.*

[53] Although it did not explicitly adopt such a test as the governing standard, the *Aspen* Court did summarize its analysis by stating: "the evidence supports an inference that Ski Co. was not motivated by efficiency concerns and that it was willing to sacrifice short-run benefits and consumer goodwill in exchange for a perceived long-run impact on its smaller rival." *Aspen*, 472 U.S. at 610-11; *see also id.* at 608 ("The jury may well have concluded that Ski Co. elected to forgo these short-run benefits because it was more interested in reducing competition in the Aspen market over the long run by harming its smaller competitor.") This language indicates the *Aspen* Court saw this as at least one viable means of proving monopolization, but the Court did not state it is necessary to prove a sacrifice in short term profits to prove monopolization. Further, as we'll see, the Supreme Court's addition of the factor that the defendant lacked any efficiency motive is potentially an important limitation that may mean such a sacrifice in short-term profits is not sufficient to show monopolization either. *See infra* Part III. Nor did *Aspen* actually involve a short-term sacrifice of overall profits. *See infra* Section II.B.1.

[54] *See* RICHARD A. POSNER, ANTITRUST LAW: AN ECONOMIC PERSPECTIVE 28 (1976) (quoted supra note __); LAWRENCE ANTHONY SULLIVAN, HANDBOOK OF THE LAW OF ANTITRUST 113 (1977) (the characteristic feature that distinguishes honestly industrial competitive behavior from predation is that in the latter "the predator is acting in a way which will not maximize present or foreseeable future profits unless it drives or keeps others out or forces them to tread softly. . . . Such conduct makes sense if, but only if, it is seen as a means of driving out or controlling competitors"); Janusz A. Ordover & Robert D. Willig, *An Economic Definition of Predation: Pricing and Product Innovation*, 91 YALE L.J. 8, 9-10 (1981) ("predatory behavior is a response to a rival that sacrifices part of the profit that could be earned under competitive circumstances, were the rival to remain viable, in order to induce exit and gain consequent additional monopoly profit."). For similar formulations limited to predatory pricing, see Patrick Bolton et al., *Predatory Pricing: Strategic Theory and Legal Policy,* 88 GEO. L.J. 2239, 2242-43 (2000); Paul L. Joskow & Alvin K. Klevorick, *A Framework for Analyzing Predatory Pricing Policy*, 89 YALE L.J. 213, 219-20 (1979).

[55] *See* Brief for Appellees at 48, *United States v. Microsoft Corp*., Nos. 00-5212, 00-5213 (D.C. Cir. Feb. 9, 2001), available at http://www.usdoj.gov/atr/cases/f7400/7425.pdf. This position does not appear to have been adopted by the en banc D.C. Circuit court. *See infra* Part III. To the extent it is relevant, I filed a Tunney Act statement opposing the DOJ-Microsoft settlement in this case.

[56] *See* Brief for Appellant United States at 25, 29-31, AMR Corp. (10th Cir. Jan. 11, 2002) (No. 01-3202), available at http://www.usdoj.gov/atr/cases/f9800/9814.pdf. This government position was previously criticized in Elhauge, *Why Above-Cost Price Cuts Are Not Predatory*, *supra* note , at 693, and ultimately rejected by the Tenth Circuit in United States v. AMR Corporation, --- F.3d --- , 2003 WL 21513205, at *7 & n.13 (10th Cir. 2003).

[57] *See* Brief for the United States and the Federal Trade Commission as Amici Curiae Supporting Petitioner at 8, 16, Verizon Communications v. Law Offices of Curtis V. Trinko, (U.S. Supreme Court) (No. 02-682), available at http://www.usdoj.gov/atr/cases/f201000/201048.pdf. To the extent it is relevant, I have consulted for Verizon on this case, and am a consultant to the FTC on other matters. The views expressed in this Article are my own, and are not intended to reflect the views of either Verizon or the FTC.

[58] *See* Deborah Platt Majoras, Principal Deputy Assistant Attorney General, Antitrust Division, U.S. Department of Justice, "Ensuring Sound Antitrust Analysis: Two Examples," at 13-18 (Speech of July 3, 2003), available at http://www.usdoj.gov/atr/public/speeches/201167.pdf. As with some court statements, some of these statements by antitrust officials

This profit-sacrificing test has a superficial attraction that has evidently proven irresistible. But when one peers under the hood, one finds three devastating defects. To summarize them before demonstrating them: First, this test is not really a generalization from predatory pricing doctrine because the test does not actually fit even that doctrine as it stands. Second, sacrificing profits in the short run to drive out rivals and reap long run monopoly profits is normally socially desirable, and thus should be rewarded rather than penalized with treble antitrust damages. Third, it is not generally necessary to sacrifice short run profits in order to engage in undesirable exclusionary conduct. The fit between the test and desired results is thus decidedly poor. Let me explicate.

A. Lack of Fit With the Doctrine Being Generalized

It turns out that the proposed predation test fails to even explain the predatory pricing doctrine it endeavors to generalize. The key reason is that its short-run benchmark is failing to maximize profits, which does not correspond to the below-cost pricing required by U.S. predatory pricing doctrine.

Any monopolist maximizes its short-run profits by setting a monopoly price well above its costs – indeed that is what makes monopolies allocatively inefficient.[59] It follows then that a monopolist who sets its prices anywhere between its monopoly price and its costs must be sacrificing short-run profits, even though it is not pricing below cost. A monopolist who engages in such pricing thus cannot be in violation of U.S. predatory pricing doctrine under *Brooke*.[60] But such a monopolist would be in violation of the proposed predation standard because it would be sacrificing short-run profits, and the only rational reason to do so would be to either keep out or drive out rivals and thus earn greater profits in the long run.

Indeed, courts, regulators, and commentators who have used this predation standard have logically been driven to these conclusions. Some have concluded that under this standard any monopolist who limit prices – that is, sets a price that is above-cost but below its short-term profit-maximizing price in order to keep out rivals who are not efficient enough to enter at that price – is engaged in illegal predatory pricing.[61] Others have concluded the same for a monopolist that reacts to entry by cutting its prices to an above-cost level that fails to maximize short-run profits but drives out the less-efficient entrant and thus allows the restoration of monopoly profits.[62]

Nonetheless, under *Brooke,* setting above-cost prices is perfectly legal even if designed to keep or drive out entrants. Thus, this proposed test cannot be justified as a generalization of actual predatory pricing doctrine. It would rather radically expand it.

Nor would such an expansion of predatory pricing be desirable, for it would amount to affirmative legal *duty* to engage charge the profit-maximizing monopoly price whenever possible.

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can be read to focus less on whether profits were actually sacrificed in the short run than on whether they would have been sacrificed but for the harm to rival competition.

[59] *See* CARLTON & PERLOFF, *supra* note , at 88-98; PINDYCK & RUBINFELD, MICROECONOMICS 334-52 (1989).

[60] Brooke Group v. Brown & Williamson, 509 U.S. 209, 222-25 (1993).

[61] *See, e.g.,* Transamerica Computer v. IBM, 698 F.2d 1377, 1387 (9th Cir. 1983).

[62] *See* Elhauge, *Why Above-Cost Price Cuts Are Not Predatory*, *supra* note , at 684, 691-95, 701, 754-55 (collecting sources making this argument). One of the many oddities of the latter position is that it aims to force monopolists to engage in everyday limit pricing that would also violate the proposed predation standard. *See id.* at 792-95.

That is, it would forcibly require the main evil antitrust hopes to minimize – monopoly pricing far above marginal costs.[63] Such pricing is harmful not only to consumer welfare, but to allocative efficiency, because by definition such pricing leaves unserved marginal consumers who would have been willing to pay a lower price that would still exceed the costs of serving them. Further, it turns out one cannot justify the imposition of this short-term harm to consumers and efficiency with the hope that it will, by encouraging entry, lead to greater efficiency and consumer benefits in the long run, for reasons I have detailed elsewhere.[64]

B. Sacrificing Short-run Profits to Drive Out Rivals and Reap Long Run Monopoly Profits Is Normally Good

Well, one might wonder, how do we know these problems with the proposed predation test are not unique to predatory pricing doctrine? Maybe the test works just fine for defining other sorts of exclusionary conduct. Afraid not. To the contrary, the problem is that what this test identifies as the signature of evil – sacrificing short-run profits in order to drive out rivals and reap long-run monopoly profits – is normally the stamp of virtue.

This is easiest to see when the issue is whether to invest in the creation of intellectual property. Suppose a firm is deciding whether in year 1 to invest $1 billion in research that has a 50% chance of successfully producing by year 3 a patented product that is so much more valuable than existing market options that it will drive firms providing those existing options out of the market and yield the firm $4 billion in supracompetitive profits. Once the successful innovation has occurred, the patented product will have monopoly power precisely because it is so much more valuable than alternative market options, so the first element of the monopolization test will be satisfied. Further, the proposed standard for the second element would also be met because the firm did create that monopoly power by sacrificing short-run profits in year 1 in order to create a better product that could drive out rivals and reap it long-run monopoly profits starting in year 3. Likewise, its decision to invest in innovation makes no sense but for the prospect of those monopoly returns.

The point is easily generalized. Investments in innovation that create monopoly power would *typically* be unprofitable but for the prospect of the monopoly returns reaped by excluding rivals. Normal competitive returns are available by just investing in bonds or the stock market. It is only the prospect of supracompetitive returns that could induce a firm to make risky investments in research that might not pan out. Further, even sure-thing investments in innovation involve sunk costs that would never be incurred but for the prospect that they could be recouped in the long-run by supracompetitive above-cost pricing.

Thus, read literally, the proposed predation test would prohibit investments in innovation, subjecting them to treble damages. Some scholars have indeed been willing to walk the logical plank that this test leads them to fall off, concluding that antitrust law should thus condemn as "predatory" any product innovations whose profitability depends on their ability to drive rivals out

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[63] It would also create a regulatory conflict for any monopolist operating on a global market, for charging a profit-maximizing monopoly price would likely constitute illegal excessive pricing and an abuse of a dominant position under E.C. law. *See* Article 82 of the E.C. Treaty (ex Article 86); United Brands, [1978] 1 C.M.L.R. 429, at ¶ 252.

[64] *See* Elhauge, *Why Above-Cost Price Cuts Are Not Predatory*, *supra* note , at 686-89, 754-827.

of the market.[65] But this has the proper policy priority exactly backwards. Such innovations make consumers and society better off by giving them new market options that are better (because cheaper or high quality) than the market options they would have had without the innovation. This is the *most* desirable form of market activity we can have. To condemn it is to elevate into a fetish the *ex post* avoidance of static allocative inefficiency given certain cost and demand curves, and ignore the disastrous *ex ante* effects such a standard would have on dynamic productive efficiency that either raises demand curves by making the product more desirable or lowers cost curves by making the product cheaper to make. Repeated economic studies indicate the latter is far more valuable.[66]

One might protest that producing a superior product is covered by the exception to *Grinnell* and in any event does not really "exclude" the rival from anything. So perhaps, if we combine those notions with the proposed predation test, we are fine after all. Not really. For all it takes is a request by the rival for access to the intellectual property to satisfy any such requirements.

Suppose, in the above example, it has become obvious in year 2 that the research has been successful although it will take until year 3 to set up production and begin yielding profits. A rival then offers $1 million for access to the intellectual property rights so it can compete in year 3. The innovative firm declines to sell access. The rival sues. It can clearly show that in year 2 the firm excluded the rival from access to its property and in doing so sacrificed short-run profits by forgoing a $1 million payment. Further, that decision made no rational economic sense but for the prospect that in year 3 the firm would take advantage of having excluded its rival from access to the intellectual property it needed to compete, driving the rival out of the market and reaping monopoly profits. Thus, under the proposed standard, this refusal to deal would be illegal predation.

Again, this result would be disastrous. If firms could not exclude rivals from the fruits of their innovations when they are successful, then no firm would have any incentive to invest in innovation. Instead, every firm would have an incentive to lazily avoid making investments in innovation since it would know it could free ride off its rivals if any of them successfully innovated.

Well, one might wonder, can't we can avoid this issue by just concluding that federal patent or copyright law trump antitrust law, and thus apply the proposed predation standard outside their realm? No, and for three reasons. First, the application of monopolization standards to patents and copyrights cannot be so easily avoided. In fact, courts often do apply the antitrust duty to deal to patent or copyrights, although the lack of coherent guidance has not surprisingly left the lower courts

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[65] *See* Ordover & Willig, supra note , at 22-30.

[66] *See* III AREEDA & HOVENKAMP, ANTITRUST LAW, ¶720a, at 255 & n.3 (2d ed. 2002) (collecting sources); AREEDA & KAPLOW, supra note, at 31; JOSEPH A. SCHUMPETER, CAPITALISM, SOCIALISM, AND DEMOCRACY 84-92, 99-106 (3d ed. 1950); Moses Abramovitz, *Resource and Output Trends in the United States Since 1870*, 46 AM. ECON. REV. 5 (1956); Robert M. Solow, *A Contribution to the Theory of Economic Growth*, 70 Q.J. ECON. 65 (1956); Robert M. Solow, *Technical Change and the Aggregate Production Function*, 39 REV. ECON. & STAT. 312 (1957). *See also* MICHAEL E. PORTER, THE CURRENT COMPETITIVENESS INDEX: MEASURING THE MICROECONOMIC FOUNDATIONS OF PROSPERITY, IN THE GLOBAL COMPETITIVENESS REPORT 40, 45 (2000) (showing that nations with better market performance generally compete by innovation and differentiation rather than by price and imitation); Mariko Sakakibara & Michael E. Porter, *Competing at Home To Win Abroad: Evidence from Japanese Industry*, 83 REV. ECON. & STAT. 310, 312 (2001)(showing that the degree to which market shares fluctuate influences market performance far more than the size of market shares); R.E. Caves & M.E. Porter, *Market Structure, Oligopoly, and Stability of Market Shares*, 26 J. INDUS. ECON. 289 (1978) (same); Oliver E. Williamson, *Economies as an Antitrust Defense: The Welfare Tradeoffs*, 58 AM. ECON. REV. 18, 22-23 (1968) (proving that, even in static models, the productive efficiency gains from a small cost reduction usually offset the allocative efficiency loss from increasing prices over costs).

split on precisely when any antitrust duty applies.[67] Nor would any conclusion that patent and copyright statutes simply trump antitrust duties to deal be sensible on the merits. After all, the rights to exclude conferred by those statutes are no different than the rights to exclude conferred by any property right, so that if antitrust law duties to deal are viewed as compatible with the latter, they are equally compatible with the former.[68] Patent and copyright thus cannot be hermetically sealed away from antitrust duties applicable to other forms of property. Indeed, the federal antitrust agencies have issued guidelines stressing, "The Agencies apply the same general antitrust principles to conduct involving intellectual property that they apply to conduct involving any other form of tangible or intangible property."[69] Further, the courts have a very strong presumption against implied repeals of antitrust law, holding that repeal can be "implied only if *necessary* to make the [non-antitrust statute] work, and even then only to the *minimum* extent necessary."[70]

Second, many intellectual property rights are creations of state law, and cannot be said to implicitly repeal otherwise applicable federal antitrust law. This includes the crucial rights protecting trade secrets, which may be far more important than patent rights. Indeed, empirical studies indicate that, in the bulk of industries, most innovation would have been undertaken without patent protection, with the percentages ranging from 62-89% for the chemical, petroleum, machinery and fabricated metal industries, to 99-100% for the office equipment, motor vehicles, instruments, primary metals, rubber and textile industries.[71] Since 66-84% of patentable inventions were in fact patented in all these industries, the main reason for the general lack of reliance on patents would

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[67] *See* Image Technical Services, Inc. v. Eastman Kodak Co., 125 F.3d 1195, 1115-20, 1129 (9th Cir. 1997) (holding, on remand from Supreme Court's *Kodak* decision, that owners of patents and copyrights must provide access to them if the plaintiff can rebut the presumption that they have a valid business justification for denying access); Data General Corp. v. Grumman Systems Support Corp., 36 F.3d 1147, 1184-87 & n.64 (1st Cir. 1994) (same for copyrights, but suggesting in dicta maybe not for patents); In re Independent Service Organizations Antitrust Litigation CSU, LLC v. Xerox Corp., 203 F.3d 1322, 1325-20 (Fed. Cir. 2000) (concluding that "[i]ntellectual property rights do not confer a privilege to violate the antitrust laws," but also holding that no antitrust liability for a refusal to give access to lawful patent or copyright unless the anticompetitive effect exceeds their statutory scope); *Intergraph*, 195 F.3d at 1356-57 (Fed. Cir. 1999) (applying essential facility doctrine to Intel's intellectual property and patented chips); David L. Adridge Company v. Microsoft Corporation, 995 F. Supp. 728 (S.D. Tex. 1998) (applying essential facility doctrine to assess claimed antitrust duty to provide access of Microsoft's Windows 95); *see also Microsoft,* 253 F.3d at 63 (calling "frivolous" Microsoft's argument that "'[I]f intellectual property rights have been lawfully acquired, . . . their subsequent exercise cannot give rise to antitrust liability.'"; holding that Microsoft could not condition access to its copyrights on restrictions on their use that hampered rivals from competing with the monopoly power earned by the copyright).

EU cases have been even freer with applying antitrust duties to deal to patents and copyrights. *See* Joined cases 241/91 and 242/91, Radio Telefis Eireann (RTE) and Independent Television Publications Ltd (ITP) v Commission of the European Communities, 1 E.C.R. 743, at ¶¶ 48-50 (1995); Case 238/87, AB Volvo v Erik Veng (UK) Ltd, 1 E.C.R. 6211; Case COMP D3/38.044, NDC Health v. IMS Health, O.J. No. L-59/18 (2002).

[68] *See* Continental Paper Bag Co. v. Eastern Paper Bag Co., 210 U.S. 405, 429 (1908)("patents are property, and entitled to the *same* rights and sanctions as other property." . . . As to the suggestion that competitors were excluded from the use of the new patent, we answer that such exclusion may be said to have been of the very essence of the right conferred by the patent, as it is the privilege of *any* owner of property to use or not use it, without question of motive.") (emphases added)

[69] *See* DOJ-FTC, Antitrust Guidelines for the Licensing of Intellectual Property §2.1 (April 6, 1995), available at http://www.usdoj.gov/atr/public/guidelines/ipguide.htm.

[70] *Silver v. NYSE*, 373 U.S. 341, 357 (1963) (emphasis added).

[71] *See* Edwin Mansfield, *Patents and Innovation: an Empirical Study,* 32-2 MANAGEMENT SCIENCE 173 (1986). The only exception discovered in Mansfield's study was that 60% of pharmaceutical innovations would not have been undertaken without patent protection. But Mansfield's study also did not include modern high-tech industries like software or computers, which probably would also exhibit a higher percentage of innovations that would not be undertaken without patent or copyright protection.

appear to be that most of these inventions did not meet the standards for federal patent protection. But the fact that 16-34% of patentable inventions are not patented suggests there is also another factor, most likely the fact that firms often prefer trade secret protection because patent law requires disclosure.[72] In either case, since these are hardly industries where federal copyright protection is very important, the inventors who invest in making such innovations must be relying on the protection of state law, including the property rights to exclude that are, in practice, what maintain trade secrets.

Third, and most important, the above analysis of the proposed predation standard's undesirable effect on investments to create intellectual property applies equally to investments made to create, enhance, or maintain the value of *any* property right – physical or intellectual. After all, garden variety property rights are not mere matters of private prerogative. To the contrary, they (like intellectual property rights) are recognized by the state when and where the state believes those rights will lead to more desirable conduct by encouraging investment in the property, and the essence of that encouragement is provided by the core property right to exclude other.[73] If there were no right to exclude others from the fruits of investments made in the property, then the property right cannot provide the encouragement to invest that is the main purpose for recognizing property rights to begin with.

Again, suppose a firm is deciding whether to invest $1 billion in year 1, only now the investment is to build a plant that will make a product that is better or cheaper than rivals can make. If it is right that this investment will be successful, then the firm will, starting in year 3, drive its rivals out and reap $4 billion in monopoly profits. Consumers would be better off, not worse off, if the investment occurs because it will create a market option that was superior to what they had before. True, after the investment, the firm will have monopoly power. But such monopoly power is desirable because it simply means the firm has created something that is sufficiently cheaper or better than rivals can produce that there are no reasonably interchangeable substitutes constraining the firm to price at cost. The prospect of those monopoly profits will thus encourage consumer-benefitting investments that otherwise would not be made.

But under the proposed predation standard, the investment would never be made. This is because if a firm does make that investment, its rivals can offer $1 million in year 2 for a lease to use the plant in year 3. The firm that denies this rival request for access will necessarily be sacrificing short-term profits in year 2, which is only profitable because this exclusion of rivals enables the firm to reap long-run monopoly profits starting in year 3. Thus, to avoid treble damages, the firm would have to give rivals access to any plant that constitutes a sufficient improvement over other market options to enjoy monopoly power. And if a firm has to give its rivals access to such a plant, there is no incentive to make the investment necessary to create the market-improving plant at all.

Nor is the point is limited to investments as dramatic as the creation of new physical property that will enjoy monopoly power. The same would be true for investments that enhance or maintain

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[72] *See* Richard C. Levin, Alvin K. Klevorick, Richard R. Nelson and Sidney G. Winter, *Appropriating the Returns from Industrial Research and Development,* 3 BROOKINGS PAPERS ON ECONOMIC ACTIVITY 783 (1987).

[73] For elaboration, see *infra* Part III.

the value of existing property that, when enhanced or maintained, confers monopoly power. Thus, the above predation standard would also deter a firm from making an investment in remodeling its plant to enhance its efficiency in a way that would make it sufficiently market-improving to reap monopoly profits. It would even deter a firm from making optimal investments for maintenance upkeep on a plant that was already sufficiently better than other market options to enjoy monopoly power.

Indeed, the point is not even limited to investments in property. They also apply to investments in the nexus of contractual rights we call firms. Often, what gives a firm monopoly power is not property rights, but an advantage in personnel, organization, or distribution. Firms may need to make costly investments to train personnel to be make a product better or more cheaply, or to adopt changes in organization or distribution that yield great efficiencies. Investments in creating a brand with a desirable reputation (that is, advertising) may also be necessary to efficiently overcome the consumer information costs that would otherwise lead consumers to underconsume because they find information costs too high and uninformed consumption too risky. All those sorts of investments can involve short-term sacrifices in profits that would be irrational unless the firm expects them to give itself some advantage that allows it to price above cost in the future – that is, reaps the firm some significant market power that a court might well deem monopoly power. If a rival could wait out the investments and then claim that access to the personnel, organization, distribution system or brand is necessary for it to compete away those supracompetitive profits, then those investments will never be made in the first place.

None of these consequences make any sense. Delayed gratification is not an antitrust offense. The proposed standard fails because sacrificing short-term profits to make the sort of investments that enable one to destroy one's rivals in the future is ordinarily not evil but the mark of good capitalistic virtue.

C. Sacrificing Profits Is Not Necessary for Undesirable Exclusionary Conduct Either

The standard also fails because it turns out that sacrificing short-term profits is not even necessary for illicit monopolization. This is most obvious in cases where the defendant uses a horizontal conspiracy, extramarket activities, or tortious conduct to further monopoly power. After establishing that point, I move on to the more difficult task of showing that the same is true when the monopolist unilaterally imposes conditions on access to its product, which requires the more difficult task of exposing the single monopoly profit myth that has come to distort thought in this area.

1. Horizontal Conspiracies, ExtraMarket Activities, and Tortious Conduct. Consider the offense of horizontally combining to form a monopoly or monopolistic cartel. This activity is immediately profitable without any sacrifice of short run profits. True, one could normally tackle those cases through Section 1 liability for concerted action. But that does not alter the doctrinal embarrassment that combinations are conduct that the courts have always held to constitute monopolization under §2 even though they would not meet the proposed profit-sacrificing standard

for determining which conduct constitutes monopolization.[74] Further, there is at least one important case that could not be challenged under §1: the case of an unsuccessful *attempt* to combine to form a monopolistic cartel, which could only be challenged as attempted monopolization under §2 since §1 does not cover attempted conspiracy.[75]

More fundamentally, there are many undesirable forms of *unilateral* exclusionary conduct that do not involve short-term sacrifices of profits. This is easiest to see for unilateral *extra*market activities, like filing false papers to procure a patent that excludes rivals. Filing false papers is no more costly than filing honest papers, and indeed may even be cheaper because it requires less research. Yet the Court in *Walker Process* had no difficulty concluded that filing false patent papers to secure a monopoly constituted illegal monopolization.[76] The same is true for many other activities that influence governmental action to exclude rivals but which lie outside the scope of antitrust petitioning immunity.[77] These often can inflict costs on rivals that immediately hamper their ability to compete and thus produce higher profits in the short-run that exceed any petitioning costs. In *Continental Ore*, the defendant vanadium producer simply had its subsidiary exercise a discretionary agency power it had been given to exclude rivals, an activity that required no short term sacrifice of profits.[78] Other cases deny immunity for baseless litigation that harms rivals,[79] or for procuring rubberstamp governmental approvals,[80] activities which might often reap immediate gains for monopolists that swamp any petitioning costs.

The same is also true of many unilateral *market* activities by monopolists that are tortious in nature. Consider, for example, the simple tactic of falsely disparaging the quality of rival products. Such deceptive conduct by a monopolist to enhance or maintain its monopoly power is patently undesirable, and has been held to constitute monopolizing conduct.[81] Yet, there is no reason to think it involves a short-term sacrifice of profits. Lying is cheap in the short run, and can immediately shift buyers away from rivals. The costs of lying are, if anything, likely to come in the long run, when the consumers figure out the lies, which should diminish the reputation of the lying firm in a way that may make consumers more reluctant to buy from it. But by then the anticompetitive exclusion of the rival may have already been achieved. In any event, here is a form of monopolizing conduct that is entirely profitable in the short run.

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[74] *See, e.g., Grinnell*, 384 U.S. at 576; American Tobacco Co. v. United States, 328 U.S. 781, 783-84, 808-09, 813-14 (1946) (noting that this constitutes monopolization as well as a conspiracy to monopolize); Standard Oil Co. v. United States, 221 U.S. 1, 70-75 (1911) (same).

[75] *See* United States v. American Airlines, 743 F.2d 1114 (5th Cir. 1984), cert. dismissed, 474 U.S. 1001 (1985) (holding that attempted monopolization doctrine applied).

[76] Walker Process Equip., Inc. v. *Food Mach. & Chem. Corp*., 382 U.S. 172 (1966).

[77] *See* Einer Elhauge, *Making Sense of Antitrust Petitioning Immunity*, 80 CALIF. L. REV. 1177, 1181-1250 (1992) (describing doctrine).

[78] Continental Ore Co. v. Union Carbide & Carbon Corp., 370 U.S. 690, 695, 702-04 & n.11 (1962).

[79] Professional Real Estate Investors v. Columbia Pictures Indus., 508 U.S. 49 (1993).

[80] FTC v. Ticor Title Insurance Co., 504 U.S. 621 (1992)

[81] *See* National Ass'n of Pharmaceutical Mfrs. v. Ayerst Lab., 850 F.2d 904, 912-13 (2d Cir. 1988); Int'l Travel Arrangers, Inc. v. Western Airlines, Inc., 623 F.2d 1255 (8th Cir.1980); see also Microsoft v. U.S., 253 F.3d 34, 76-77 (D.C. Cir. 2001) (en banc) (holding that exclusionary conduct proven where Microsoft deceived Java developers about whether using Microsoft's development tools would make software incompatible with rival operating systems); see also Allied Tube v. Indian Head, 486 U.S. 492, 501 (1988) (conspiracy to spread false information about rival product safety is anticompetitive); American Soc'y v. Hydrolevel, 456 U.S. 556 (1982) (same).

One can easily generalize the point to many other forms of tortious conduct against rivals that enhances or maintains monopoly power. For example, monopolists have sometimes resorted to destroying or damaging their rival's property to hamper them from making or distributing their products. Such activities are clearly undesirable ways of enhancing or maintaining monopoly power, and have thus been held to constitute monopolization.[68] Yet, such conduct can be entirely profitable in the short run because it undermines a rival's short term ability to compete. Likewise, a monopolist who bribes another firm's employees to get them to shift business from rivals or to divulge the rival's trade secrets need not sacrifice any short run profits, especially if the bribe is paid only after the business is diverted. Yet such conduct has also been held to constitute monopolization.[69]

2. Nontortious Unilateral Market Conduct and the Single Monopoly Profit Myth. The problems with the profit-sacrifice test extend even to nontortious unilateral market conduct. In particular, it applies as well to conditions a monopolist might unilaterally impose on the availability and prices of monopoly goods. This point requires more explanation because it is an issue that has become obscured by the single monopoly profit myth. The genesis of this myth was a famous article by Director and Levi, which argued that, to get buyers to accept any undesirable restriction to exclude rivals, a monopolist would have to offer a discount (from the monopoly price it would otherwise charge) that sufficed to offset any harm the restriction imposed on buyers.[70] Although even Director and Levi themselves pointed out that this might sometimes benefit the monopolist when the restriction imposed even greater costs on rivals,[71] some have been misled by this form of argument to conclude that exclusionary conditions imposed by a monopolist can never really harm buyers, and thus should be per se lawful.[72]

The profit-sacrificing standard appears to rest on the more modest premise that Director and Levi's point holds in the short run – and thus requires the monopolist to incur a short-term sacrifice in profits to impose any undesirable condition – but that this sacrifice can be more than made up by the long-run increase in monopoly prices made possible once the exclusionary conduct has excluded rivals or impaired their efficiency.[73] Exclusionary conduct might, for example, foreclose enough of the market to deprive rivals of: (1) efficiencies of scale in production or research, (2) learning curve economies, (3) network effects or (4) the most efficient distributors or suppliers.[74] That can deter entry, drive rivals out of the market, slow down their growth, or simply leave rivals less efficient than they otherwise would have been. Either way, rivals will have less ability in the future to restrain the monopolist from raising prices, so an investment in lowering short term prices to get

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[68] *See* Conwood Co., L.P. v. U.S. Tobacco Co., 290 F.3d 768, 783-88 (6th Cir.2002), *cert. denied,* 123 S.Ct. 876 (2003).

[69] *See* Associated Radio Serv. Co. v. Page Airways, 624 F.2d 1342 (5th Cir. 1980), *cert. denied,* 450 U.S. 1030 (1981).

[70] *See* Aaron Director & Edward H. Levi, *Law and the Future: Trade Regulation*, 51 NW. U. L. REV. 281, 290, 292-94 (1956).

[71] *Id.* at 290.

[72] *See, e.g.,* E. THOMAS SULLIVAN & JEFFREY HARRISION, UNDERSTANDING ANTITRUST AND ITS ECONOMIC IMPLICATIONS 250 (1998); ROBERT BORK, THE ANTITRUST PARADOX 306-07, 309 (1978).

[73] For example, the leading antitrust treatise mistakenly believes that a monopolist cannot increase short-run profits with exclusive dealing, but acknowledges that it can cause long term harm to buyers and competition. *See* XI HERBET HOVENKAMP, ANTITRUST LAW ¶1802d5, at 72 (1998).

[74] *See infra* Part III.B (summarizing these theories).

buyers to accept the exclusionary conduct will allow the monopolist to charge higher long run prices than it otherwise could have.

But this sort of logical premise for a profit-sacrificing standard itself raises an immediate problem. Why would buyers agree to buy under a policy that gives them short-term benefits that are outweighed by a long-term cost, when on balance they are worse off? This is a problem not just for exclusionary agreements with buyers, but even for exclusionary conduct that would be deemed purely unilateral – like predatory pricing or refusals to deal with rivals -- for buyers could always cease doing business with any monopolist known to engage in tactics designed to increase its long-run ability to exploit buyers. The answer is obvious if you think about it. If there were only one buyer who was the ultimate consumer of the monopoly product, that buyer wouldn't agree to buy from a firm that engaged in such exclusionary tactics. Such a unitary consumer would compare the same short-term benefits and long-term costs that the monopolist is considering in reverse, and say "no thanks." So the answers must lie in the realities that (1) there often are multiple buyers and (2) they often are not ultimate consumers but intermediate buyers.[75] But those same realities also indicate that a monopolist need not sacrifice *any* short term profits to impose undesirable exclusionary conditions. To see why, let's take each reality in turn.

i. Collective Action Problems. – Most markets have not one buyer, but many buyers. This reality means that those buyers face serious collective action problems when confronting a unitary monopolist. Those collective action problems can make it individually rational for each buyer to agree with a monopolist to restrictions that harm buyers as a group.[76] Suppose each buyer is offered a small short-term discount from a monopoly price if it will agree to buy under an exclusionary policy that will, if most buyers agree to it, hamper rivals' ability to compete and thus enhance the seller's market power against all buyers. If they think about the anticompetitive consequences at all, each buyer will individually reason that, if enough other buyers agree to the exclusionary policy, then the seller will successfully create or protect anticompetitive seller market power regardless of what the individual buyer does, since it alone does not have a large enough buyer share to prevent that marketwide result from occurring. And, if enough other buyers do not agree to the exclusionary policy, then the seller will fail to gain or protect anticompetitive market power regardless of what the individual buyer does. Thus, no matter what it expects other buyers to do, each individual buyer has incentives to agree to the exclusionary policy in exchange for the discount because its individual decision has little influence on whether the adverse marketwide

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[75] Where the defendant is acting as a monopsonist, the answers lie in the parallel realties that: (1) there often are multiple suppliers and (2) any supplier is not the ultimate consumer.

Another possibility is that the buyer's management might agree to an anticompetitive policy that is contrary to the buyer's long term interests because agency costs make the management an imperfect decisionmaker for the buyer's interests. *Cf.* Louis Kaplow, *Extension of Monopoly Power Through Leverage*, 85 COLUM. L. REV. 515, ___ (1985) (arguing that similar agency cost problems might explain why monopolists use inefficient exclusionary schemes). For example, if agency costs meant that a manager only gets credit for events that happened during her tenure, then she might be tempted to agree to short-term discounts that are profitable in the short run, and thus earn her a promotion or a better job elsewhere, leaving the long run harm of higher costs to be blamed either on her successor or on marketwide forces. Such agency cost problems would seem to be the only explanation for why a short-term bribe would persuade a single, consuming buyer to agree to an anticompetitive scheme that harms it in the long run. However, the proponents of the short-term profit sacrificing test do not base their claim on a theory of agency costs.

[76] *See generally* MANCUR OLSON, THE LOGIC OF COLLECTIVE ACTION (2d ed. 1971); RUSSELL HARDIN, COLLECTIVE ACTION (1982).

effects occur, but does definitely determine whether or not that buyer gets a discount. Since every buyer has those individual incentives, each will agree to the exclusionary policy for a small discount even though those agreements will collectively create or protect the anticompetitive market power that imposes a long term harm on them all. Indeed, if there are many buyers, their individual decisions will have so little effect on the marketwide outcome that they none will find it worthwhile to even incur the costs of thinking through the anticompetitive consequences – they will simply accept any discount offered.

Such collective action problems can explain why buyers agree to any of the conduct condemned as monopolization by the Supreme Court. They explain why buyers agree to short-term below-cost predatory prices even though that drives out rivals and creates greater long term monopoly profits that buyers must pay.[77] They explain why, in *Lorain Journal*, individual firms continued to advertise with a newspaper monopolist that refused to deal with firms that bought advertising from its radio station rival, even though that exclusionary condition hampered competition that would lower the newspaper's long run monopoly prices that those advertisers had to pay.[78] They explain why, in *Griffith*,[79] a chain that had a theater monopoly in some towns could get multiple film distributors to agree to give that chain exclusive rights in other towns too even though that extended the chain's monopoly power against the distributors to more towns.[80] They explain why, in *United Shoe*, a monopolist supplier of shoe machinery could get 1460 shoe manufacturers to agree to lease restrictions with "virtually no expressed dissatisfaction" even though, in the Court's opinion, the restrictions harmfully excluded the monopolist's rivals and thus raised long run machinery prices.[81] They explain why, in *Aspen,* skiiers continued to buy ski lift tickets from the monopolist ski mountain even though it changed to a no-joint-pass policy that made those lift tickets less desirable to consumers and, in the Court's view, increased long run monopoly profits against them.[82] And they explain why, in *Kodak*, owners continued to buy parts from Kodak even though the new policy of bundling them with service, in the Court's view, might increase Kodak's monopoly profits.[83] Indeed, it is this basic dynamic, that the monopolist can act as one while its buying counterparts have collective action problems, that gives the monopolist market power and enables any exclusionary conduct harmful to those buyers.

But closer analysis reveals that, other than in the case of below-cost pricing, a monopolist can exploit buyers' collective action problems without sacrificing short-term profits. Let's begin

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[77] *See* Elhauge, *Why Above-Cost Price Cuts Are Not Predatory*, *supra* note , at 60-61 (explaining why these collective action problems are not solved by rivals offering long-term contracts contingent on their survival).

[78] Lorain Journal Co. v. United States, 342 U.S. 143 (1951).

[79] Griffith v. United States, 334 U.S. 100 (1948).

[80] *See* Louis Kaplow, *Extension of Monopoly Power Through Leverage*, 85 COLUM. L. REV. 515, 532-33 (1985); Einer Elhauge, *Does Interest Group Theory Justify More Intrusive Judicial Review?*, 101 YALE L.J. 31, 99-100 (1991).

[81] United States v. United Shoe Machinery Corp., 110 F. Supp. 295, 340 (D. Mass. 1953), aff'd per curiam, 347 U.S. 521 (1954); C. KAYSEN, UNITED STATES V. UNITED SHOE MACHINERY CORPORATION 278 (1956). An alternative view is that the defendant's lease-only policy benefitted buyers by lowering their financing, risk-bearing and transaction costs, and that the various lease restrictions were necessary to maintain efficient incentives to use and maintain leased machines. *See* John Shepard Wiley Jr. et al., *The Leasing Monopolist*, 37 UCLA L. REV. 693, 709-17 (1990). If so, then collective action problems would not be necessary to explain the arrangements.

[82] *Aspen*, 472 U.S. at 600-611.

[83] *Kodak*, 504 U.S. at 483.

by supposing that the offered discount is from the monopoly price that prevailed right before the exclusionary conduct was initiated. Even in that case there may be no discernable sacrifice of profits because the offered discount could be trivially small, even one dollar. The reason is that the collective action problems mean each individual buyer has incentives to accept that trivially small discount because there is an even smaller likelihood that its individual refusal to participate will prevent marketwide exclusion of rivals. If there are 1000 buyers, each individual buyer will conclude that its decision to participate will definitely earn it the dollar, and that the decisions of the other 999 buyers will determine whether the scheme successfully excludes the seller's rival regardless of what the individual buyer decides.

It is only a small step from a trivial discount to realize that the discount does not have to be from whatever price prevailed before the exclusionary conduct started. It suffices to offer a future discount from whatever turns out to be the future market price. Each individual buyer will still have incentives to agree to accept exclusionary conduct in exchange for that discount no matter what it expects other buyers to do, for all the same collective action reasons noted above. Because every buyer has incentives to agree, the exclusionary conduct will succeed in raising future market prices, and thus the discount will be from a future price baseline that was inflated by the exclusionary scheme itself. Accordingly, the firm seeking to create or maintain a monopoly by offering such a future discount need not sacrifice any short-term profits at all.

Indeed, even when a firm couples its exclusionary policy with a fixed price, that price may not entail any sacrifice of short term profits. This is because buyers will accept that fixed price as long as it reflects a discount from the *expected* future supracompetitive price. If, given collective action problems, each buyer expects a sufficient number of other buyers to agree to the exclusionary conduct, the expected future price will be inflated by the predicted success of the exclusionary conduct. Thus, each buyer will accept exclusionary conduct as long as the associated price is discounted from the full monopoly price the firm will be able to charge in the future (given the predicted impairment of rival efficiency from the exclusionary conduct) even though that price is above the prices that preceded the exclusionary scheme.[84]

In short, in any case where collective action problems mean that a firm can successfully exploit buyers by offering short-term discounts that sacrifice current profits in exchange for acceptance of exclusionary conduct that raises long-run monopoly prices, those same collective action problems mean that the firm can do the same without sacrificing short term profits at all. It can exploit collective action problems by offering trivial discounts from prior prices that have no noticeable effect on short-term profits. It can even offer prices that are a discount only from the expected long-run monopoly prices that will result when the scheme succeeds, and thus actually allow the firm to *increase* short-term profits.

This may be precisely what happened in *Griffith,* where there was no evidence that the defendant threatened to withhold its services in monopoly towns at all, let alone that it discounted those monopoly services to get the exclusionary rights in other towns.[85] And, in *Otter Tail,* the

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[84] For a model proving this for exclusive dealing, see Eric Rasmussen, Mark Ramseyer & John Wiley, *Naked Exclusion*, 81 AMER. ECON. REV. 1137 (1991).

[85] *See Griffith*, 334 U.S. at 104-05, 107-08.

Court stated that the proposition that the "'promotion of self- interest alone does not ... to immunize otherwise illegal conduct'" applied to exclusionary conduct in a monopolization claim, thus rejecting the defense that the conduct prevented a loss of profits that otherwise would have resulted.[86] Nor was there any evidence of a short-term profit sacrifice in *Lorain Journal, United Shoe,* or *Kodak.* Indeed, *United Shoe* held illegal practices by a monopolist that it acknowledged were traditional in the industry and used by its nonmonopolist rivals even though that indicated it must not be the case that this conduct would sacrifice profits but for the prospect of monopoly returns.[87] Even in *Aspen*, the case that comes closest to articulating a short-term profit-sacrificing test, the defendant does not appear to have actually sacrificed short term profits. To be sure, the Court emphasized that, by discontinuing its cooperation with its rival on a joint ski pass, the defendant had sacrificed consumer goodwill and short-term profits it could have made by accepting its rival's bank-funded vouchers or selling lift tickets to its rivals in bulk.[88] But those sacrifices would only mean a short-term sacrifice of overall profits if the profits forgone by diminished consumer goodwill and lost sales through the rival were not exceeded by the increased short-term profits made by increased sales of the defendant's three-mountain pass or separate lift-tickets directly to consumers. Given that discontinuing the joint pass increased the defendant's market share in its very the first year,[89] and that no evidence was cited that the total market output of ski lift tickets sold declined, it instead seems likely that the conduct increased the *Aspen* defendant's profits even in the short run.

ii. Intermediate Buyers (or Suppliers). The reality that monopolists often sell to intermediate buyers means that those buyers can also have strong incentives to agree to exclusionary arrangements even when buyers do not face collective action problems because they have market power (or can collectively be organized to have market power). The reason is that such intermediate buyers have incentives to collude with upstream sellers in ways that create supracompetitive profits for the sellers and intermediate buyers and pass on the anticompetitive costs to downstream buyers. In particular, intermediate buyers have incentives to agree to arrangements that preserve or enhance seller market power (by excluding or impairing the efficiency of the seller's rivals) in exchange for either (1) side-payments that split the seller's supracompetitive profits, or (2) special discounts that give the participating buyers market advantages over other buyers and thus enhance the participating buyers' downstream market power.[90] This is true whether buyers have market power individually or collectively, as long as the intermediate buyers sell to others in a downstream market. Indeed, the ability of intermediate buyers to reach agreements with sellers that help sellers acquire market power in exchange for a share of the resulting supracompetitive profits (either directly or by increasing the buyers' downstream market power) is just one special application of the general

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[86] 410 U.S. at 380.

[87] 110 F. Supp. at 340, 344, aff'd per curiam, 347 U.S. 521. Suggesting the same was the facts that the same practices were used by the firm before becoming a monopolist. *See* Wiley, *supra* note, at 717.

[88] *Id.* at 608, 610-11.

[89] *Id.* at 594.

[90] *See* IV AREEDA, HOVENKAMP & SOLOW, ANTITRUST LAW ¶943b, 204-06 & n.4 (rev. ed. 1998); Elizabeth Granitz & Benjamin Klein, *Monopolization by Raising Rivals' Costs: The Standard Oil Case*, 39 J.L. & ECON. 1 (1996); Hovenkamp, *Mergers & Buyers*, 77 VA. L. REV. 1369 (1991); Thomas G. Krattenmaker & Stephen C. Salop, *Anticompetitive Exclusion: Raising Rivals' Costs to Achieve Power Over Price*, 96 YALE L.J. 209, 238-40(1986).

Coase Theorem.[91]

In the side-payment scenario, buyers agree to an arrangement that enhances seller market power, even if that means each buyer must pay more for the seller's product, in exchange for the seller agreeing to share its supracompetitive profits through side-payments. Such payments are distinguishable from simple product discounts because they are not made on a per-unit basis for a single product. Sometimes they reflect lump sum payments; other times they reflect discounts on multiple products. In either case, the key is that, because they are not mere per unit discounts on a single product, such side-payments do not decrease the buyers' marginal cost for that product in a way that would cause them to pass on any savings from the sidepayments downstream to consumers. Instead, the increased prices for the monopolized good are passed on to the buyers' customers as part of increased marginal costs without an offset for the sidepayment. The buyers' losses thus result only from reduced sales, which can be more than offset by the side-payments, which are funded out of the sellers' monopoly overcharge. In short, such side-payments increase the buyer's profits without reducing its marginal costs, and thus effectively constitute the payment of a share of the sellers' monopoly profits in exchange for helping the seller enhance or maintain its monopoly profits.

In the special discount scenario, participating buyers agree to the arrangement in exchange for special per-unit discounts that are unavailable to nonparticipating buyers. These special discounts enhance the participating buyers' market power downstream by giving them a cost advantage over existing or potential rivals that effectively constitutes a barrier to rival expansion or entry. In these cases, the seller effectively agrees to enhance the participating buyers' downstream market power (through discounts unavailable to the buyers' rivals) in exchange for the participating buyers helping maintain and enhance the seller's market power upstream (by excluding the seller's rivals).

In some cases, the special discount to these participating buyers might just offset the supracompetitive price inflation that results from the enhanced seller market power. Sellers have incentives to agree to such special discounts because the agreements with the participating buyers that enhance seller market power enable the sellers to charge supracompetitive price levels to the *non*participating buyers. The participating buyers have incentives to agree because the agreement does not increase their costs, but does increase the costs of their rivals. This helps the participating buyers keep out new entrants, and oust or hobble their rivals. In such case, the exchange is a straightforward trade of enhanced seller market power (exercised against other rival buyers) in exchange for enhanced buyer market power (exercised against downstream buyers).

In other cases, the special discounts might even exceed the supracompetitive price inflation attributable to whatever aid the participating buyers provide to seller market power. In these cases, the seller effectively shares the proceeds from its enhanced seller market power against nonparticipating buyers with the participating buyers, as well as enhancing the participating buyers' downstream market power. But the larger the share of purchases made by the participating buyers, the less advantageous such a scheme can be to the sellers.

Perhaps more typically, the special discounts are smaller than the supracompetitive price

[91] *See* AREEDA, HOVENKAMP & SOLOW, *supra note* , at 204-06 & n.4; Hovenkamp, *supra* note .

inflation that results from the enhanced seller market power. That would result in prices to the participating buyers that are higher than they would be without the agreement. Even then, these buyers might be willing to agree to this price increase because their special discount means that the price increase raises their rivals' costs more than their own, and thus enhances participating buyers' market shares compared to rival buyers. In this case, the participating buyers would pay some premium (in input prices) in exchange for an increase in their downstream profits. Here, the participating buyers effectively give the sellers a share of the supracompetitive profits created by their enhanced buyer market power, as well as give the seller enhanced market power against nonparticipating buyers.

Indeed, this last scenario is what happened in the mother of all monopolization cases, the famous Standard Oil case. Back then, railroad transportation was necessary to get crude oil to refiners and then distribute refined oil. Standard Oil agreed to pay the railroads at least 15% *more* that it was previously paying in exchange for the railroads making sure that the price paid by Standard Oil was a significant discount from the price charged to other oil refiners.[92] Faced with transportation costs that were now significantly higher than Standard Oil's, the other refiners were either driven out of the market or, because they realized they could not compete at this cost disadvantage, sold their business to Standard Oil.[93]

Interestingly enough, a powerful buyer has incentives to agree to arrangements that create or enhance seller market power even though the seller does *not* guarantee the buyer any special discount in exchange. The reason is that, even without any formal seller commitment, a buyer with market power knows that it will have the leverage to negotiate for some discount from the supracompetitive price that a seller with market power will charge to buyers who have no significant market share. And that special discount will give the powerful buyer an additional advantage over its rivals in the downstream market. In contrast, if the seller market were perfectly competitive, then seller prices will all be at cost, and even a powerful buyer will not be able to negotiate any discount from a price set at cost because no seller wants to lose money. Thus, counter-intuitively, a powerful buyer will often *prefer* to create or maintain seller market power even though the buyer knows that such power will increase prices.

This last point explains the continued implementation of the scheme in *Standard Oil*. In that case, a corporate charter and contracts initially provided a formal commitment to special discounts, which caused all the major rival refiners in Cleveland to sell to Standard Oil, thus giving it buyer market power.[94] But the formal commitment was withdrawn before it was ever implemented because it provoked crude oil suppliers to strike violently and the Pennsylvania legislature to revoke the corporate charter.[95] Why then did Standard Oil continue to assist railroads to enhance their market power over transportation? The answer is that Standard Oil's buyer market power sufficed to enable it to negotiate for special discounts without any formal commitment by the railroads.[96]

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[92] Granitz & Klein, *supra* note , at 9-10.

[93] *See* Standard Oil Co. v. United States, 221 U.S. 1, 32-33 (1911); Granitz & Klein, *supra* note , at 14.

[94] Granitz & Klein, *supra* note , at 9-10, 14-16.

[95] *Id.* at 14-15.

[96] *Id.* at 17-20. When railroads extended special discounts to rival refiners, Standard Oil exercised its buyer market power aggressively to force railroads to keep the discounts special to Standard Oil. *Id.* at 27-31, 34-35.

And those special discounts in turn forced the rest of the refiners to sell to Standard Oil.[97] To get the benefit of those special discounts, Standard Oil was willing not only to pay more than the competitive rate for transportation, but to block a new transportation technology (pipelines) that would have lowered its transportation costs.[98]

Where intermediate buyers do not have market power, then they are instead likely to have collective action problems that can also drive them to accept special discounts even though the discount is from a supracompetitive price. Each buyer has incentives to agree to the special discount even if the price is higher than the prior price in order to gain a market advantage over nonparticipating rivals. Further, each individual buyer realizes that, if it did not agree to accept this price, it would suffer a market disadvantage by paying higher expected future prices than its rivals, and that this market disadvantage might drive it from the market. But because every buyer has those same incentives, the end result will be that no buyer has any market advantage over other buyers because they have all agreed to the exclusionary agreements that in aggregate give the seller enhanced market power to charge them higher prices than otherwise would have prevailed on the market.

Buyers who are not monopsonists but have some degree of market power may begin with a sidepayment or special discount strategy, but end up with a collective action problem. Such buyers may agree to exclusionary conduct because they expect that the discounts they receive will give them an advantage over their rivals that enhances their downstream market power. But they may find that this induces other buyers to likewise agree, with the end result that no buyer enjoys a special discount or market advantage over others. Instead, each buyer will have received a discount from a price that has been inflated by the fact that the marketwide effects have helped the seller enhance, maintain, or slow down the erosion of its monopoly power. The existence of such collective action problems among buyers is not inconsistent with the fact that they may individually have some market power. After all, the classic prisoners' dilemma creates such problems for only two actors, and thus two or more buyers with market power will likely find themselves vulnerable to these problems. True, such buyers are less likely to conclude that their individual agreement has no significant influence on whether the marketwide anticompetitive effect will occur. But the same problem can result because their individual decision definitely determines whether they get a discount that inures to only their benefit, but has lower odds of determining whether an marketwide harm is created that would, if created, be shared with the other buyers anyway.

Notice that *none* of the above scenarios involving side-payment or special discounts require a monopolist to sacrifice any short-term profits. To the contrary, in all these scenarios the side-payments and special discounts are funded out of the additional supracompetitive profits that the exclusionary scheme creates. Thus, they can be expected to involve an *increase* in short-term profits as well as long term profits. For example, in *Standard Oil*, the monopolizing conduct increased the short-run profits of *both* the railroads and Standard Oil.[99]

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[97] *Id.* at 20-23.

[98] *Id.* at 18-22, 31-37.

[99] Granitz & Klein, *supra* note , at 12-14, 24-27.

D. Conclusion

Even the canonical sort of predation envisioned by a standard that focuses on whether the monopolist sacrificed short term profits depends upon the existence of buyer collective action problems or seller-buyer collusion to harm downstream buyers. The existence of these two realities are thus necessary to explain why monopolizing conduct could *ever* succeed. Yet, as the analysis above shows, those same realities also mean that a short-term sacrifice in profits might never be necessary. Thus, the nature of the underlying problems explodes any claim that the sacrifice of short-term profits should be the key factor in determining whether monopolization has occurred.

The fundamental problem with the proposed predation standard is that it focuses on the time line of efforts to increase profits rather than on whether the means of increasing profits are desirable. Firms can increase profits through desirable activities or undesirable activities. Both desirable and undesirable activities sometimes require a short-term sacrifice of profits to reap long-term gains, and sometimes do not. Thus, the key question is not whether a business strategy requires delayed gratification. The key question is what our standards are for judging which activities are desirable and which are undesirable.

True, one can more generously read some versions of the profit-sacrifice test as focused not on the time line of actual profits, but on whether the conduct would (at whatever time) have sacrificed profits but for a harm to rival competition.[100] Such a reading would at least avoid immunizing the undesirable conduct detailed in Section II.C. However, it would still condemn desirable conduct like above-cost price cuts and innovation that, as Sections II.A. and II.B. showed, often does sacrifice profits unless it enables a firm to drive out rivals. Further, even if we put those cases aside, interpreting the test as requiring that the conduct sacrifice profits if one leaves side any additional monopoly returns from hampering rivals amounts to simply saying that the conduct has no efficiency benefit to it. Since the test would no longer be based on actual profits, but on the desirability of how those profits were acquired, this interpretation of the profit-sacrifice test would offer no administrability benefits. Worse, it obscures the underlying efficiency inquiry by requiring it to be reframed as a question of hypothetical profitability once undesirable profits are excluded. And it effectively presupposes that, for all monopolization cases, the existence of any efficiency benefit suffices to immunize conduct without ever weighing it against the anticompetitive costs in the normal rule of reason fashion. Rather than address such issues through the indirect and obscuring rubric of hypothetical profitability analysis, it is better to address the efficiency issues directly, which is what I turn to next.

III. RESOLVING BASELINE PROBLEMS WITH PREVAILING EFFICIENCY INQUIRIES

Although Supreme Court monopolization cases have generally rested on conclusory labels, such as whether conduct is "exclusionary," "competition on the merits," or had "legitimate," "normal, or "valid" business purposes,[101] there are several sentences in the *Aspen* opinion that

[100] *See supra* note __.
[101] *See supra* Part II.

suggest an underlying norm with more content, and that norm is economic efficiency. The *Aspen* Court began its analysis by stating, "If a firm has been 'attempting to exclude rivals on some basis other than efficiency,' it is fair to characterize its behavior as predatory."[102] The Court also said that the jury's conclusion that the conduct was not justified by any normal business purpose was supported by the defendant's "failure to offer any efficiency justification" for its conduct.[103] Finally, the Court summarized its analysis by saying the evidence supported the conclusion that defendant "was not motivated by efficiency concerns and that it was willing to sacrifice short-run benefits and consumer goodwill in exchange for a perceived long-run impact on its smaller rival."[104] This reference to a lack of efficiency motivations would seem to conceptually limit any reliance on a pure short-term profit sacrificing test, indicating that the Court did not believe such a profit-sacrifice was itself sufficient to prove illegality.

This is certainly an important step toward developing a coherent standard. Unfortunately, this seeming identification of efficiency as the relevant norm has not been repeated in the other Supreme Court monopolization cases, including the *Kodak* decision that followed it.[105] And even the *Aspen* Court never makes clear that efficiency is the sole normative standard rather than just one factor in determining whether a justification is "valid" or not.[106] True, as a predictive matter, it would be surprising (given its other antitrust precedents) if the Supreme Court did not embrace some form of an efficiency norm as the principal criterion to judge which monopoly-furthering conduct constitutes illegal monopolization. But even if we assume this, the problem remains that the Supreme Court's scant development of the issue means that none of its monopolization opinions address the key baseline issues necessary to give the efficiency concept more definitive content. In particular, none of the cases answer the key question: efficient compared to what?

A. Ex Ante v. Ex Post Efficiencies

1. Ex Ante Efficiencies and Their Relation to Property Rights. One important baseline issue the Supreme Court has yet to face is whether to consider efficiency from an *ex ante* or *ex post* perspective. As a result, the Court's methodology for considering whether such efficiencies exist has so far focused solely on *ex post* efficiencies. For many cases, this turns out to be the functional equivalent of mistakenly focusing only on whether the monopolist has sacrificed short-term profits to exclude its rival.

This was certainly the case in *Aspen* itself. There the Court held that the defendant, which owned three of the four ski mountains in Aspen, engaged in monopolization because it refused to cooperate with the rival that owned the other mountain to offer a joint four-mountain ski pass. The Court reasoned that, while a monopolist had no duty to always cooperate with rivals, it could not

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[102] *Aspen*, 472 U.S. at 605 (quoting BORK, *supra* note , at 138).

[103] *Aspen*, 472 U.S. at 608.

[104] *Aspen*, 472 U.S. at 610-11.

[105] *Kodak*, 504 U.S. at 483 & n.32 (stating that "Liability turns . . . on whether 'valid business reasons' can explain Kodak's actions," or whether it has "valid business justifications" or "legitimate competitive reasons," without ever identifying efficiency as the norm by which validity and legitimacy is judged).

[106] Some have concluded that the criteria for determining when monopoly-furthering conduct is "valid" not only extends to nonefficiency criteria, but that conduct is "especially" likely to be deemed predatory if it is "improper for reasons *extrinsic* to the antitrust laws." ABA SECTION ON ANTITRUST, ANTITRUST LAW DEVELOPMENTS 249 (5th ed. 2002) (emphasis added).

refuse to do so without a valid business reason,[107] and relied on the following to show that there was no valid business reason or efficiency justification for the refusal. (1) Consumers liked the four-mountain pass, and could weigh mountain quality as they saw fit under a joint pass that allocated revenue by consumer usage.[108] (2) Defendant's rival lost market share when the joint pass was discontinued.[109] (3) The defendant had to forego profits it could have made by accepting its rival's bank-funded vouchers or selling lift tickets to its rivals in bulk.[110] (4) Accepting the four-mountain pass (or equivalent vouchers) did not impose higher monitoring or administrative costs than the other means by which the defendant sold lift tickets.[111]

But one could say the same sorts of things for just about every case *after* a firm has already invested in the creation, enhancement or maintenance of property that consumers regard as so much more valuable than other market options that the firm that controls access to that property enjoys monopoly power. Consumers will prefer to have the monopolist share that property with rivals, since that will drive down prices. Rivals denied access to that property will lose market share. The firm that denies the rival access will lose profits it could have made by giving rivals access to its property. And ordinarily monitoring or administrative costs will not be any higher when access is given to rivals, or at least not higher than the revenue from selling that access. Thus, failing to share with rivals the property that confers monopoly power will almost always look inefficient from this purely *ex post* perspective.

Nor is the logic producing that conclusion a simple result of the four factors the *Aspen* Court happened to examine. For the fact is that, from an *ex post* perspective, excluding rivals from any property rights valuable and unique enough to enjoy monopoly power will generally constrain consumer choice, lower output, and raise prices, thus producing allocative inefficiency. This is certainly true with intellectual property, where sharing is normally costless, and thus any dissemination of the knowledge protected by the property right will produce more efficient competition in using that knowledge. But it is also true with any other kind of physical property that gives the owner monopoly power,[112] assuming sharing is not more costly than the efficiency gains from competitive use of the property.

Such an *ex post* approach ignores the *ex ante* reality that it is precisely the prospect of being able to exclude rivals from one's property and charge a price above the marginal cost of using it that is necessary to encourage the prior investments that created that property, or enhanced or maintained its value. Indeed, any antitrust law judgment that mandatory sharing is efficient would seem to raise considerable tension with the property law judgment that a right to exclude furthers social welfare. As the Court has elsewhere noted, "the right to exclude others" is "'one of the most essential sticks

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[107] 472 U.S. at 600-05.

[108] *Id.* at 605-07, 609-10.

[109] *Id.* at 608.

[110] *Id.* at 608.

[111] *Id.* at 608-09.

[112] If the property were readily duplicable by rivals, then it would not confer such monopoly power. But there are other reasons why monopoly power might be lacking even if duplication were impossible, such as when other sorts of property confer similar advantages that prevent an owner of the nonduplicable property from raising prices above cost. For example, while patents cannot be duplicated, sometimes they lack market power because other patents provide substitutes for accomplishing the same functional goal.

in the bundle of rights that are commonly characterized as property.'"[113] The recognition of a property right reflects a government determination that the property right creates desirable incentives for investment. This is true whether one subscribes to the now-dominant utilitarian theories of property,[114] or to the Lockean theory that mixing in the investment of one's labor to increase the value of property makes one morally deserving of having one's property rights protected.[115] True, Locke articulated his theory in a way that seemed to limit it to investments that take the form of labor, but that was based on his empirical premise that "labor makes for the greatest part of the value of things" and "ninety-nine hundredths" of the property expenses.[116] Those factual suppositions may have been accurate in Locke's times, but today the proportion of value is surely in the opposite direction.[117] Thus, once one adjusts Locke's empirical premise for the current reality, Locke's logic would naturally extend his moral claim to other investments that, when mixed in, significantly increase the value of the property, and would thus make the nonlabor investor equally deserving of property rights protection.

A similar point about the relation of antitrust and property law was made by Harold Demsetz, who elegantly showed that whether one believes that a barrier to entry is desirable or not turns on whether one believes the property right to exclude that creates that barrier is desirable or not.[118] Since the whole point of property rights is to create those barriers to entry by giving a right of exclusion, "the problem of defining ownership is precisely that of creating properly scaled legal barriers to entry."[119] If another body of law has created a property right to exclude outsiders, then that must be because a governmental lawmaker believed that right had desirable effects.[120] If property rights are restricted to allow sharing and imitation, then a necessary cost will a reduced incentive to invest and invent.[121] Thus, antitrust courts cannot lower those barriers by restricting those property rights without reducing whatever valuable effect the property right was supposed to have. The same goes for rights to exclude rivals' from one's organization, personnel or brand.[122]

2. The Contrast With Schumpeter's Ex Post Efficiency Claim About Monopoly Power. This distinction between *ex ante* and *ex post* efficiency claims helps us disentangle the point here from a longlasting debate between Schumpeter and his critics. The argument here is that the

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[113] Dolan v. City of Tigard, 512 U.S. 374, 383 (1994) (quoting Kaiser Aetna v. United States, 444 U.S. 164, 176 (1979)).

[114] *See, e.g.,* ALLAN RYAN, PROPERTY AND POLITICAL THEORY 91-117 (Basil Blackwell ed., 1984); (describing utilitarian justification for property rights); J. Roland Pennock, *Thoughts on the Right to Private Property, in* PROPERTY 171 (J. Roland Pennock and John W. Chapman ed., New York University Press, 1980) (same).

[115] *See* JOHN LOCKE, TREATISE OF CIVIL GOVERNMENT AND A LETTER CONCERNING TOLERATION 19 (Charles L. Sherman ed., 1937) (1689).

[116] *Id.* at 27-28.

[117] *See, e.g.,* Solow, *Technical Change, supra* note __ (80% of increase in worker output from 1909 to 1959 resulted from technological changes).

[118] Harold Demsetz, *Barriers to Entry*, 72 AM. ECON. REV. 47, 48-52 (1982).

[119] *Id.* at 49, 52 (emphasis omitted)

[120] State v. Shack, 277 A.2d 369, 372 (N.J., 1971) ("Property rights serve human values. They are recognized to that end, and are limited by it."); JOHN G. SPRANKLING, UNDERSTANDING PROPERTY LAW 4 (Lexis Publishing, 2000) (property rights "exist *only to the extent* that they serve a socially-acceptable justification.") (emphasis added).

[121] Demsetz, *supra* note , at 52. *See also* Festo Corp. v. Shoketsu Kinzoko Kogyo Kabushiki Co., 535 U.S. 722, 730-31 (2002) (a patent "monopoly is a property right; and like any property right, its boundaries should be clear. This clarity is essential to promote progress, because it enables efficient investment in innovation.")

[122] *See supra* II.B.

prospect of future monopoly profits is necessary to encourage *ex ante* innovation and investment to create that monopoly power. It thus differs entirely from, although it is often confused with, the Schumpterian claim that *existing* market power fosters more innovation and investment *ex post* (that is, after the creation of the market power) because greater market power means the firm who innovates and invests will reap more of the fruits.[123]

Schumpeter's argument has been contested on two levels, neither of which undermines the point here. First, Kenneth Arrow and others have offered economic models indicating that a firm that is already a monopolist has less incentives to innovate.[124] The math is complex, but the logic simple. A monopolist by definition begins with lower output than a competitive market: thus, any reduction in per-unit cost the monopolist earns from innovation must be multiplied by a smaller output to get the total gain. Further, a monopolist gains less from innovation because any monopoly profits that result from that innovation in part replace monopoly profits it was already earning. But Arrow's model depends crucially on the assumption that a competitive firm that created the same innovation would enjoy effective patent protection barring others from access to that innovation, thus allowing it to reap monopoly profits in the future. In other words, Arrow's model depends on the enforcement of patent rights to exclude rivals from the fruits of an investment in innovation, and would not hold if instead the successful innovator had to give rivals access to that innovation at marginal cost. Further, although limited to patent protection of cost-reducing innovation, Arrow's model can readily be extended to other forms of property protection given to noninnovative investments that decrease product cost, as well as those given to innovations or other investments that increase product value. Thus, Arrow's model confirms, not rebuts, the point that enforcement of those property rights against antitrust claims is necessary to maximize *ex ante* incentives to innovate and invest.

Nor does this Arrovian argument even effectively disprove Schumpeter's claim, for Schumpeter's claim was that existing market power is necessary to encourage innovation precisely where legal rights do *not* effectively protect innovation. Schumpeter was particularly concerned about innovative changes in organization, distribution, or scale that would *not* be legally protected by patents, and might thus go unrewarded without some existing market power.[125] Thus, if antitrust duties to deal are extended to prevent firms from legally excluding rivals from the fruits of their

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[123] SCHUMPETER, *supra* note , at 84-92, 99-106.

[124] *See* Kenneth J. Arrow, *Economic Welfare and the Allocation of Resources For Invention*, in ESSAYS IN THE THEORY OF RISK-BEARING 144 (Markham Publishing Co., 1971); *see also* W. KIP VISCUSI, JOHN M. VERNON AND JOSEPH E. HARRINGTON, ECONOMICS OF REGULATION AND ANTITRUST 834-37 (The MIT Press, 2d ed., 1998); JEAN TIROLE, THE THEORY OF INDUSTRIAL ORGANIZATION 390-392 (The MIT Press, 1988).

[125] *See* SCHUMPETER, supra note 264, at 84-85, 88-89. Arrow's model further depended on the unrealistic assumption that the existing monopolist was immune from entry by innovating rivals. Schumpeter's more realistic assumption was that monopolists face the threat that others will innovate in order to replace them through a process he called "creative destruction." *Id.* Under that more realistic assumption, it can be shown that there are actually mixed effects. *See* TIROLE, *supra* note , at 392-96. They depend on whether the innovation is drastic or not, with a nondrastic innovation being one where preinnovation cost levels constrain a firm who controls any new innovation to charge less than the full monopoly price. An existing monopolist has greater incentives to create nondrastic innovations because when they make such innovations it maintains their monopoly profits, whereas an entrant who makes such innovations gains only a share of duopoly profits. But an existing monopolist has less incentive to create drastic innovations because when they make such innovations it replaces their existing monopoly profits to some extent, where as entrant who makes such a drastic innovation reaps full monopoly profits with no replacement offset. In either case, though, property protection is vital to encourage either a drastic or nondrastic innovation by either the monopolist or entrant.

innovations (or other investments), that would not only lessen future innovation and investment, but perversely increase the validity of Schumpeter's claim that we have to tolerate great market power to get significant innovation or investment at all. Among other things, such an antitrust duty to deal would perversely mean that enforcement agencies should allow bigger mergers even though they would create market power, because that would encourage innovation and investment that otherwise would not occur because the antitrust duty lessened property protection. Thus, the combination of Arrow's model of effective property protection and Schumpeter's analysis of incentives where property protection is ineffective demonstrates the antitrust vice rather than virtue of allowing antitrust duties to deal to interfere with standard property rights.

The second level at which Schumpeter's point has been criticized is by the theory of X-inefficiency, which argues that monopolists are more likely than competitive firms to exhibit laziness and other agency problems.[126] This theory makes a fair amount of sense from the perspective of corporate law theory, which normally stresses that, even though capital markets imperfectly constrain agency costs, those agency costs will be limited by product market competition.[127] If the firm enjoys monopoly power, then this lessens the product market constraint and thus predictably should increase agency costs.[128] But this rise in agency costs is by definition limited to the lesser of either the capital market constraint or the firm's monopoly power, the latter of which equals the difference in value or cost between its product and other market options. Thus, any rise in agency costs cannot exceed the benefits reaped by the creation or maintenance of monopoly power from desirable innovation of investment. In short, while X-inefficiencies may tend to reduce the important benefits of monopoly power that exists because of innovation and investment, they cannot eliminate those benefits. One should also not exaggerate the difference because agency costs will also persist (to a lesser degree) on competitive markets.[129]

3. Problems with the Approach of Imposing Restrictions on Property Rights in Those Cases When They Do Not Create Significant Incentives to Innovate. This distinction between *ex ante* and *ex post* incentives to innovate also helps address various claims by many prominent scholars that patent rights should be restricted in those cases when courts have determined that the rights create little incentive to innovate to offset the imposition of antitrust duties. Although this scholarship has focuses on patents, the logic behind their proposals for such case-by-case assessments extends in obvious ways to other forms of property rights.

For example, Professor Scherer argues that, while duties to deal would theoretically reduce incentives to invest in many industries, antitrust courts have correctly chosen to imposed duties to

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[126] *See* H. Leibenstein, *X-Inefficiency Xists - Reply to an Xorcist*, 68 AM. ECON. REV. 211 (March 1978); W.J. Primaux, Jr., *An assessment of X-Efficiency Gained through Competition,* 59 REV. ECON. STAT. 105-07 (Feb. 1977); J.P. Shelton, *Allocative Efficiency vs. X-Efficiency: Comment*, 57 AM. ECON. REV. 1252-58 (Dec. 1967); H. Leibenstein, *Allocative Efficiency v. X-Inefficiency*, 56 AM. ECON. REV. 392 (June 1966).

[127] See Harold Demsetz, *The Structure of Ownership and the Theory of the Firm*, 26 J.L. &ECON. 375, 379 (1983); Fischel, *The Corporate Governance Movement*, 35 VAND. L. REV. 1259, 1264 (1982).

[128] *See* Mark J. Roe, *Rents and Their Corporate Consequences*, 53 STAN. L. REV. 1463, 1472-73 (2001)

[129] *See* Jensen & Meckling, *Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure*, 3 J. FIN. ECON. 305, 330 (1976) ("[T]he existence of competition in product ... markets will not eliminate the agency costs due to managerial control problems.... If my competitors all incur agency costs equal to or greater than mine I will not be eliminated from the market by their competition.").

license patents only in those industries where it has had no adverse effect on investment in innovation because firms still had competitive incentives to innovate.[130] He find this conclusion confirmed by evidence that the firms operating under these duties did not in fact invest any less in innovation than firms in other industries. But both his theory and evidence are purely ex post. They cannot tell us whether, if these firms had realized the law would impose this risk of compulsory patent licensing, they would have had sufficient ex ante incentives to create their inventions. Further, once judicial decisions did create such a legal risk of compulsory patent licensing, that risk would apply to all future innovations that might get patented by any firm. Thus, one would not expect this antitrust risk to diminish innovation more for those firms or industries that happened to have suffered compulsory licensing on past innovations. If anything, one would think that, since the firms subject to such duties in the past usually already possessed monopoly power, they would (under Schumpeterian analysis) have somewhat higher incentives to invest in innovation, which is in fact what Scherer found.[131] But this does not alter the fact that such duties lower the ex ante incentive to invest for all firms who dream that innovation will bring them future monopoly profits.

Others have similarly suggested that, at least in the patent context, rather than giving inventors a categorical right to exclude to further their incentives to innovate, courts should employ a case-by-case standard that weighs the extent to which exclusion contributes to innovation incentives against the allocative inefficiency created by excluding imitators. An influential article by Louis Kaplow, for example, proposes that each restrictive practice imposed by a patentee should be evaluated by balancing "the reward the patentee receives" from the practice against "the monopoly loss that results."[132] Although he does not himself apply this test to refusals to license patents to rivals, modern caselaw would seem to make such refusals a "restrictive practice" that should be judged by his proposed test. But such a determination seems beyond the ken of antitrust judges and juries, and having it resolved through antitrust litigation is bound to produce great uncertainty and highly inconsistent results, which would make business planning impossible. Nor does it ask the right question, which is instead the relationship between the reward to the patentee and the *social value* of the invention. After all, the monopoly loss that results from the exclusion of rivals is an *ex post* loss that only exists if we compare it to a baseline that assumes the invention was made in the first place. But we only get to that baseline if there are adequate *ex ante* incentives to innovate, and those incentives will be optimal if the reward to the patentee equals the social value of the invention. That social value equals the difference in value between the market option created by the patent and the pre-existing market options available from its rivals. Allowing the patentee to exclude rivals from its patent will generally allow it to charge a price premium no greater than that difference, for if it tried to charge any more then consumers would instead turn to the pre-existing market options that were available without the patent. The same is true for any other sort of intellectual or physical property right recognized by the law in order to encourage investments.

Professor Ayres and Klemperer make the even stronger claim that "unconstrained monopoly

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[130] F. M. SCHERER, THE ECONOMIC EFFECTS OF COMPULSORY PATENT LICENSING 63, 75 (New York University, Graduate School of Business Administration, Center for the Study of Financial Institutions, Monograph Series In Finance and Economics, 1977).

[131] *Id.* at 95.

[132] Louis Kaplow, *The Patent-Antitrust Intersection: A Reappraisal,* 97 Harv. L. Rev. 1813, 1816 (1984).

pricing is not a cost-justified means of rewarding patentees" because "[t]he last bit of monopoly pricing produces large amounts of deadweight loss for a relatively small amount of patentee profit."[133] Thus, they conclude that "restricting the patentee's monopoly power a small amount is likely to increase social welfare" because "[t]he benefit of reducing the deadweight loss of supra-competitive pricing is likely to outweigh the costs of a slightly lower incentive to innovate."[134] This might suggest that imposing duties to deal on patent holders (or on any monopolist) would be desirable because any decrease in incentives to innovate would be outweighed by the gain in reduced monopoly pricing.

But there are two important problems with the Ayres-Klemperer analysis. First, it depends on the assumption that demand elasticity is high: if instead it is low (as one would think would be typical for innovations not available elsewhere), then at the margin there would be little gain in social welfare but a lot of loss in monopoly profits, and thus a great loss in the incentive to innovate. Further, *ex ante* to innovation, a monopolist will likely be uncertain about what the demand elasticity will be, and thus the prospect of reducing prospective monopoly pricing can have a large effect on *expected* profits and thus on discouraging investments in innovation.

Second, even though Ayres and Klemperer show that sometimes the loss in monopoly profits is relatively small, any loss will necessarily discourage some socially desirable innovation at the margin. Allowing full monopoly pricing allows the monopolist to reap the difference between the value of what it has produced and the value of the next best market option, which is the same as the social value of the innovation. Any lower price thus reduces profits from a level that reflects this full social value, and will thus produce suboptimal investment in innovation. Ayres and Klemperer rely on the intuition that a small reduction in expected profits will only reduce innovation a little and that this will be offset by the improved ex post allocative efficiency. But to the extent this diminution in profits deters some investment in innovation, then the innovation will never made and no offsetting improvement in *ex post* efficiency will result. Further, any reduction in innovation will have productive efficiency costs that (because of their dynamic effects) will tend to far exceed the social welfare benefit of any improvement in allocative efficiency for those innovations that are made.[135]

But for present purposes one need not resolve those complex issues for there is a separate problem with extending the Ayres-Klemperer claim to antitrust duties to deal. Namely, a requirement of sharing imposes not a small, but a large reduction on the scope of monopoly power, and thus will have much more devastating effects on innovation incentives. To make the reduction small, one must instead imagine antitrust courts setting a price on access that is not at cost, but rather just a little below the monopoly level. However, determining just how far below to go would require antitrust judges and juries to set sail on the sea of doubt of determining a reasonable price, which they have always avoided. Moreover, once one adopts that approach, it is not at all clear why it should be limited to cases that can be framed as antitrust claims. If judges and juries know what the "reasonable" price is that a monopolist should charge, then that should be a claim available to any

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[133] Ian Ayres and Paul Klemperer, *Limiting Patentee's Market Power Without Reducing Innovation Incentives: The Perverse Benefits of Uncertainty and Non-Injunctive Remedies,* 97 Mich. L. Rev. 985, 987(1999).

[134] *Id.* at 990.

[135] *See supra* sources collected in note __.

buyer of the patented product, and thus a general limitation on patent law. Further, doing so through antitrust raises the risk that any monopolist that guesses wrong about how a jury will rule will be smacked with treble damages. That will tend to make monopolists overshoot and offer a price substantially below the best estimate of what a jury might require, which would make the expected loss of monopoly profits high, and thus cause a great negative effect on innovation.

Even if critics are right that the property rights provided by patent law are broader than necessary to encourage innovation, the fact is that Congress reached a contrary empirical judgment when it enacted the patent statutes. Antitrust law does not authorize judges and juries to second-guess that legislative judgment based on contrary academic theories or empirical studies. Those theories and studies should instead be argued to Congress, and if they are persuasive they would call for far more sweeping changes in patent laws than occasional (and haphazardly applied) antitrust duties to deal with rivals.

The arguments above for rejecting duties to license patents apply equally to duty to license the copyrights created by federal law or share access to the host of physical property rights normally defined by state laws. In all those cases, the property rights are recognized to protect investment and innovation, and are defined in the way that this body of law deemed optimal to do so.

Indeed, although it appears not to be commonly understood, such arguments for imposing an antitrust duty to deal at a court-set price basically amount to a claim that the relevant property rights should be converted into liability rules. For what they would do is shift from (a) an owner right to exclude unless he consents to any price offered for access to (b) a rule that allows others to invade his property as long as they pay a court-determined rate. While there is now a rich literature on the complex tradeoffs between choosing property versus liability rules,[136] the point here is that these are tradeoffs that have already been made by the body of property law that defines the limits of the relevant property rights. There is no reason for antitrust to upset those tradeoffs by injecting an uncertain threat of treble damages for exceeding different limits defined on a case-by-case basis by antitrust judges and juries.

Although legal sources support this conclusion that antitrust law should treat patent rights to exclude like other property rights to exclude,[137] other have argued that patent rights merit special treatment. Professor Kaplow, for example, expresses the commonly held view that patent law raises special tensions with antitrust law because "the very purpose of a patent grant is to reward the patentee by limiting competition, in full recognition that monopolistic evils are the price society will pay."[138] But this is neither true nor distinguishes other property rights.

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[136] *See, e.g.*, Lucian Bebchuk, *Property Rights and Liability Rules: The Ex Ante View of the Cathedral*, 100 MICH. L. REV. 601 (2001); Ian Ayres & Paul M. Goldbart, *Optimal Delegation and Decoupling in the Design of Liability Rules*, 100 MICH. L. REV. 1 (2001); Louis Kaplow & Steven Shavell, *Property Rules Versus Liability Rules: An Economic Analysis*, 109 HARV. L. REV. 713 (1996); Ian Ayres & J.M. Balkin, *Legal Entitlements as Auctions: Property Rules, Liability Rules, and Beyond*, 106 YALE L.J. 703 (1996); Ian Ayres & Eric Talley, *Solomonic Bargaining: Dividing a Legal Entitlement to Facilitate Coasean Trade*, 104 YALE L.J. 1027 (1995); A. Mitchell Polinsky, *Resolving Nuisance Disputes: The Simple Eco-nomics of Injunctive and Damages Remedies*, 32 STAN. L. REV. 1075 (1980); A. Mitchell Polinsky, *On the Choice Between Property Rules and Liability Rules*, 18 ECONOMIC INQUIRY 233 (1980); A. Mitchell Polinsky, *Controlling Externalities and Protecting Entitlements: Property Right, Liability Rule, and Tax-Subsidy Approaches*, 8 J. LEGAL STUD. 1 (1979); Calabresi & A. Douglas Melamed, *Property Rules, Liability Rules, and Inalienability: One View of the Cathedral*, 85 HARV. L. REV. 1089 (1972).

[137] *See supra* II.B (collecting sources)

[138] Kaplow, *supra* note , at 1817.

Patent rights do not preclude competition or guarantee monopolistic evils. They merely provide a right to exclude others from a particular innovation. Such patent rights often compete with other patents or methods of accomplishing the same goal, and thus may or may not enjoy any monopoly or market power. Whether a patent confers monopoly power depends entirely on how much value the patent has compared to other market options, which is what determines the level of patentee reward.

And one could say precisely the same for copyrights or physical property rights, like the right to exclude rivals from a plant in which one made investments. Such rights to exclude may or may not preclude competition or confer monopoly power, depending on how valuable that copyright or plant is compared to other market options. Whichever sort of property right we are talking about, its ability to preclude competition or create monopoly power turns on its economic value compared to the property rights held by others, not on some metaphysical distinction about the sort of property right. Alternatively, if one wishes to use words in a noneconomic meaning, and thus style patents as a preclusion of competition and creation of a monopoly, one could equally say that physical property rights preclude others from competing in the use of the same property and give one firm a monopoly over use of that property.

One might be tempted to distinguish patent rights on the grounds that investments in trying to create a new patent are more risky, and that thus maintaining *ex ante* incentives by limiting antitrust duties to deal is more critical for patent rights. But this distinction fails on several scores. First, it may or may not be true. Some big investments in physical property turn out to be risky indeed – consider the billions plowed into telecommunications in the late 1990s. Some investments in creating patents are not so risky, such as many efforts to patent an improvement on a drug with a known pharmaceutical purpose covered by medical insurance. And firms could always adjust for risk by investing in a diversified portfolio of innovation efforts. If we really believed the degree of risk mattered, courts should thus advert directly to that factor rather than drawing any categorical distinction between patent and physical rights.

Second, greater certainty in outcomes would not eliminate the *ex ante* incentive problem with imposing duties on physical property. If it would cost $1 billion to build a bridge that is so socially desirable that it would reap $1.1 billion in monopoly profits, then any duty to share the rights to that bridge with rivals will suffice to deter investment in that bridge, a socially undesirable result. Greater certainty that an investment will produce a desired product or service will not help if it is also certain that the law will prevent firms from reaping any monopoly returns for making such investments. Such a duty to deal will still produce suboptimal investment in physical property, only this time an investment we are otherwise certain would be desired by consumers.

4. Sorting Out Ex Ante and Ex Post Efficiency Claims – The Necessity of Proving Discrimination Against Rivals. Where does the above analysis leave us? On the one hand, the Supreme Court cannot mean that the *ex post* inefficiencies of excluding rivals always suffice to require sharing as a matter of antitrust law. If it did, then socially desirable investments necessary to make or maintain monopoly power would never be made, and consumers would lose a market option that they regard as substantially better than other market options. Further, the Court has

explicitly rejected the notion that monopolists always have a duty to deal with rivals.[139]

On the other hand, once we admit *ex ante* efficiencies, couldn't any monopolist *always* say it had a "valid" efficiency justification for refusing to share its property rights with its rivals? After all, since any property right to exclude outsiders must reflect a decision by some governmental lawmaker that this right has desirable effects, those desirable effects would seem to always provide a "legitimate" business reason for the exclusion. The monopolist would merely have to observe that its refusal to deal with rivals must increase its overall expected profits in some way (otherwise why would it refuse?), and any such profit increase must necessarily confer the efficiency benefit of increasing *ex ante* incentives to create, enhance, or maintain the valuable property that confers the monopoly power. The problem is that such a conclusion, coupled with the doctrine that conduct is not exclusionary if a monopolist has a legitimate or valid business purpose or efficiency motive, would indicate that monopolists *never* have a duty to deal with their rivals. And the Court has explicitly rejected that notion as well.[140]

In short, since the Supreme Court has rejected both the notion that a monopolist must always deal with rivals, and the notion that it never has to do so, it must reject respectively any theory that *ex post* inefficiencies always require sharing, or that *ex ante* efficiencies always justify denying sharing. Alas, the Court has never articulated how it resolves cases that raise both *ex post* inefficiencies and *ex ante* efficiencies.

Although its analysis focused solely on the *ex post* inefficiencies of refusing to share with rivals, the *Aspen* decision cannot reasonably be read as rejecting inquiry into these *ex ante* efficiencies, for the defendant never offered them. Perhaps the defendant did not think it had very strong *ex ante* efficiencies to offer. One tempting, but ultimately unsatisfying, theory for why this might be has to do with the provenance of its monopoly power. After all, mountains in Aspen are natural resource that the defendant did not have to create with investments, and that rivals could not physically duplicate. While investments were necessary to develop the mountains into ski facilities, much of the monopoly power was created not by those investments but by the acquisition of the already-existing second and third mountains from other firms, one of which was already fully developed.[141] Further, by the time of the disputed refusal, the defendant had already been recouping its investment with the joint pass for fifteen years, and it found joint passes a sufficient means of recouping investments in ski mountains in other competitive towns.[142]

Likewise, in other duty to deal cases, the provenance of the monopoly power at issue suggested the relative weakness of arguments about the need to encourage the investments that created that power. In *Otter Tail*,[143] "the defendants' facilities depended upon exclusive government grants."[144] In *Terminal Railroad,* the monopoly was created by the combination of existing railroad facilities rather than by fresh investment.[145] Moreover, one possible explanation for the greater

[139] *Aspen,* 472 U.S. at 601-03.
[140] 472 U.S. at 601-03.
[141] 472 U.S. at 587-89 & nn.2-5.
[142] *Id.* at 589-93, 603 & n.30.
[143] Otter Tail Power v. United States, 410 U.S. 366 (1973).
[144] L. SULLIVAN & W. GRIMES, THE LAW OF ANTITRUST: AN INTEGRATED HANDBOOK 114 (2000).
[145] United States v. Terminal R.R. Ass'n, 224 U.S. 383, 391-94 (1912).

general willingness of E.C. lawmakers to impose duties to deal on monopolists is that, compared to the U.S., more of the monopolies in Europe were created by regulations, government subsidies, or permitted combinations rather than by innovation or other investments.[146] And prominent critics of the essential facility doctrine have said that the next-best alternative to eliminating it would be to restrict it to cases where the facility is a natural monopoly, legally protected from competition, or publicly subsidized,[147] which they justify on grounds that otherwise rivals could duplicate the facilities, but which could also be justified on a provenance approach.

What makes this theory unsatisfying is that, while it may explain what actually motivated the litigants in past cases not to raise this issue, it does not provide a sound basis for generating a doctrine to decide the *ex ante* versus *ex post* issue in the full range of monopolization cases. For several reasons, it would be unwise to resolve that issue through judicial or jury inquiry into how the relevant monopoly power was created. Such an inquiry would be highly uncertain, and in most cases the sources that created the monopoly power would be mixed. Even if courts could be sure that the monopoly power was not created by investments that were made based on the prospect of monopoly profits, there remains the need for ongoing investments to maintain or enhance the value of the property that enjoys monopoly power. And giving property owners incentives to make such ongoing investments in their property is certainly an important reason for why property rights are recognized. Finally, if the monopoly were really created improperly or because of bad government policy, then the correct solution is to break up the monopolies to undo those past improprieties or errors.[148] Forced sharing of the improperly-created monopoly does not remedy the past mistakes. Rather, it worsens them by undermining not only the monopolist's incentives invest to maintain and enhance the value of property that gives it monopoly power, but also rival incentives to innovate or invest to duplicate the functional benefits of that property. And it creates enormous administrative difficulties by requiring antitrust judges and juries to set the reasonable price for access, a task only rendered more difficult by the fact that optimal prices will continually vary over time with changing market conditions, but will end up being assessed retrospectively by antitrust tribunals after years of adversary proceedings, with any wrong guess being punished by treble damages.

But there is a more telling reason why *ex ante* efficiencies could not have reasonably been offered in the *Aspen*. The *Aspen* defendant's refusal to cooperate in offering a joint pass took the form of refusing to sell lift tickets to its rival at either the wholesale price it was offering other tour operators who bought in bulk, or even at the same retail price it sold to consumers.[149] This is a more promising basis for an doctrinal rule, for an antitrust rule preventing *that* sort of discriminatory

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[146] *See* Damien Geradin, *The Opening of State Monopolies to Competition: Main Issues of the Liberalization Process* 181, 183 in THE LIBERALIZATION OF STATE MONOPOLIES IN THE EUROPEAN UNION AND BEYOND (D. Geradin, Ed., 2000).

[147] IIIA AREEDA & HOVENKAMP, ANTITRUST LAW ¶771c, at 173 (2d ed. 2002).

[148] Where instead the underlying economic fundamentals produce a natural monopoly because of economies of scale or scope, the proper remedy would instead be utility-rate regulation. But the decision whether to impose such utility rate-regulation must be left up to the legislators and regulators, which can set up an expert prospective system for setting and monitoring rates to keep profits sufficient to induce the requisite investments to create and maintain the natural monopoly. Nor should courts be quick to leap to conclusions of natural monopoly since distinguishing natural from temporary monopolies is difficult, and today's natural monopoly can change tomorrow with changes in demand, technology or other factors. *See infra.* Further, if the market is a natural monopoly that merits regulation, the appropriate rate regulation would extend far beyond antitrust rules that regulate the rates at which monopolists must deal only with rivals and only when other criteria that satisfy the duty to deal elements are met.

[149] *Aspen,* 472 U.S. at 593-94.

refusal does not deprive the defendant of any right to set the rate of reimbursement for its investments, past or current. The monopolist has already done so by setting the price at which it is willing to sell its product to others. And if that price does not suffice to induce the investment *ex ante*, then it merely indicates the investment was not optimal to make in the first place. Further, given that this price would reflect the monopoly price set by the defendant, a duty to sell to rivals at that price would not undermine rival incentives to invest to duplicate the intellectual or physical property that generates the monopoly power. Finally, it vastly simplifies administrability to base the antitrust doctrine on whether the defendant is refusing to sell to rivals at the same terms that it sells to others. Antitrust judges and juries applying such a doctrine would not have to assess the relevance of mixed causes for the creation of the monopoly power, nor the relative weight of past and present investments. Nor would they have to independently determine what the proper reasonable price is. All they would have to determine is whether a monopolist enhanced or maintained its monopoly power by refusing to sell to rivals on the same terms that it sold to others.

In short, while the *ex ante* efficiencies created by property rights do justify virtually all refusals to deal on terms other than the price set by the property owner, they do not justify discriminatory refusals to deal with those buyers who are (or deal with) rivals. Although this factor has not been explicitly mentioned in Supreme Court caselaw, such discrimination obviously exists for garden variety exclusionary conditions that limit the ability of buyers of the monopoly product to buy from rivals, since such conditions necessarily discriminate against buyers who deal with rivals. Less obviously, such discrimination against rivals existed in every case where the Court held a monopolist liable for a unilateral refusal to deal directly with its rivals. This doctrinal observation about the anti-rival discrimination present in refusal to deal cases was apparently first made by Judge Posner in a 1986 opinion,[150] though without linking such discrimination to *ex ante* incentives to invest in property or providing any other theory of why discrimination should be a relevant antitrust principle. Judge Posner also seems to have mistakenly believed *Aspen* did not involve such discrimination against rivals.[151] But he was right that *Otter Tail* did. There, the defendant discriminated against rivals by refusing to supply or wheel electric power to those municipalities that competed with the defendant in the retail distribution of electricity to houses, even though the defendant had entered into contracts that set prices for both supplying and wheeling electricity to nonrival electric systems.[152]

Further, while Posner does not mention it, such anti-rival discrimination also existed in all the per-*Otter Tail* cases where the Supreme Court affirmed antitrust liability for a refusal to deal. In *Terminal R.R.*, which involved concerted action creating a monopoly, the defendants discriminated against rivals by refusing them access to the consolidated facilities on the same terms granted to members of the combination and the remedy was accordingly limited to requiring such

[150] *See* Olympia Equip. Leasing Co. v. Western Union Telegraph Co., 797 F.2d 370, 377 (7th Cir. 1986) (Posner, J.)(the "essential feature of the refusal to deal cases" is "a monopoly supplier's discriminating against a customer because the customer has decided to compete against it").

[151] *Id.* (concluding that *Aspen* was not a conventional case because the rival "was never a customer of" the monopolist).

[152] *See* 410 U.S. at 368-72; United States v. Otter Tail Power Co., 331 F. Supp. 54, 57-58 (D. Minn. 1971). Although the bulk of the defendant's electricity sales were at retail, it did make 10% of its sales at wholesale. 410 U..S at 387 (Stewart, J., joined by Burger, C.J., and Rehnquist, J., concurring in part and dissenting in part).

equal treatment.[153] In *Lorain Journal,* the defendant discriminated by refusing to sell advertising space to those advertisers who dealt with its rival.[154] And in the now largely forgotten 1927 *Kodak* case, the defendant refused to sell to a rival dealer at the same wholesale price it sold to other dealers.[155]

Finally, in the only post-1986 Supreme Court monopolization case on the topic, the 1992 *Kodak* case, the defendant discriminatorily refused to sell parts both to firms that competed with it in providing service and to buyers who bought service from its rivals.[156] Indeed, in the last case, the Court rejected on principle the argument that such discrimination was justified to fully exploit the defendant's "investment" in creating the parts over which it had a monopoly.[157] This amounts to a rejection of the proposition that furthering such *ex ante* investment incentives justifies discrimination against rivals or those who deal with them.

All these cases are thus consistent with the relatively administrable rule that *ex ante* efficiencies always justify refusals to deal unless the monopolist discriminates by refusing to offer rivals (or buyers who deal with rivals) the same terms it was voluntarily offering other similarly-situated buyers. Buyers might not be similarly situated if it is more costly to serve some buyers than others, which certainly means this rule is not entirely free of ambiguity. But compared to conclusory references to whether refusals further "valid" business reasons, such a rule provides a far clearer method for monopolists to avoid liability, and for tribunals to adjudicate and remedy it. Further, any requirement to sell at the defendant-set monopoly price undermines neither the monopolist's *ex ante* incentives to invest nor the rival incentives to duplicate those investments. And since the defendant itself has consented to the price, this use of antitrust law does not convert property rights to liability rules.

Limiting any antitrust duty to deal to cases where the defendant discriminates against rivals also minimizes what would otherwise be tricky takings clause issues. After all, as the Court has elsewhere noted, "the right to exclude others" is "'one of the most essential sticks in the bundle of rights that are commonly characterized as property.'"[158] To require an owner to give others "access" to its property on terms set by the government would "deprive" the owner of this right, and thus "[w]ithout question" would constitute "a taking" of property under the Fifth Amendment.[159] The antitrust laws are not somehow immune from this limitation, and thus antitrust duties to deal at a court-set price would raise difficult just compensation issues. On the other hand, where the defendant itself sells access to its property on terms it sets, a government requirement that such access also be sold to rivals on equal terms would seem either to raise no takings issue or to prove that the payment of a price set by the defendant by definition provides the requisite "just

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[153] 224 U.S. at 406-12. This element of discrimination against rivals has also been cited by the Court as grounds to condemn concerted action denying access to facilities that enjoy market power that falls short of monopoly power. *See* Associated Press v. United States, 326 U.S. 1, 10-11, 13 (1945).

[154] Lorain Journal Co. v. United States, 342 U.S. 143 (1951).

[155] Eastman Kodak Co. v. Southern Photo Materials, 273 U.S. 359, 368-69, 375 (1927).

[156] 504 U.S. at 458, 464 n.8, 483 & n.32.

[157] *Id.* at 485.

[158] Dolan v. City of Tigard, 512 U.S. 374, 383 (1994) (quoting Kaiser Aetna v. United States, 444 U.S. 164, 176 (1979)).

[159] *Dolan*, 512 U.S. at 383.

compensation."[160]

This limitation on a monopolist's right to discriminate among outsiders should be sharply distinguished from claims that the defendant has discriminated in favor of itself over all outsiders. That sort of "discrimination" in favor of a property owner is inherent in the property right to exclude, and necessary to further *ex ante* incentives to invest in property. Consistent with this, the lower U.S. appellate courts have rejected the proposition that the essential facilities doctrine requires firms "to cease using its own facility so that [a rival] can begin using it."[161] Nor do they require firms that use their own facilities but do not voluntarily provide them to other outsiders to enter into a new line of business by providing those facilities to rivals.[162] Unless a firm voluntarily engages in the business of providing access to its property, one would have no baseline to determine whether a defendant was discriminating in the terms it was offering rivals.

Similarly, one should also distinguish the case where a firm has effectively just transferred the right to exploit valuable patent or other property rights from itself to another firm. Such a transfer does not increase the first firm's monopoly power but merely replaces the monopolist with a more efficient firm, which is entirely desirable. This sort of replacement should accordingly not be deemed to trigger a nondiscrimination duty to also transfer that property to all other rivals as well, for such a duty could destroy the value of the property right and thus inefficiently discourage transfers to firms that can make more use of the property. For example, often the firms or individuals that are good at innovating and creating new patents are not the best firms for actually making and selling the patented product. It will thus often be desirable for the patent holder to exclusively license that patent to another firm. If any such exclusive license were invalid, and the patent holder were obligated to also license all other firms that want to use it, then the first firm would not be willing to pay as big a flat or annual fee for it, for the obligation to license the patent

[160] Likewise, when a patent holder conditions his license on payment of a particular price, he lies within the doctrine that "the patentee may grant a license to make, use and vend articles under the specification of his patent for any royalty or upon any condition the performance of which is reasonably within the reward which the patentee by the grant of the patent is entitled to secure." United States v. General Electric Co., 272 U.S. 476, 489 (1926). But he exceeds the limits of that doctrine when he tries to reap rewards above that level by imposing conditions that discriminate against rivals.

[161] City of Vernon v. S. Cal. Edison, 955 F.2d 1361, 1366-67 (9th Cir. 1992); *see also* MCI Comm. v. AT&T, 708 F.2d 1081, 1149 (7th Cir. 1983) (rejecting such a claim or any rival claim to "preferential access"). A different sort of case is the one where a monopolist buys up property that is a necessary input for rivals but does *not* use the property itself but rather holds on to the property to keep it from rivals. Such an exclusionary suppression of inputs by a monopolist constitutes illegal illegal monopolization under well-established antitrust law. *See, e.g.,* American Tobacco v. United States, 328 U.S. 781, 803-804 (1946); III AREEDA & TURNER, ANTITRUST LAW at 8, 250 (1978). *See also* III AREEDA & HOVENKAMP, ANTITRUST LAW ¶702c, at 152 (2d ed. 2002) (same for hiring talent that the monopolist does not use in order to deny it to rivals). Since the property was created by others, and is going unused by the monopolist, there is no tenable argument in such a case that the right to exclude is necessary to preserve *ex ante* incentives to create and preserve property valuable enough to enjoy monopoly power.

[162] *See* Olympia Equip., 797 F.2d at 377 (relevant discrimination against rivals is only present when a firm decides to "withhold from one member of the public a service offered to the rest."). Laurel Sand & Gravel v. CSX Transp., 924 F.2d 539, 544-45 (4th Cir. 1991). *Cf.* 14 H. HOVENKAMP, ANTITRUST LAW ¶2312c, at 23-24 (1999) (noting that even the Robinson-Patman Act does not apply to discrimination between the defendant's own retail operation and independent retailers). In contrast, the E.C. has stated that, a dominant firm with an essential facilities acts illegally if it "grants access to competitors only on terms less favorable than those which it gives its own services, thereby placing the competitors at a competitive disadvantage" because a "company in a dominant position may not discriminate in favor of its own activities in a related market ... without objective justification." Sea Containers v. Stena Sealink, 1994 O.J. (L 15) 8, at ¶67. This condemnation of discrimination in favor of oneself seems hard to square with basic property rights and the maintenance of *ex ante* incentives for investment.

to other firms would destroy its monopoly power. This would discourage such licensing, requiring either other forms of licensing that might less efficient,[163] or the firm to make the product itself even though it is less efficient. Either of those less efficient alternatives will reduce the returns on creating the patent, and thus will lead to suboptimal investments in such innovations. Likewise, a firm that makes the investment to create some physical property – such as a bridge – that is so valuable that it enjoys monopoly power should be able to lease that bridge to another firm to operate as a monopoly without then having a nondiscrimination duty to also lease the bridge to any other firm that wants to operate the same bridge in competition with the first firm. Otherwise, such a duty would discourage transfers to the most efficient bridge operator, which in turn would lead to suboptimal investments in valuable bridges. On the other hand, if the licensee or leasee to which the right to operate the monopoly then sells the underlying product or service to outsiders generally, rivals should be able to buy that product or service on the same terms as other outsiders.

Limiting any monopolist's duty to deal to cases involving discrimination against rivals should also be contrasted with the commonly cited alternative of limiting any such duty to cases where the monopolist terminated an existing willingness to supply rivals. True, there is language in *Aspen* that could be read to suggest such a limitation,[164] but such a limitation would be inconsistent with *Otter Tail,* which imposed a duty to deal without requiring any such termination of a pre-existing willingness to supply the rival, which was a new entrant.[165] Such a limitation would also bear no relationship to preserving *ex ante* incentives. Indeed, such a limitation would create perverse incentives for a monopolist to refrain from *ever* dealing with a rival, even if it were otherwise inclined to do so, out of the fear that this proposed antitrust rule would convert any such dealing into the sort of lifetime tenure normally reserved for professors. It would thus affirmatively encourage precisely the sort of discrimination against rivals that is least necessary to further *ex ante* incentives for investment. One might fear that a nondiscrimination rule would have the similar effect of discouraging a monopolist from dealing with anyone so that it does not have to deal with its rivals. But that sort of behavior is implausible and self-deterring, for if a monopolist does not sell to *someone,* it cannot make any profit or recoup its investments.[166] A termination rule would also improperly freeze in place a business practice even though it has become inefficient. A discrimination rule would instead allow the defendant do abandon an inefficient business practice as long as it does so even-handedly. The main benefit of a requirement of proving termination is that, compared to having no limit at all, it does aid administrability because past terms provide some benchmark for determining the terms at which the monopolist must deal. But the aid is limited

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[163] If monitoring and enforcement costs are nonexistent, it would presumably always be more efficient for the patent holder to license as many manufacturers as it can with royalties paid on a per unit basis. If the patent reduces the cost of manufacture by $10 (or increases the product value by $10) then firms should be willing to pay a $10 per unit royalty, and the patent holder will want competition in manufacture to maximize the number of units made. But monitoring and enforcement costs may be sufficiently high that it is more efficient to license the patent on some lump-sum or annual basis.

[164] 472 U.S. at 603.

[165] 410 U.S. at 368-72.

[166] A monopolist might prefer to keep some input for its own use in order to combine it with other inputs in order to sell a finished product to outsiders. But that is simply an exercise of its right to exclude others from its property that property law protects to further *ex ante* efficiencies. *See generally* X AREEDA, ELHAUGE & HOVENKAMP, ANTITRUST LAW ¶1748, at 242-250 (1995) (explaining why such cases are appropriately judged under duty to deal rather than tying doctrine).

because whatever terms were reasonable yesterday will change quickly over time as market conditions change. A requirement of proving discrimination, in contrast, provides a relevant and constantly changing benchmark at each moment in time.

None of this means that antitrust law does or should impose some general common carrier duty of nondiscrimination on all monopolists. After all, under U.S. law, monopolists generally are free to engage in price discrimination as long as they do not violate the particular requirements of the Robinson-Patman Act. The above analysis instead shows that discrimination against rivals (or those who deal with them) is *necessary* to rebut the otherwise ubiquitous justification that excluding others from a monopolist's property has *ex ante* efficiencies. This does not mean that such discrimination is also *sufficient* to prove monopolization, for the other elements would still have to be proved. In particular, it would remain necessary to show that the refusal to deal with the rival on equal terms was *ex post* inefficient and that it contributed significantly to enhancing, maintaining or slowing the erosion of monopoly power. For example, a refusal to deal with rivals would not satisfy those conditions if sharing access with rivals created costs that exceeded any procompetitive benefits, or if the rival could feasibly duplicate the facilities it seeks to require the monopolist to share. Proof on those issues thus remains necessary in a duty to deal or essential facility case.[167] Likewise, where the alleged exclusionary conduct is that the monopolist is selling to buyers on exclusionary conditions that limit their purchases from rivals (like tying, exclusive dealing, or other obligations that limit purchases from rivals), that conduct is only illegal if not saved by *ex post* efficiencies furthered by the exclusionary conditions.[168]

B. Whether Conduct Succeeds by Enhancing Monopolist Efficiency or by Worsening Rival Efficiency

Suppose a monopolist's exclusionary conduct does have an efficiency justification. Does that *suffice* to make its conduct legal? Or does the Court then have to move on to weighing that efficiency benefit against the inefficiency harms created by the exclusionary conduct?

The former conclusion seems supported by the cases stating that conduct that tends to exclude rivals is nonetheless legal if it furthers "valid," "normal," or "legitimate" business purposes.[169] If efficiency benefits suffice to make a purpose valid, normal, or legitimate, then that would seem to indicate that they suffice to make the conduct legal. But other cases suggest that in a monopolization case, like for any agreement in restraint of trade case, the efficiency benefit should

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[167] *See Aspen*, 472 U.S. at 608-09 (considering claimed *ex post* inefficiencies); *Otter Tail*, 410 U.S. at 378, 381-82 (considering both the difficulty of municipalities creating their own facilities and any *ex post* inefficiencies created by a duty to deal); *Terminal R.R.*, 224 U.S. at 405 (stating that ordinarily the defendants could set whatever terms it wanted for its facilities or "exclude altogether" other firms because, "[i]f such terms were too onerous, there would ordinarily remain the right and power [for rivals] to construct their own" facilities, but that the situation in its case was "extraordinary" because such duplication was not feasible); *supra* at __ & note __ (collecting lower court essential facilities cases requiring that a plaintiff prove the facility is nonduplicable and that sharing is feasible).

[168] *See Kodak*, 504 U.S. at 483-85 (considering such claimed *ex post* efficiencies, but rejecting on principle the claim that discriminating against rivals or those who deal with them was necessary to fully exploit the investment it made in creating valuable parts); Microsoft v. U.S., 253 F.3d 34, 58 (D.C. Cir. 2001) (en banc) (court must consider any offered procompetitive justifications for a monopolist's exclusionary conditions); LePage's v. 3M, 324 F.3d 141, 163-64 (3rd Cir. 2003) (en banc) (considering procompetitive justifications for such exclusionary conditions).

[169] *Kodak*, 504 U.S. at 483 & n.32; *Aspen*, 472 U.S. at 605, 608.

be weighed against the anticompetitive harm. This goes all the way back to the famous *Standard Oil* case, where the Supreme Court acknowledged that the statutory word "monopolize" was ambiguous, and announced that "the criteria to be resorted to in any given case for the purpose of ascertaining whether violations of [§2] section have been committed is the rule of reason."[170] More specifically, in the recent *Microsoft* en banc decision, the D.C. Circuit stated in dicta that, if exclusionary conduct had both an anticompetitive effect and a procompetitive justification, then a monopolization claim would be resolved by determining whether "the anticompetitive harm of the conduct outweighs the procompetitive benefit."[171]

How can we reconcile these seemingly conflicting lines of cases, and if open-ended balancing is required, how can antitrust courts and juries possibly do it without creating massive business uncertainty? The answer lies in determining whether the alleged exclusionary conduct succeeds in furthering monopoly power (1) only if it the monopolist has improved its own efficiency or (2) by impairing rival efficiency whether or not it enhances monopolist efficiency. In the first category of cases, the greater efficiency of the monopolist may cause it to expand, which in turn makes rivals to lose sales and become less efficient. But the root cause is the increased efficiency of the monopolist because this conduct cannot expand or maintain its monopoly share unless the monopolist has improved its efficiency. In the second category of cases, the decreased efficiency of the rival procured by the exclusionary conduct causes the monopolist to gain or maintain its monopoly share even if the conduct does not improve the efficiency of the monopolist at all. For reasons explained below, the first category should be per se legal, and the latter per se illegal, without having courts or juries engage in any open-ended balancing.

1. Conduct That Succeeds by Improving the Monopolist's Own Efficiency. In the first camp fall cases where the monopolist has simply improved its own efficiency by creating a "superior product" or using its "business acumen" to figure out how to make its costs lower, and then bested its rivals on the market by selling a product that is better or cheaper than the products offered by rivals. In such cases, the monopolist's conduct certainly has an efficiency justification. On the other hand, it is also true that driving out the less efficient rivals can produce anticompetitive effects that might, if one could do the social welfare calculation accurately, outweigh those efficiency benefits. For example, many scholars have argued that a monopolist should not be able to exploit its greater efficiency by charging above-cost prices that drive out its less efficient rivals because of the allocative inefficiency that results when rivals are driven out or deterred from entering.[172] In addition, as noted above, scholars sometimes argue that, while a property right to exclude does give a monopolist greater incentives to invest in improving its own efficiency, an antitrust duty to deal should nonetheless be imposed when this efficiency benefit is offset by the allocative inefficiency that will result if rivals do not get access to the benefits of that property too.[173] Similarly, while the *Microsoft* case involved many exclusionary conditions imposed on buyers, one of the claims was that Microsoft's technological bundling of its operating system and browser constituted monopolization because it excluded rivals in the browser market. This issue was ultimately resolved

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[170] Standard Oil Co. v. United States, 221 U.S. 1, 62 (1911).
[171] Microsoft v. U.S., 253 F.3d 34, 58 (D.C. Cir. 2001) (en banc) (citing *Standard Oil*).
[172] *See* Elhauge, *Why Above-Cost Price Cuts Are Not Predatory*, *supra* note , at 684-86, 754-55 (collecting sources).
[173] *See supra* Part III.A.3.

by the holding that there was no technological or efficiency benefit at all from that bundling.[174] But suppose there had been: would the efficiency benefits from producing this "superior product" then have to be weighed against the harm? So some have concluded, noting that it is possible that any efficiency gain from the improved product would be offset by the inefficiency costs created by the exclusion of browser rivals.[175]

It is this sort of claim that I think the Court correctly means to reject with its monopolization test, which stresses that monopolies earned by "superior products" and "business acumen" are legal.[176] That test suggests that, when a firm figures out how to make a better or cheaper product, and then uses that advantage to drive out rivals, antitrust tribunals will not engage in a social welfare calculus to determine whether the product improvement offsets the inefficiency produced by the loss of competition. The risks are simply too great that such an open-ended balancing inquiry, coupled with the risk of treble damages, would deter desirable innovation and investments in improving products or the methods of making them. In such cases, the existence of any efficiency justification will instead suffice to end the inquiry.

Significantly, the various statements by the Court that a "valid" or "legitimate" business reason would suffice to legalize otherwise exclusionary conduct were all made in a context that suggested those statements were limited to refusals to deal,[177] where the defendant is seeking to reap an advantage from a superior product. In such cases, as noted above, any nondiscriminatory refusal to deal or insistence on high prices furthers *ex ante* efficiencies, and thus should suffice to protect the refusal from condemnation. This is consistent with the fact that Supreme Court cases have condemned only those refusals to deal that discriminate against rivals and thus do not further *ex ante* efficiencies.[178]

Other language in Supreme Court opinions also supports this conclusion. The *Copperweld* Court observed, "an efficient firm may capture unsatisfied customers from an inefficient rival, whose own ability to compete may suffer as a result. This is the rule of the marketplace and is precisely the sort of competition that promotes the consumer interests that the Sherman Act aims to foster."[179] This language excludes from the antitrust calculus any anticompetitive effect produced by a reduction in the ability of rivals to compete because the defendant won away sales by its own greater efficiency. The *Aspen* Court favorably cited a jury instruction that stressed:

> [M]onopoly power which is thrust upon a firm due to its superior business ability and efficiency does not constitute monopolization. For example, a firm that has lawfully acquired a monopoly position is not barred from taking advantage of scale economies by constructing a large and efficient factory. . . . We are concerned with conduct which unnecessarily excludes or handicaps competitors. This is conduct

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[174] United States v. Microsoft, 253 F.3d 34, 66-67 (D.C. Cir. 2001) (en banc).

[175] Steven C. Salop & R. Craig Romaine, *Preserving Monopoly: Economic Analysis, Legal Standards, and* Microsoft, 7 GEO. MASON L. REV. 617, 650 (1999) (arguing that if such a product design should be condemned if it "improves product performance by $5 and also creates barriers to competition that permit the monopolist to raise prices by $50."); United States v. Microsoft, 147 F.3d 935, 958-59 (D.C.Cir.1998) (Wald, J., concurring in part and dissenting in part).

[176] *See supra* Part I.

[177] *Kodak*, 504 U.S. at 483 & n.32; *Aspen*, 472 U.S. at 605, 608.

[178] *See supra* Section III.A.4.

[179] Copperweld Corp. v. Independence Tube Corp., 467 U.S. 752, 767 (1984).

> which does not benefit consumers by making a better product or service available--or in other ways . . . [180]

This language exempts conduct that harms rivals as a byproduct of increased monopolist efficiency, and endorses legality for conduct that creates a "better product or service" market option for consumers. The *Aspen* Court also favorably quoted Robert Bork for the proposition that: "Improper exclusion (exclusion not the result of superior efficiency) is always deliberately intended."[181] This apparently approves equating "improper exclusion" with exclusion that was "not the result of superior efficiency." So does its statement that, "If a firm has been 'attempting to exclude rivals on some basis other than efficiency,' it is fair to characterize its behavior as predatory."[182] All these statements seem to confer *per se* legality on a monopolist's efforts to make itself more efficient than rivals, and then exploit that greater efficiency in a way that drives out rivals.

Consistent with this, the Supreme Court has explicitly rejected the proposition that above-cost pricing can be predatory.[183] This permits a monopolist to take whatever steps it wants to improve its own efficiency and lower its costs, and then to use that greater efficiency to drive out its rivals. Such above-cost price cuts to drive out rivals may sometimes produce allocative inefficiencies, but the Court is correct that permitting them will increase efficiency over the full range of cases, especially if one takes into account the effects on *ex ante* incentives to become more efficient.[184] Similarly, while the D.C. Circuit in *Microsoft* did state the general test that it would balance procompetitive effects against anticompetitive ones when it was faced with a case dominated by Microsoft's exclusionary agreements with buyers, the fact is that it did not really apply that sort of balancing test when faced with a claim that a superior product has anticompetitive effects. For example, the en banc opinion considered a claim that Microsoft had designed certain software in a way that made Java applications run faster on its operating system but incompatible with rival operating systems. Although the opinion stated that its test was that "the incompatible product must have an anticompetitive effect that outweighs any procompetitive justification for the design," in went on to hold that the fact that the product ran faster on Microsoft machines sufficed to make it legal.[185] This technological benefit was certainly a procompetitive justification but did not really eliminate the anticompetitive effect (although the court said it did) since the product design still impaired rival efficiency in a way that reduced their ability to constrain Microsoft's monopoly power. It thus amounted to a holding that any technological benefit suffices when the monopolist has improved its own product, without any need to weigh it against any anticompetitive consequences that product design may have by impairing rival efficiency.

Further, when the D.C. Circuit had earlier considered in isolation the product design question

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[180] *Aspen*, 472 U.S. at 596-97.

[181] *Aspen*, 472 U.S. at 602-03 (quoting BORK, *supra* note , at 160).

[182] *Aspen*, 472 U.S. at 605 (quoting BORK, *supra* note , at 138).

[183] Brooke Group v. Brown & Williamson, 509 U.S. 209, 222-25 (1993). Discounts conditional on buyers limiting purchases from rivals are an entirely different matter since they can gain market share by foreclosing and limiting the efficiency of rivals even if they do not improve the efficiency of the monopolist. *See* Elhauge, *Why Above-Cost Price Cuts Are Not Predatory*, *supra* note , at 698 n.53; LePage's v. 3M, 324 F.3d 141 (3rd Cir. 2003) (en banc); *infra* at __.

[184] For an detailed explanation of why this is so, see Elhauge, *Why Above-Cost Price Cuts Are Not Predatory*, *supra* note , at 754-804.

[185] Microsoft v. U.S., 253 F.3d 34, 74-75 (D.C. Cir. 2001) (en banc).

whether technologically bundling the operating system and browser were anticompetitive, the D.C. Circuit had specifically concluded that any technological benefit from the bundling would suffice to make the bundle legal.[186] The court recoiled in horror from the dissent's suggestion that it should decide whether to condemn the creation of such a superior product by weighing its technological benefit against any resulting anticompetitive harm.[187] On this the D.C. Circuit was correct that such a social welfare calculus "was not feasible in any predictable or useful way" since placing a value on any technological benefit is beyond the ability of antitrust courts, and weighing any such technological value against the anticompetitive harm would involve trading off "incommensurable" factors.[188] While it reached that decision in the context of enforcing a consent decree, the same conclusion is even more justified for typical antitrust litigation because leaving such an open-ended issue to antitrust judges and juries imposing treble damages would create a severe risk of overdeterring desirable product innovation.[189] In the en banc decision, the D.C. Circuit condemned this technological bundling as exclusionary conduct not because the anticompetitive effect outweighed the technological benefit, but because it turned out there was no technological benefit at all.[190] Indeed, the district court had found that this bundling actually *worsened* technological performance.[191]

The D.C. Circuit's analysis certainly indicates that showing an anticompetitive effect is necessary to condemn a product design because it need not even reach the procompetitive justification issue until such an anticompetitive effect shown. Thus, the lack of a technological benefit does not suffice to make a monopolist's product design illegal. But its holdings also indicate that any actual technological benefit does suffice to make the monopolist's product design legal even though it may have offsetting anticompetitive effects.

The point is not that unilateral efforts to improve or exploit a monopolist's efficiency by offering a superior or cheaper product never impose offsetting inefficiencies by driving out rivals and ending market competition. The point is that normally the benefits of such efforts greatly outweigh the costs, and antitrust courts and juries cannot reliably determine when that general rule does not hold. Thus, antitrust doctrine sensibly prefers to rely not on such case-by-case substantive judgments, but on a market *process* that allows monopolists to reap whatever gains they can by efforts to improve their own efficiency, while subjecting them to the constant counter-pressure that their rivals will be trying to do the same. Thus, where alleged exclusionary conduct does have an efficiency justification, and can succeed in furthering monopoly power only to the extent the monopolist has successfully improved its own efficiency, then that alone suffices to make the

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[186] United States v. Microsoft*,* 147 F.3d 935, 949-51 (D.C.Cir.1998)

[187] *Id.* at 952-53.

[188] *Id.*

[189] For my prior argument making that point in a co-authored treatise, see X AREEDA, ELHAUGE, & HOVENKAMP, ANTITRUST LAW ¶1746b, at 226-27 (1996). On the other hand, the defendant must show that there is some technological benefit derived by the bundling being done by it rather than by its buyers. *Id.* at 227-29. The D.C. Circuit mistakenly applied this test in its first opinion, relying on an asserted technological benefit that could have equally been produced by allowing Microsoft's buyers – who were computer makers – to bundle the operating system and browser if they thought that produced a worthwhile technological benefit. *See* Elhauge, *The Court Failed My Test*, THE WASHINGTON TIMES, at A-19 (July 10, 1998).

[190] Microsoft v. U.S., 253 F.3d 34, 66-67 (D.C. Cir. 2001) (en banc).

[191] United States v. Microsoft, 84 F.Supp.2d 9, 53-58 (D.D.C. 1999).

conduct legal without further inquiry into its possibly adverse effects on overall market efficiency.

2. Conduct That Succeeds by Impairing Rival Efficiency. Now let's consider exclusionary conduct that furthers monopoly power by impairing rival efficiency whether or not it enhances the monopolist's own efficiency. Normally such exclusionary conduct does so because it forecloses rivals from supplies or outlets they need to achieve full efficiency. Below-cost pricing, for example, can divert sales from rivals in a way that impairs rival efficiency even if the defendant did not enhance its own efficiency because its prices are lower than its efficiency justifies. More typically, a monopolist forecloses rivals by imposing exclusionary conditions on sales that limit the ability of buyers to buy from its rivals. For example, a monopolist might offer a product discount (on this or another product) if buyers will agree to buy all or some high percentage of their purchases from the monopolist. If enough other buyers agree, then this can produce a substantial marketwide foreclosure.[192] Likewise, a monopolist might impose similar exclusionary conditions on its purchases that limit the ability of suppliers to supply its rivals. All these exclusionary conditions are discriminatory in the sense noted above because they discriminate against those who deal with rivals.

Where such foreclosure so completely deprives rivals of supplies or outlets that they cannot make any sales at all, then they cannot stay in business and the harm to their efficiency is plain. But exclusionary conditions that produce far less extreme foreclosure can also impair rival efficiency. In most industries, there are economies of scale at low output levels, so that firms can lower their costs by expanding until they reach the output level that minimizes their costs, which is called the minimum efficient scale. If foreclosure prevents a competitive number of rivals from maintaining this scale, or from expanding their operations to reach it, then it impairs their efficiency.[193] Foreclosure can similarly deprive rivals of economies of scope if, without the foreclosure, rival expansion would have enabled them to offer a variety of products that can be more efficiently produced or sold together than separately. Further, even if rivals are able to achieve their minimum efficient scale and scope of production, foreclosure that bars rivals from the most efficient suppliers[194] or means of distribution[195] will also impair rival efficiency by increasing their costs for

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[192] Unless, that is, the buyers are dealers who merely resell the product to ultimate consumers, entry barriers to being a dealer are zero, and any entrant can immediately and costlessly expand sales to any extent necessary. In that case, foreclosure of dealers cannot effectively foreclose rivals because they can simply create a new entrant who can immediately access the entire consumer market. But foreclosure will limit rival sales under more realistic assumptions about dealer entry and expandability. Nor is this likely to be an issue if the foreclosed buyers do not merely resell the product but use it in some fashion. This is clearest when buyers are the ultimate consumers of the product, for then a rival could not possibly overcome foreclosure by creating new buyers and having them expand to make all market purchases.

[193] Note that this anticompetitive effect is not necessarily eliminated if the unforeclosed market can sustain merely one rival, for if one rival exists it would be less likely to undercut monopoly pricing since it knows it will make less profit in the long run if it did. Rather, to avoid this anticompetitive effect, the unforeclosed market must be large enough to sustain the number of rivals at their minimum efficient scale that is sufficient to prevent such coordination.

[194] *See* Krattenmaker & Salop, supra note , at 234-45; Stephen C. Salop & David T. Scheffman, *Raising Rivals'Costs*, 73 AM. ECON. REV. 267 (1983) (Special Issue).

[195] *See* LePage's v. 3M, 324 F.3d 141, 159-60 & n.14 (3rd Cir. 2003) (en banc); Microsoft v. U.S., 253 F.3d 34, 70-71 (D.C. Cir. 2001) (en banc). Although such distributors are nominally buyers, one can conceptualize their foreclosure as effectively a foreclosure of the most efficient suppliers of a necessary input called distribution services.

delivering products to customers. Most industries are also characterized by a learning curve,[196] so that substantial foreclosure of the market can impair rival efficiency by simply slowing down rival expansion even though it does not outright prevent that expansion.

If rival efficiency is impaired in any of these ways, then rivals will have to cover their now-higher costs by charging higher prices than they otherwise would have. This will worsen the market options available to consumers, and mean that these rivals will impose less of a constraint on the monopolist's market power than they otherwise would have. This can thus enhance or maintain monopoly power even if it never drives rivals out of the market.

Many modern industries are also characterized by network effects, which means that one seller's product is more valuable to buyers the more that other buyers have purchased the same good from that seller.[197] Where network effects exist, foreclosure can impair rival efficiency by denying rivals access to the number of buyers they need to make their products more valuable to all buyers. Rather than raising rivals' costs, this strategy succeeds by lowering the value of rivals' products. This also worsens the market options available to consumers and lessens the ability of rivals to constrain the monopolist's market power.

Finally, in markets where competition by innovation is important, foreclosure can deny rivals economies of scale in recouping investments in research. If firms are foreclosed from a significant share of the market, then successful innovations will have a smaller payoff than they otherwise would have, which will discourage efficient investments in research and innovation. For example, suppose it would cost $1 million to invest in research by a firm that has a 50% chance of successfully innovating to create a product that would be sufficiently better than current market options that, if created, it would take all customers in a market with 2.1 million customers and earn the firm an additional $1/customer.[198] Without foreclosure, capital markets would provide the firm with funding because the expected returns are $1.05 million, which exceeds the $1 million cost, and this is socially efficient since the net benefits exceed the costs. But if even as little as 10% of the market were foreclosed, then capital markets would not provide the firm with funding for its research because the expected payoff would only be $945,000, which is less than the cost. Thus, in this example, 10% foreclosure could preclude rivals from obtaining the capital funding they need to make efficient, socially desirable investments in research and development. Because incentives for research investments are optimal if the entire market is open to a firm that succeeds with new innovation, agreements that foreclose a significant share of the market will discourage some funding necessary to make efficient investments in innovation. This suboptimal level of innovation will

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[196] See, e.g., James E. Hodder & Yael A. Ilan, *Declining Prices and Optimality When Costs Follow an Experience Curve*, 7 MANAGERIAL & DECISION ECON. 229 (1986); A. Michael Spence, *The Learning Curve and Competition*, 12 BELL J. ECON. 49 (1981).

[197] See, e.g., David S. Evans & Richard Schmalensee, *A Guide to the Antitrust Economics of Networks*, ANTITRUST, Spring 1996, at 36; Michael L. Katz & Carl Shapiro, *Systems Competition and Network Effects*, 8 J. ECON. PERSP. 93 (1994). Network effects are often called network externalities, but that terminology is inaccurate unless market participants fail to internalize these effects. *See* S. J. Liebowitz & Steve Margolis, *Network Effects and Externalities*, THE NEW PALGRAVES DICTIONARY OF ECONOMICS AND THE LAW 671, 671 (MacMillan 1998).

[198] For simplicity, costs here include normal returns on capital and earnings reflect the present value of future earnings. Investors are also assumed to be risk neutral. Taking risk aversion into account would only exacerbate the anticompetitive effects of foreclosure by increasing the risks faced by new innovative companies.

deprive consumers of better market options, and will help protect the monopolist's market power against innovative threats.

There are many subtle distinctions among economies of scale, scope, learning, research, and network effects. But they can all roughly be described as economies that depend on reaching a certain market share – so for purposes of linguistic simplicity let me call them all "economies of share."[199] The common element is that such economies of share can be denied to rivals through marketwide foreclosure. Exclusionary conduct that produces a marketwide foreclosure that denies rivals these economies of share thus impairs rival efficiency.

Note that the proper baseline for determining whether rival efficiency has been impaired is not the status quo. That is, the question is not whether the conduct has rendered the rival less efficient than it had been in the past. For generally exclusionary conduct is used to preserve existing monopoly power to prevent rivals from *gaining* efficiencies they otherwise would have gained.[200] Thus, the proper baseline is whether the exclusionary conduct helps enhance or maintain monopoly power by depriving rivals of efficiencies they could have obtained without the exclusionary conduct. Since a nondiscriminatory setting of the above-cost terms on which the monopolist will deal is simply an exercise of the property right to exclude that rewards and reflects an independent improvement in monopolist efficiency, such conduct should not be considered an exclusionary impairment of rival efficiency.[201] Rather, one must show the monopolist went beyond the improvement in its monopolist efficiency by either pricing below its cost or by discriminating against rivals or those who deal with them.

The key factor that distinguishes the sort of exclusionary conduct that merits condemnation is that it can successfully increase or maintain the monopolist's market share even if the monopolist has not increased its efficiency in any way. Where the conduct in fact does not increase the monopolist's efficiency at all, then the issue is easy, for such conduct impairs rival efficiency without any offsetting efficiency benefit on the other side of the ledger. For example, suppose there were economies of scale and the monopolist acknowledged that the minimum efficient scale was 40%, but the monopolist uses exclusionary agreements that foreclose its only rival from 70% of the market. The monopolist might try to argue that those agreements were necessary to encourage it to make the sunk cost investments in its facilities to attain economies of scale. But that argument would be easy to reject, for the economies of scale by definition bottom out at 40% of the market, and thus the agreements that assured the monopolist 70% of the market provided no incremental increase in the monopolist's efficiency. Instead, their sole effect is to worsen the efficiency of its rival by denying it economies of scale.

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[199] More precisely, economies of scale depend on size, but if we assume market output is relatively static then a certain share implies a certain size. Likewise, economies of scope more precisely depend on achieving a certain size across multiple product markets. And learning curve economies more precisely depend on total past production rather than current size or share, but if a firm is foreclosed from a substantial share of the market in its early years that will limit its total past production and thus slow down its progress along the learning curve.

[200] *See infra* Section IV.C.

[201] If one instead adopted a baseline that entitled rivals to access to such property because their efficiency would be impaired without it, then that would seem to "make all property rights illegal" because their "purpose and effect is to raise others' (including rivals') costs of using goods protected by" those property rights. Wesley J. Liebeler, *Exclusion and Inefficiency,* 11 REGULATION 34 (1987).

This same sort of analysis applies to any case where economies of share peter out below 50% of the market. Such economies of share can never provide a justification for exclusionary conduct by a monopolist who, by definition, has a market share over 50%. A seemingly more difficult case is where the monopolist claims that economies of share extend beyond 50% of the market. In that case, the monopolist might argue that exclusionary conditions that guarantee it more than 50% of the market are necessary for it to improve its own efficiency. True, if the economies of share are over 50%, then any exclusionary conduct that guarantees the monopolist over 50% of the market must by definition be impairing rival efficiency by holding it below 50%. But in such a case, should antitrust judges and juries then be saddled with the task of weighing whether the gain in monopolist efficiency turns out to benefit consumers more than they suffer from the impairment of rival efficiency?

The answer is no, and for a number of reasons. To begin with, even if we assume economies of share do extend to a size larger than 50% of the market, there is ordinarily a plain less restrictive alternative to using exclusionary conditions to guarantee the monopolist a share above 50%: namely, it can use vigorous above-cost price competition and internal expansion through sales without conditions that discriminate against rivals. If there are economies of share that extend beyond 50%, a monopolist can keep expanding and lowering prices as it achieves those greater economies, until it has fully achieved its minimum efficient share. This would provide a market test of whether economies of share really justify a firm of that size. Further, a firm that has achieved economies of share through such price competition remains vulnerable to competition by a rival who is more efficient and has an even lower cost curve,[202] thus assuring the market gets the most efficient firm or firms.[203] And through such price competition the market can also adjust for the fact that today's economies of share can change tomorrow as technology and consumer demand changes, making a size that seems efficient today inefficient tomorrow.

In contrast to relying on such a market test, there are several problems with claims that economies of share justify exclusionary conditions that guarantee certain shares to the monopolist. Assigning market share by such exclusionary conditions rather than by open competition can result in the monopolist becoming larger than economies of share really justify, or the monopolist persisting at a size that later becomes unjustified when changes in technology and consumer demand change economies of share. Further, such exclusionary conditions can give a less efficient incumbent firm exclusive access to the benefits of economies of share, preventing a rival that is more efficient (because it has a lower overall cost curve) from being able to compete because the exclusionary conditions foreclose that rival from the access to buyers that it needs to achieve its own economies of share. Accordingly, it is better to allow free market competition determine whether economies of share require a firm of a given size and which firm that should be, rather than to allow those issues to be determined by a form of private self-regulation through discriminatory conditions, subject to imperfect review years later by antitrust judges and juries.

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[202] Or, in the case of network effects, a higher overall demand curve.

[203] For an explanation of how a rival that do not have a higher cost curve than an incumbent monopolist can overcome economies of scale if there is no marketwide foreclosure, see Elhauge, *Why Above-Cost Price Cuts Are Not Predatory*, *supra* note , at 786-92. In contrast, if the monopolist ties product availability or price discounts to the *share* of its product that is taken, that can disable a rival from achieving those same economies of share.

Indeed, the argument that economies of share justify exclusionary conduct that assures that share to one firm over its rivals is conceptually no different than the argument that exclusionary conduct to achieve a monopoly should be legal if the market is a natural monopoly. That argument has been rejected by well-accepted antitrust economics, and for the same reasons.[204] Banning such exclusionary conduct despite the seeming inevitability of monopoly helps "assure survival for the most efficient competitor and protect the processes of competition when the claimed inevitability [of monopoly] is less than sure."[205] Further, it preserves an undistorted market that is able to adjust if today's natural monopoly becomes unnatural tomorrow because of changing demand or costs.[206] Counterintuitive as it may seem, we can have temporary natural monopolies, and we would not want to allow exclusionary conduct to preclude the process of competition by firms seeking either to end the monopoly or to become the next temporary monopolist.

This well-accepted rejection of the natural monopoly defense has more bite than one might think. After all, in every monopolization case, the defendant has a market share over 50%.[207] Thus, any argument that economies of share required the exclusionary conduct that secured that share necessarily amounts to a claim that the minimum efficient share is greater than 50%, which is the same as claiming the market is a natural monopoly since one cannot have two firms with greater than 50% market share. Accordingly, any claim that a monopolist's exclusionary conduct is justified by economies of share amounts to a claim that it is entitled to engage in exclusionary conduct to achieve or maintain a monopoly because this is a natural monopoly. Sometimes such claims may have economic merit. But it would still be better to have their merit determined not by private self-regulation or antitrust juries, but by an undistorted market test of requiring free competition without the exclusionary conduct. Such a market test can not only determine more accurately whether the market is really a natural monopoly and who the most efficient natural monopolist is, but can rapidly alter either conclusion whenever circumstances change.

In short, where economies of share exist, there are two possibilities. One possibility is that economies of share peter out somewhere below a 50% share of the market given existing technology and demand. If so, then those economies of share cannot provide any efficiency justification for exclusionary conduct that attains or maintains a monopoly market share over 50%. The other possibility is that those economies of share go beyond 50% of the market. If so, then we have a natural monopoly, and exclusionary conditions that guarantee a higher share for the monopolist should still not be permitted because requiring competition by internal expansion without such conditions will provide us with a market test that assures that economies of share are really that high, that the monopolist is the most efficient firm to take advantage of them, and that can nimbly adjust either conclusion with future changes in technology, demand, or firm efficiency.

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[204] *See* III AREEDA & HOVENKAMP, ANTITRUST LAW 125-26 (2002). The holding in *Otter Tail* rejected a dissenting argument that the monopolization claim should be rejected because the fact that the market was a natural monopoly made monopoly inevitable. *See* 410 U..S at 388-89 (Stewart, J., joined by Burger, C.J., and Rehnquist, J., concurring in part and dissenting in part).

[205] AREEDA & KAPLOW, ANTITRUST ANALYSIS 616 (4th ed. 1988).

[206] *See* Richard A. Posner, *Natural Monopoly and its Regulation*, 21 STAN. L. REV. 548 (1969) ("No natural monopoly can safely be assumed to last forever, impervious to changes in technology and consumer taste").

[207] As we will see, the analysis here helps explain why a 50% market share has been a de facto lower bound to prove monopoly power even though market share is a highly imperfect proxy for the extent of a firm's ability to price above cost. *See infra* Section IV.B.

Consistent with this analysis, *United Shoe* rejected on principle an argument that the exclusionary practices considered there were justified because achieving economies of scale, production, distribution or research requiring reaching a monopoly share.[208] Likewise, the *Microsoft* en banc decision rejected Microsoft's arguments that various exclusionary conditions it imposed on those it deal with kept the market focused on its operating system.[209] The court did not dispute these claims factually, but rejected them as a matter of antitrust principle. But given the pervasive influence of network effects in this industry, there clearly are efficiency benefits to having the market focused on one operating system. The court's treatment of this argument thus amounted to a rejection of the claim that such economies of share could ever justify exclusionary conditions designed to guarantee that the monopolist enjoyed those economies rather than its rivals.

This conclusion does mean that sometimes a monopolist might be prohibited from using exclusionary practices that do improve its own efficiency even though those same practices would be deemed procompetitive when engaged in by its rivals, which they are likely to do since that practice will presumably enhance their efficiency as well. But the *Kodak* Court explicitly stated that, "Behavior that might otherwise not be of concern to the antitrust laws--or that might even be viewed as procompetitive-- can take on exclusionary connotations when practiced by a monopolist."[210] And *United Shoe* upheld a finding of monopolization for exclusionary practices by a monopolist even though it was acknowledged that the same practices were engaged in by its rivals, would be engaged in by "honorable firms," and were traditional in the industry, all of which suggested the practices were efficient even when they did not further monopoly power.[211] Those efficiency virtues were never weighed against the anticompetitive effects. Instead, *United Shoe* found that it sufficed that the monopolist "excludes some potential, and limits some actual, competition" and this "is not attributable solely to defendant's ability, economies of scale, research, natural advantages, and adaptation to inevitable economic laws."[212] This again supports the proposition that the monopolist is immune when any harm to rivals' ability to compete comes from its own improved efficiency, but liable for exclusionary practices that further its monopoly power by impairing rival efficiency whether or not they improve monopolist efficiency.

This conclusion is also supported by the monopolization standard's general strong preference for a monopolist competing by improving its own efficiency and then exploiting that greater efficiency to offer cheaper or better products, rather than by imposing exclusionary conditions that impair the efficiency of rivals. It is also consistent with other language by the Supreme Court, which has stressed: "'The central message of the Sherman Act is that a business entity must find new customers and higher profits through internal expansion --that is, by competing successfully rather

[208] United States v. United Shoe Machinery Corp., 110 F. Supp. 295, 345 (D. Mass. 1953), aff'd per curiam, 347 U.S. 521 (1954). It separately also rejected this claim factually. 110 F. Supp.at 345-56.

[209] Microsoft v. U.S., 253 F.3d 34, 71-72 (D.C. Cir. 2001) (en banc).

[210] *Kodak*, 504 U.S. at 488.

[211] 110 F. Supp. at 340, 344, aff'd per curiam, 347 U.S. 521. Suggesting the same were the facts that the practices were used by the firm before becoming a monopolist, *see* Wiley, *supra* note, at 717, and by firms in many competitive markets for a variety of possible efficiency reasons, *id.* at 709-17.

[212] 110 F. Supp. at 343, aff'd per curiam, 347 U.S. 521.

than by arranging treaties with its competitors."[213] The same preference for internal expansion would seem to apply vis-avis efforts to achieve profits through treaties with others to fence out competitors. Nor is the point limited to actual expansion, for the Court has also stated that monopolist's should employ the same sort of behavior to avoid market contraction in the face of increasing competition, stressing that "the Sherman Act . . assumes that an enterprise will protect itself against loss by operating with superior service, lower costs, and improved efficiency."[214] What the monopolist cannot do is instead use exclusionary conditions that discriminate on the basis of rivalry to impair rival efficiency in a way that will enhance or maintain its monopoly market share whether or not they improve the monopolist's own efficiency.

IV. THE CAUSAL LINK TO MONOPOLY POWER

We are now in a position to revisit the monopoly power element. Recall that, while not entirely vacuous, current monopoly power standards have at least three problems.[215] First, just about every firm in the real world has at least some pricing discretion, and this is only becoming more true with increasing brand-differentiation and the movement of the economy away from commodities toward services and experiences. Second, monopoly power is defined as having a substantial degree of a market power that is itself defined to exist only when it is substantial. Third, and most seriously, the doctrine is unclear about whether pricing discretion or market share is the variable whose substantiality matters, with even advocates of a pure pricing discretion standard recoiling from its application when market shares dip to low levels.

A. The Causal Connection to Marketwide Effects

We can begin to make a bit more sense of these issues by noting that U.S. antitrust law does not merely require "monopoly power" in the abstract, but a *causal* connection between the challenged exclusionary conduct and the acquisition or maintenance of that power.[216] Such a causal connection is implicit in language of §2, which makes it illegal to "monopolize," "attempt to monopolize" or "conspire ... to monopolize."[217] The "-ize" suffix proves crucial, for it indicates that the gravamen of the offense is the illicit creation or maintenance of a monopoly power that otherwise would not exist, at least not to the same degree. Thus, the statutory language calls for proof of some causal connection between the illicit conduct and the extent of monopoly power, or a dangerous threat of such a causal connection.

Of course it will often be unclear just how the market would have developed but for the defendant's misconduct, especially when a monopolist is squelching the development of some new

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[213] Aspen Skiing Co. v. Aspen Highlands Skiing Corp., 472 U.S. 585, 600 (1985)(quoting United States v. Citizens & Southern National Bank, 422 U.S. 86, 116, (1975))

[214] Otter Tail Power v. United States, 410 U.S. 366, 380 (1973).

[215] *See supra* Part I.A.

[216] *See* Eastman Kodak Co. v. Image Technical Services, Inc., 504 U.S. 451, 481 (1992); Aspen Skiing Co. v. Aspen Highlands Skiing Corp., 472 U.S. 585, 596 n.19 (1985); United States v. Grinnell Corp., 384 U.S. 563, 570-571(1966).

[217] 15 U.S.C. §2.

firm or technology. Courts resolve that problem by holding that, because the wrongdoer appropriately bears the burden of any uncertainty caused by its misconduct, a plaintiff need only prove the exclusionary conduct was reasonably capable of making a significant causal contribution to the acquisition or maintenance of monopoly power.[218] But the underlying basis for liability remains the reasonable likelihood of some causal link between the exclusionary conduct and the extent of the defendant's monopoly power.

This sort of approach is not used everywhere. E.C. competition law instead makes the illegal act the "abuse ... of a dominant position," and thus focuses on whether any dominant market power that already exists was improperly used.[219] This provision thus does not on its face cover conduct that improperly *creates* (or even less, attempts to create) dominant market power, but does prohibit a firm that (properly or improperly) acquired such market power and uses it to charge "unfair . . . prices."[220] United States antitrust law, in contrast, focuses solely on illicit conduct that bears some reasonable causal connection to monopoly power, leaving completely unregulated the prices charged by a firm that properly acquired or maintained such power.

Although this difference in doctrine may have merely resulted from the happenstance of the verb chosen for drafting, this U.S. approach reflects a much sounder policy. Illicit conduct that produces or maintains dominant market power leads to higher prices that are both avoidable and socially undesirable. It is thus important to condemn such conduct, and the failure of E.C. competition law leaves an unsound gap in the regulation of anticompetitive behavior. In contrast, when a firm uses proper conduct to create something sufficiently more valuable than existing market options to enjoy dominant market power, then any high prices it earns are the proper social reward for that creation, and the denial of that reward by E.C. law seems equally unsound.

In any event, wise or not, this causal connection is a key aspect of actual U.S. antitrust doctrine, and it helps illuminate the proper understanding of the monopoly power element. For while the Court defines "monopoly power" as "the power to control prices or exclude competition,"[221] this causal connection suggests the Court does not mean a power to simply control one's own prices or to exclude any competitor. It rather suggests that the Court means a power to control *marketwide* prices or to exclude the sort of *marketwide* competition that otherwise seems reasonably capable of constraining its power.

This causal connection makes clear that it cannot suffice that a firm has the same pricing discretion that any firm has in our brand-differentiated world, even though such discretion does enable it to engage in price discrimination and raise its own prices by restricting its own output. That sort of pricing discretion depends on existence of the brand, and thus bears no reasonable causal relation to whether exclusionary conditions impair rival efficiency in the marketplace. Rather, the proof necessary to show the sort of control over price that indicates monopoly power is that the firm can, by reducing its own output, constrain marketwide output and thus raise marketwide prices. In short, it must be able to influence the prices of others on the market, not just have some

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[218] *See* Microsoft v. U.S., 253 F.3d 34, 79 (D.C. Cir. 2001) (en banc) (collecting sources).

[219] Article 82 of the E.C. Treaty (ex Article 86).

[220] Article 82 of the E.C. Treaty (ex Article 86).

[221] *Kodak*, 504 U.S. at 481 (quoting United States v. E.I. du Pont de Nemours & Co., 351 U.S. 377, 391 (1956)); *Grinnell*, 384 U.S. at 571 (same).

discretion over its own prices.

Indeed, when it first defined "monopoly power," the Court was quite specific about this, stating: "Price and competition are so intimately entwined that any discussion of theory must treat them as one. It is inconceivable that price could be controlled without power over competition or vice versa."[222] Thus, the Court clearly means to exclude any sort of power over price that does not result from a power over competition. And it meant to include the sort of power over rivals that does enhance the monopolist's ability to raise prices, thus including not just the power to exclude competition from the marketplace altogether, but the power to exclude competition from enough of the market to impair rival efficiency and thus increase marketwide prices.

This need to prove a causal connection between the exclusionary conduct and the acquisition or maintenance of monopoly power might seem inconsistent with language in *Kodak* that resurrected a sentence from *Griffith* defining monoplization as "the use of monopoly power 'to foreclose competition, to gain a competitive advantage, or to destroy a competitor.'"[223] Literally read, this language seems to condemn the use of monopoly power to gain a competitive advantage or disadvantage rivals in some other market in which the defendant never has monopoly power. But this language in *Kodak* was dicta. Indeed, the *Kodak* Court immediately followed this language with a sentence indicating that Kodak would be liable only "[i]f Kodak adopted its parts and service policies as part of a scheme of willful acquisition or maintenance of monopoly power."[224] This sentence appears to reverse any implication that the first language eliminated the need to prove a causal connection to the initial or continued existence of monopoly power.[225] Further reversing any such implication was the later statement in *Spectrum Sports* that §2 condemns unilateral conduct "only when it actually monopolizes or dangerously threatens to do so."[226]

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[222] *duPont*, 351 U.S. at 392.

[223] *Kodak*, 504 U.S. at 482-83 (quoting United States v. Griffith, 334 U.S. 100, 107 (1948)); *See also Aspen*, 472 U.S. at 595-96 (quoting jury instructions that made illegal the anticompetitive or exclusionary "use" of monopoly power).

[224] *Kodak*, 504 U.S. at 483.

[225] Although this language in *Griffith* itself is often described as dicta, this does not appear to be technically accurate. One might be tempted to the think it was dicta because it was preceded with language that seemed to emphasize the need for such a causal link by stating: "It is . . . not always necessary to find a specific intent to . . . to build a monopoly in order to find that the anti-trust laws have been violated. It is sufficient that a . . . monopoly results as the consequence of a defendant's conduct ..." "*Griffith*, 334 U.S. at 105. But the Court's ultimate holding was that a violation of monopolization doctrine had been proven even though the record failed to show "what effect these practices actually had on the competitors . . . or on the growth of the [monopolist]," and the lower court has explicitly "found that no competitors were driven out of business, or acquired by appellees." *Id.* at 109. Instead, the Court ruled that it sufficed to find a violation that "the monopoly power of appellees had some effect on their competitors and on the growth of the [monopolist]," even though the extent of that effect could not yet be determined without a remand. *Id.* Given that the relevant growth of the monopolist was into nonmonopoly towns, this holding appears to dispense with any requirement to prove a causal connection to the existence of monopoly power. But *Griffith* is full of many misguided notions that have been ignored by modern courts because they conflict with modern antitrust jurisprudence, including the notion that "monopoly power, whether lawfully or unlawfully acquired, may itself constitute an evil and stand condemned under §2 even though it remains unexercised. For §2 of the Act is aimed, inter alia, at the acquisition or retention of effective market control." *Id.* at 107. Taken literally, this language would suggest that the firm that builds a better mousetrap so that the world will beat a bath to its door will receive as its legal reward a judgment that it is liable in antitrust for treble damages. No court takes that proposition seriously. In any event, the later statements in *Kodak, Spectrum Sports* and *Copperweld* appear to have reimposed the need to prove a causal connection to the acquisition or maintenance of actual monopoly power.

[226] 506 U.S. at 459; *see also Copperweld*, 467 U.S. at 767 ("The conduct of a single firm is governed by § 2 alone and is unlawful only when it threatens actual monopolization.").

B. The Economic Relevance of Market Share

Why do courts remain fixated with market *shares* as proof of monopoly power? After all, everyone seems to agree market shares are at best an imperfect proxy for the power to raise prices above competitive levels.[227] The conventional response is to try to defend the use of this imperfect proxy by saying that it is an easier or more administrable test to apply. But it is not at all clear why we would think so. Proving any market share requires establishing a particular market definition, and that has become an enormously complex task requiring inquiry into the degree of pricing discretion that a *hypothetical* monopolist would have if it had 100% of a market with a posted definition.[228] It is not at all clear why a market share calculation that is derived from such an estimate of the pricing discretion of a hypothetical monopolist should be regarded as easier or more certain than inquiry into the actual pricing discretion of the actual defendant.

Nor is the puzzle eliminated if, as suggested above, we define pricing discretion to exist only when a firm can raise marketwide prices. For example, if a market had five firms with 20% market share each producing a homogenous product and all the firms were entirely unable to expand output, then each firm could, by reducing its own output, constrain marketwide output and raise marketwide prices. Yet no one would say that each firm was a monopolist. Why do we shrink from that conclusion because of low market shares?

Part of the reason may simply be linguistic: the Greek prefix "mono" means one, so it makes little linguistic sense to talk about a market with more than one monopolist. The statutory language instead suggests the sort of singularity that implies a market share of over 50%. But there is much more that this to it. For if one reflects on the above analysis, it indicates an underlying economic reality that would support the same conclusion even if "monopolize" did not happen to be the word used in the U.S. statute. The reasons are several.

First, as shown in Part III, the ability of a firm to get buyers to agree to exclusionary conditions that hamper rival efficiency and harms buyers as a group will depend on that firm being able to act as a unitary actor that either (a) does not have collective action problems that the buyers have or (b) can reach a Coasian bargain with buyers who have market power to create supracompetitive profits and pass on the costs downstream. If there are instead multiple actors, such as the case of five firms each with 20% of the market, then they will have their own collective action amongst themselves, and thus less ability to exploit the collective action problems of buyers. Likewise, if no one large seller dominates, sellers will have more difficulty entering into a Coasian bargain with buyers to create more seller market power and share the resulting supracompetitive profits.

Second, without a dominant market share, it will be very difficult for any single firm – no matter how much discretion over prices it has – to foreclose rivals from such a large share of the market that they can impair the efficiency of those rivals. For example, in the case of five 20% firms, even if one firm imposes exclusionary conditions that absolutely foreclose its buyers and

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[227] *See* AREEDA & KAPLOW, *supra* note , at 564-72; Landes & Posner, *supra* note .

[228] *See* 1992 Horizontal Merger Guidelines, 57 Fed. Reg. 41,552 §§ 1.11, 1.21, 1.52 (Sept. 10, 1992) (defining markets by looking to whether a hypothetical monopolist in that market could raise prices 5% over competitive levels).

suppliers from dealing with rivals, that will still amount to only a 20% foreclosure of the market.[229] Nor would such a 20% foreclosure really contribute much to the sort of market power each 20% firm does have, which instead turns on the inability of rivals to expand because they are already at full capacity. Thus, focusing on the causal connection to the alleged exclusionary conduct suggests that the sort of market power such a 20% seller may have is not the sort of power that should be deemed monopoly power.

Third, a dominant market share will tend to make any investment in impairing the efficiency of rivals more profitable. The benefits will be higher because a firm that succeeds in impairing rival efficiency will enjoy higher prices on more sales the higher the market share it has. And a dominant market share means a small market share left over to rivals, which lowers the cost of any investment in impairing rival efficiency if that cost is proportional to amount of rival sales being made.

Finally, the argument above that courts can safely disregard claims that exclusionary conditions were necessary for the defendant to achieve economies of share that improve its own efficiency depended on the premise that the defendant's market share was above 50%.[230] It was that premise that justified the conclusion that any such efficiency claim must reflect either (a) economies of share that peter out below the 50% level and that thus cannot justify exclusionary conduct that assures the defendant a share higher than 50% or (b) economies of share that continue past the 50% level and thus amount to a natural monopoly claim that should be tested by market competition rather than assured by exclusionary conditions. If the defendant's market share were below 50%, then one cannot make the same claim, and thus its efficiency assertions are better judged by the more lenient rule-of-reason balancing test applicable to agreements in restraint of trade.

In short, the analysis above indicates the continued focus by courts on whether accused monopolizers have a high market share does reflect simply some linguistic hangup nor the continued use of an imperfect proxy for an ability to raise prices above competitive levels. Rather, a high market share also has independent economic relevance because it bears on the ability of the defendant to persuade buyers to agree to exclusionary schemes, the likelihood that those schemes will impair rival efficiency, the profitability of impairing rival efficiency to the defendant, and the relevance of any economies of share the defendant may enjoy from the scheme. Thus, on economic as well as legal grounds, monopoly power should not be deemed to exist unless the exclusionary conduct contributes to the acquisition or maintenance of not only a power to raise marketwide prices or produce marketwide foreclosure but also a defendant market share of over 50%.

Interestingly, antitrust courts seem to have intuitively grasped the economic significance of having a 50% market share without articulating the theory that supports it. Lower court cases in the

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[229] True, if three of these 20% firms entered into exclusionary agreements with their buyers, then the relevant marketwide foreclosure would be their *cumulative* foreclosure of 60%. *See Standard Oil & Standard Stations v. United States*, 337 U.S. 293, 295, 309, 314 (1949) (finding anticompetitive effects because the exclusive dealing agreements of the seven leading oil producers produced an aggregate foreclosure of 65 percent); *FTC v. Motion Picture Advertising Service*, 344 U.S. 392, 393, 395 (1953) (same when four firms had exclusive dealing arrangements with an aggregate foreclosure of 75%); *United States v. Philadelphia Nat'l Bank,* 374 U.S. 321, 365-66 (1963) (stressing the cumulative foreclosure in the prior two holdings); IX AREEDA, ANTITRUST LAW 94, 103-04, 388, 390-91 (1991); XI HOVENKAMP, ANTITRUST LAW 160 (1998). But, as these sources also indicate, such exclusionary agreements would be judged under the more lenient balancing standards of Sherman Act §1 and Clayton Act §3, rather than the hostile standards of Sherman Act §2.

[230] *See supra* Section III.B.2.

U.S. generally require a market share of at least 50% to prove monopoly power.[231] And E.C. or Canadian law have held that a 50% market share is necessary to constitute prima facie evidence of a dominant position, though they have not made it an absolute requirement.[232]

C. Enhancing Monopoly Power v. Slowing Its Decline

A causal link between exclusionary conduct and monopoly power is not at all disproven by evidence that the alleged monopolist's prices, profits or market share declined during the period of exclusionary conduct. Most monopolizing activities are undertaken not to create monopoly power, but rather to maintain and slow down the erosion of existing monopoly power. In fact, it is precisely when a monopolist sees its monopoly power waning because of a new market threat or technology that it is most desperate to cling to that power, and thus most tempted to use anticompetitive conduct to slow down that erosion and maintain some degree of monopoly power for as long as possible. Thus, exclusionary conduct does not typically increase monopoly prices, profits, or shares. Rather its anticompetitive effect is usually to prevent monopoly prices, profits or shares from dropping further and faster, often by slowing down a market shift to a better or cheaper rival or new product. This is why the Court's monopolization test correctly condemns not just the acquisition, but also the "maintenance" of monopoly power with exclusionary conduct,[233] which includes conduct that simply slows down the erosion of monopoly power.[234]

Indeed, when you think about it, it is the illegitimate extension of such temporary monopolies that antitrust law should care about most. If the market were instead a natural monopoly, it would exist and persist regardless of exclusionary conduct or antitrust law as long as the underlying economic fundamentals persisted. All antitrust law could do is assure fair competition to try to assure the most efficient firm wins the natural monopoly. It is only if the monopoly it is a temporary monopoly that we fear exclusionary conduct that might extend its temporary life, and thus saddle use with monopoly prices that otherwise would have been competitive.

Accordingly, the correct baseline to determine whether exclusionary conduct causes an increase in monopoly power is *not* how high prices, profits or shares were in the *past.* Instead, the correct baseline compares the actual extent of monopoly power to the degree of power the defendant would have had without the exclusionary conduct. To illustrate, suppose a firm earns monopoly profits of $100 million, which would have decreased to $50 million without exclusionary conduct because rivals would have expanded. Suppose further that monopoly profits would instead decrease to $80 million if the firm uses exclusionary agreements with buyers that slow down rival expansion. If so, it would be in the monopolist's interest to pay $20 million in discounts or sidepayments to get buyers to agree to exclusionary agreements, even though those agreements produced no efficiencies

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[231] *See* Facey & Assaf, *Monopolization and Abuse of Dominance in Canada, the United States, and the European Union,* 70 ANTITRUST L.J. 513, 537 & n.100 (2002) (collecting cases).

[232] *Id.* at 535-36, 538-39.

[233] Eastman Kodak Co. v. Image Technical Services, Inc., 504 U.S. 451, 481 (1992); Aspen Skiing Co. v. Aspen Highlands Skiing Corp., 472 U.S. 585, 596 n.19 (1985); United States v. Grinnell Corp., 384 U.S. 563, 570-571(1966).

[234] *See* Otter Tail Power v. United States, 410 U.S. 366, 378, 381 (1973) (invalidating exclusionary conduct designed to prevent the defendant's rivals from "from eroding its monopolistic position" even though the tactics did not prevent the defendant from losing the retail business of some municipalities).

whatsoever. The firm's monopoly profits would then show a decrease from $100 million to $60 million ($80 million minus $20 million in discounts or sidepayments), which might mislead someone into concluding that the firm's exclusionary conduct failed to cause an increase in monopoly power. But in fact this exclusionary conduct would have increased monopoly power because without it the firm would have earned $10 million less in monopoly profits during that period. Thus, even though the firm's profits are declining, it can still profitably pay up to $30 million in sidepayments or discounts out of the additional monopoly profits the exclusionary conduct will create. One simply needs to be careful to use the correct but-for baseline rather than the historical baseline to measure the "additional" profits created by the exclusionary conduct.

In short, the absence of evidence that monopoly prices, profits or shares eventually rose in the long run does not mean the exclusionary conduct was not anticompetitive. In the above example, the firm's exclusionary conduct increased its profits by $10 million not by improving its efficiency but by impairing the efficiency of its rivals, and consumer welfare was harmed by over $30 million.[235] This is anticompetitive even if its prices and profits never rebound to levels greater than (or even equal to) the prices and profits that prevailed before the exclusionary conduct. This is yet another reason why it makes little sense to focus on the time line of profits rather than substantive judgments about the nature of the underlying conduct.

D. The Irrelevance of Buyer Acceptance, Initiation or Terminability

The fact that buyers have voluntarily agreed to exclusionary conduct also does not prove that conduct did not cause an increase in monopoly power, nor the conduct must be efficient and on balance beneficial to consumer welfare. Because of the underlying collective action and seller-buyer collusion problems detailed above,[236] buyers will often agree to inefficient seller conduct that is harmful to themselves and/or downstream consumers. This is true whether buyers have market power or not: either way, their decisions about whether agreeing to exclusionary conduct is in their individual interests cannot be taken as a reliable proxy for whether that conduct advances consumer welfare as a whole. That buyers find it in their interests to agree to exclusionary conduct thus should be no defense as a matter of antitrust theory. Nor does it have any support in antitrust law, which finds monopolization even when many buyers agree to exclusionary conditions restricting their dealing with a monopolist's rivals.[237]

Indeed, the contrary argument rests on a well-known logical fallacy: the fallacy of composition. The fallacy of composition is the assertion that if something is true for individual members of a group, then it must be true for the group as a whole.[238] Here, the fallacious argument

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[235] It is over $30 million because consumers also suffer a deadweight loss because without the exclusionary agreement prices would have declined further and more consumers would have bought the product at prices that exceed its lowered cost of production.

[236] *See* Section II.C.

[237] *See Kodak*, 504 U.S. at 483; Lorain Journal Co. v. United States, 342 U.S. 143 (1951); Griffith v. United States, 334 U.S. 100 (1948); United States v. United Shoe Machinery Corp., 110 F. Supp. 295, 340 (D. Mass. 1953), aff'd per curiam, 347 U.S. 521 (1954).

[238] 5 OXFORD ENGLISH DICTIONARY 693 (2d ed. 1989); RUSSELL HARDIN, COLLECTIVE ACTION 2 (1982); Caballero, *A Fallacy of Composition,* 82 AMER. ECON. REV. 1279, 1279 (1992) ("Fallacy of composition: A fallacy in which what is true of the part is, on that account alone, alleged to be also true on the whole." (quoting SAMUELSON, ECONOMICS (1995)).

is that, if individual buyers are made better off by agreeing to exclusionary conduct, then it must be in the interests of buyers as a group (and thus for the market as a whole) for them to so agree. This "fallacy of composition . . . has collapsed in the face of two major developments ...: Mancur Olson's logic of collective action and game theory's Prisoner's Dilemma. In the latter, there is a dilemma precisely because what it makes sense for an individual to do is not what it would make sense for the group to do ..."[239] Because of this, we cannot justifiably assume that if it is in the interests of each individual buyer to participate in exclusionary conduct, it is in the interests of participating buyers as a group. Even less can we assume that, if something is in the interests of participating buyers, it is in the interests of the market as a whole given the effects on nonparticipating buyers or on those downstream who pay the anticompetitive costs.

For the same reasons, it should be irrelevant that buyers initiated an exclusionary agreement with a monopolist. The same underlying collective action and seller-buyer collusion problems that make it individually profitable for a buyer to agree to an exclusionary agreement in exchange for a discount from the monopoly price even though it imposes adverse marketwide effects also make it profitable for the buyer to initiate such an agreement. Consistent with this, the Supreme Court has rejected the argument that exclusionary agreements did not constitute monopolizaiton because the monopolist had not demanded the exclusion, noting that the anticompetitive effect was the same regardless of who initiated the idea.[240]

The same logic also means it should be no defense that exclusionary agreements are short or terminable by buyers on short notice. The same factors that make it in buyers' interests to enter the exclusionary agreement to get discounts will also make it in their interests not to terminate a exclusionary agreement that offers those discounts even though termination by all buyers would eliminate the anticompetitive effect. When the exclusionary agreement results from collusion between sellers and intermediate buyers that benefits the latter at the expense of downstream buyers, then the intermediate buyers have no incentive to terminate or decline to renew the agreement. When collective action problems induced buyers to enter exclusionary agreements, those same collective action problems will also cause buyers not to terminate them because buyers will realize that their individual termination would lose them the discounts from the monopoly price but would not have much impact on whether the marketwide harm persists. Each buyer will thus have every incentive not to terminate in order to keep getting the discount, even though that discount is from a price that has been inflated by the seller market power that results because buyers collectively adhere to the scheme. Thus, the anticompetitive effects of such exclusionary agreements are not at all vitiated by the fact that buyers can terminate or decline to renew exclusionary agreements.

Nor does the issue whether exclusionary agreements causes anticompetitive harm turn on whether the buyers that agreed to them incur higher prices. First, for reasons noted above, prices may be trending downward for unrelated reasons. Second, much of the anticompetitive costs will be visited on buyers who do *not* adhere to such exclusionary arrangements. Participating buyers may be better off precisely because they have agreed to an arrangement that inflates prices for other

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[239] HARDIN, *supra* note , at 2.

[240] *Griffith*, 334 U.S. at 108. Further, in another famous monopolization case, Standard Oil as a buyer initiated the plan to give the railroads selling oil transportation exclusive rights in return for the railroads giving Standard Oil special discounts. *See* Elizabeth Granitz & Benjamin Klein, *supra* note , at .

buyers and gives participating buyers a discount from those inflated prices. Second, any costs to buyers are just a subset of the full social costs of the anticompetitive effects inflicted by these arrangements, which are also visited on downstream buyers and ultimately consumers. Thus, even if participating buyers received side-payments or special discounts that more than offset their own increased costs, exclusionary arrangements would remain socially undesirable if they increased the seller's monopoly profits by impairing rival efficiency.

Indeed, to the extent terminability is relevant, it tends to undermine the *pro*competitive justifications generally offered for exclusionary agreements. It is, for example, hard to see how such agreements can fulfill such asserted purposes as providing certainty and predictability when buyers can easily terminate the agreements whenever it suits their fancy. Such terminability also seems inconsistent with the claim that exclusive agreements are necessary to encourage relation-specific or other sunk-cost investments that increase firm's economies of scale or scope or otherwise make it interact more efficiently with buyers. After all, if the agreements are really terminable, then there would be nothing to prevent buyers from opportunistically exploiting any such investments by threatening to terminate the agreement unless they get a better deal that expropriates any additional efficiency created by the investment.

This shows the economic error in the conclusion by some scholars and courts that an ability to terminate (or not renew) an exclusionary agreements in less than one year indicates they presumptively or probably lack any substantial foreclosing effect.[241] That conclusion also conflicts with many Supreme Court cases that have invalidated exclusionary agreements that were terminable on short notice, even when the defendant did not have monopoly power.[242] Indeed, there is also a logical legal flaw with the assertion that an agreement that can be terminated in less than one year cannot be anticompetitive. The flaw is that *all* contracts that are unreasonable restraints of trade are unenforceable at common law, even before the Sherman Act was enacted, and thus have always been terminable at will. The assertion that no terminable agreement is anticompetitive would thus mean that no agreement could ever be deemed anticompetitive under antitrust law, thus making them all per se legal. This would effectively take Sherman Act § 1 and Clayton Act § 3 off the books, as well as any application of Sherman Act §2 to exclusionary conduct that requires buyer acquiescence.

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[241] *See* Roland Mach. Co. v. Dresser Indus., Inc., 749 F.2d 380, 395 (7th Cir. 1984); Omega Envtl., Inc. v. Gilbarco, Inc., 127 F.3d 1157, 1163-64 (9th Cir.1997); Thompson Everett, Inc. v. National Cable Adver., 57 F.3d 1317, 1326 (4th Cir.1995); U.S. Healthcare, Inc. v. Healthsource, *Inc.,* 986 F.2d 589, 596 (1st Cir.1993); 11 HERBERT HOVENKAMP, ANTITRUST LAW 167-69 (1998). Professor Hovenkamp and the last case acknowledge that this point does not hold if buyers receive discounts that they would lose by termination. *Id.* at 88, 117. But this acknowledgement swallows his presumption because, as Aaron and Director showed, any buyer must receive a discount from the monopoly price that otherwise could be charged to secure its consent to an exclusionary agreement. *See supra* Part II.C.

[242] *See* Standard Fashion Co. v. Magrane-Houston Co., 258 U.S. 346, 352 (1922) (invalidating exclusive dealing agreements that were terminable upon three months' notice); Standard Oil & Standard Stations v. United States, 337 U.S. 293, 296 (1949) (same for agreements that lasted only one year, and were terminable upon 30 days notice). The courts and scholars concluding otherwise have relied on FTC v. Motion Picture Advertising Service, 344 U.S. 392 (1953). But that case merely rejected a defendant argument that exclusive dealing agreements longer than one year should be permitted. *Id.* at 396. Nowhere did it suggest that any agreement shorter than one year could not be anticompetitive. *Accord LePage's,* 324 F.3d at 157 n.11. Indeed, the Supreme Court later sustained an FTC conclusion that certain exclusive dealing contracts were anticompetitive even though they were terminable at will. FTC v. Brown Shoe, 384 U.S. 316, 318-19 & n.2 (1966) (agreement condemned even though buyers could "voluntarily withdraw" at any time),*rev'g* Brown Shoe v. FTC, 339 F.2d 45, 53 (9th Cir. 1964) (sustaining agreement in part because "[r]etailers were free to abandon the arrangement at any time they saw it to their advantage so to do.").

Terminability provides a limit on judicial enforcement of a contract, but such judicial enforcement is not necessary for an antitrust offense. Accordingly, the Supreme Court has had no trouble concluding that agreements unenforceable at contract law remain illegal under federal antitrust law.[243]

CONCLUSION

It is time for scholars of current exclusionary conduct standards to acknowledge that the emperor has no clothes. The doctrine uses a barrage of conclusory labels like "exclusionary," "predatory," "valid," "legitimate," and "competition on the merits" to cover for a lack of any well-defined criteria for sorting out desirable from undesirable conduct that tends to exclude rivals. We can continue to pretend that these words offer some coherent standard, leaving these matters to the largely unguided discretion of antitrust judged and juries making uncertain and inconsistent decisions. Or we can try to clothe the doctrine with criteria that have more content and offer more guidance.

Unfortunately, the main proposal now circulating to do this job is to focus on whether the monopolist sacrificed-short run profits in order to earn long run monopoly returns. This would provide the emperor with a suit that is ill-fitting indeed, for that test both condemns the very sort of conduct that is most desirable – investments that sacrifice short-run profits to increase the long-run efficiency of a firm – and fails to condemn the very sort of undesirable conduct that most needs deterrence – conduct that undesirably excludes rivals in a way that is profitable from the get-go.

Vague references to the efficiency of defendant conduct begin to point us in the right direction, but provide little additional assistance for they fail to address the baseline questions necessary to determine whether efficiency has been enhanced or decreased. Examining those baseline issues indicates that courts must be careful not to condemn *ex post* inefficiencies at the cost of preventing more important *ex ante* efficiencies. They must also be careful to distinguish conduct whose ability to further monopoly power depends on its ability to enhance or exploit the monopolist's greater efficiency, from conduct that furthers monopoly power by impairing rival efficiency whether or not defendant efficiency were enhanced. This indicates that efforts to simply improve a firm's own efficiency and win sales by selling a better or cheaper product at above-cost prices should enjoy per se legality without any general requirement to share that greater efficiency with rivals. But exclusionary conditions that discriminate on the basis of rivalry by selectively denying property or products to rivals or buyers who deal with rivals are not necessary to further *ex ante* incentives to enhance the monopolist's efficiency, and should be illegal when they create a marketwide foreclosure that impairs rival efficiency.

Unlike with the exclusionary conduct element, it would be unfair to say that current monopoly power doctrine is like the emperor who has no clothes. But it is at best an emperor wearing a rather unsightly speedo, for current doctrine leaves great ambiguities about the degree of market power required and whether pricing discretion or market shares is the key variable. We can

[243] *See, e.g.*, Dr. Miles Medical Co. v. John D. Park & Sons Co, 220 U.S. 373, 404-08 (1911).

clothe it better by recognizing that the requirement of proving a causal link between the exclusionary conduct and the relevant monopoly power means that power should be not just over the defendant's own output or prices, but a power to affect *marketwide* prices. Further, the current focus on market share does not just reflect mere legalisms or the use of an imperfect proxy. To the contrary, sound economics indicates the minimum market share to trigger monopolization doctrine should be 50%.

It is of course easier to point out why the current emperor has no or little clothes than it is to design a new garment that will please everyone. I submit that the standards proposed above not only explain the actual pattern of case results but also provide much needed concrete guidance for antitrust courts and juries forced to sort through these tricky economic issues. Perhaps further tailoring will produce even better results. But let's at least begin by recognizing the need for a lot more fabric and content than the current doctrinal standards now provide, and focus on specifying the best concrete content we can rather than pretending the problem does not exist.