ANALYZING MONOPOLY POWER EX ANTE

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The law governing monopolization is in dire need of correction. Antitrust rules governing unilateral behavior can be characterized by intellectual incoherence and logical vacuity. The shortcoming has arisen from a judicial inability to espouse qualitative tests that logically distinguish objectionable from benign instances of unilateral conduct. Failure to highlight a single definitional metric by which to dichotomize the meaning of pro- and anti-competitive behavior has exacerbated the problem. Yet, despite decades of academic and judicial effort, no satisfactory solution has emerged.

In seeking to accomplish two goals, this article first advocates the use of aggregate welfare as a guiding narrative to section 2 enforcement. Introducing such a qualitative standard would inject much-needed definitional clarity into the conceptual distinctions between "desirable" and "objectionable" monopolization. Having addressed the issues underlying the normative case for such a lodestar, the article seeks to tackle a far more onerous challenge. This involves articulating a rule that would enable jurists coherently and correctly to sanction desirable unilateral conduct. While the subjectivity that so ubiquitously plagues jurisprudence in the section 2 arena is unlikely to dissipate even in the presence of the most perspicacious test, the article presents a novel solution by which to bypass this problem. It does so by turning to the sole element of the Grinnell test that is conducive to relatively objective application, namely, the requirement of monopoly power. The courts currently adopt an ex post approach to market power analysis in actual monopolization cases, considering a defendant's economic might at the time of suit. If sufficient power is demonstrated, the courts proceed to the subjective, and hence probabilistic, constituent of the test, pursuant to which the desirability of the monopoly is assessed according to the vacuous standards referenced above.

It is inevitable in this context that some desirable business conduct will be both erroneously punished and deterred. Given the increasing importance of new economy markets displaying powerful network effects and a concomitant predisposition to monopolization, the incidence of Type I errors in antitrust enforcement is likely to proliferate. To insulate desirable behavior from judicial scrutiny under section 2, an ex ante approach to market power analysis should be adopted. Under this view, a defendant would have its power assessed as of the initiation of the practice alleged to have led to the monopoly in question. Such a rule, heretofore unconsidered by either the judiciary or

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academy, would largely remove desirable unilateral conduct from the stochastic oversight of section 2.

INTRODUCTION

Indeterminism and vacuity are hallmarks of the law of monopolization.[1] Despite recurring efforts, the courts have yet to devise and implement an elegant solution to what is increasingly viewed as an intractable problem.[2] This article seeks to alleviate this shortcoming by advocating an initially modest, though ultimately potent, solution. More specifically, the deficient law governing monopolization could be markedly improved by revisiting the manner in which market power is assessed. Rather than analyzing such power ex post—that is, on the basis of a defendant's economic might at the time of suit—the courts should instead implement an ex ante approach that would consider the extent of a defendant's dominance at the

1. *See* Einer Elhauge, *Defining Better Monopolization Standards*, 56 STAN. L. REV. 253, 255 (2003).
2. *See id.* at 257-58.

moment the conduct alleged to have caused monopoly was initiated. The effect of such a shift in the law would be to immunize highly desirable behavior, which would otherwise be in danger of being erroneously condemned.

The need for this ex ante approach emanates from widespread academic agreement that the law governing monopolization is in dire need of correction.[3] The courts have articulated a dizzying array of tests designed to distinguish "competitive" from "anticompetitive" unilateral behavior by dominant companies.[4] Yet, each test falls prey to intellectual vacuity, circular application, and self-contradiction. Rather than enunciating erudite theories of unilateral impropriety, derived from an explicit and objective normative foundation, the judiciary has pronounced theories of superficial attraction that derive not from perspicacious insight, but from impressionistic conclusion. At least part of this shortcoming emanates from the oxymoronic nature of the still-binding rule established in *United States v. Grinnell* by the Warren Court in 1966, which condemns the fact of purposeful monopoly, while exempting behavior that paradigmatically falls within the definition of that proscribed.[5] Coupled with the logical inconsistency systemic in the rule itself is the fact that the Court at that time positively disavowed the conclusions of economic theory that

3. *See id.*; *see also* Symposium, *Identifying Exclusionary Conduct Under Section 2*, 73 ANTITRUST L.J. 311 *passim* (2006); *see* Herbert Hovenkamp, *Exclusion and the Sherman Act*, 72 U. CHI. L. REV. 147, 147-51 (2005); *see* Alan J. Meese, *Monopolization, Exclusion, and the Theory of the Firm*, 89 MINN. L. REV. 743, 744-46 (2005); John E. Lopatka & William H. Page, *Monopolization, Innovation, and Consumer Welfare*, 69 GEO. WASH. L. REV. 367, 367-68 (2001); Herbert Hovenkamp, *The Monopolization Offense*, 61 OHIO ST. L.J. 1035, 1035-36 (2000). This is not just an academic matter—the U.S. Justice Department's antitrust division has made the formulation of "objective standards for the evaluation of monopolization and other single firm conduct" a "priority." *See* Nickolai G. Levin, Weyerhaeuser*'s Implications for Future Antitrust Disputes*, 4 NYU J.L. & BUS. 343, 344 (2007) (citing Thomas O. Barnett, Deputy Assistant Att'y Gen., Antitrust Div., U.S. Dep't of Justice, Address Before the Section of Antitrust Law, American Bar Association: Antitrust Enforcement Priorities: A Year in Review 3 (Nov. 19, 2004), *available at* http://www.usdoj.gov/atr/public/speeches/206455.pdf).

4. *See* United States v. Grinnell Corp., 384 U.S. 563, 570-71 (1966); Aspen Skiing Co. v. Aspen Highlands Skiing Corp., 472 U.S. 585, 595-96 (1985); Eastman Kodak Co. v. Image Technical Servs., Inc., 504 U.S. 451, 482-83 (1992).

5. *See Grinnell Corp.*, 384 U.S. *passim*.

now hold so much sway. Given the increasingly widespread view that antitrust cases "must make economic sense,"[6] there now exists a tension between the somewhat nebulous explanatory theories underlying actual monopolization standards and those that find explanatory power in the broader antitrust context. Such confusion may serve to entrench rather than to expose the deficient legal foundation of contemporary section 2 doctrine, which seeks to condemn anticompetitive unilateral behavior by dominant firms.[7]

This judicial failure does not necessarily imply cognitive bias or political disposition but more likely finds explanation in two explanatory factors. First, serious definitional inadequacies plague section 2 jurisprudence, which ultimately lead ostensibly precise rules to take on a malleable form of a type highly vulnerable to subjective manipulation. Stripped of obfuscatory language, contemporary section 2 standards amount to little more than an order to condemn practices construed as antithetical to a particular judge's sense of what constitutes "competitive." Lacking an explicit norm to guide enforcement, the judiciary is left to rely on subjective whim, rather than objective command. The second problem lies in the innate and immense difficulty of differentiating benign and objectionable conduct in a field of near-Byzantine complexity on the basis of a single standard. The ultimate result is that companies accused of actual monopolization face a highly stochastic litigative process.

The probabilistic nature of section 2 litigation has two negative effects—it can lead to desirable conduct being mistakenly condemned and it can chill otherwise vigorous competition by causing prospective victors to tame their behavior. Both effects are bad, but the latter is likely worse, given the

6. United States v. Syufy Enter., 903 F.2d 659, 663 (9th Cir. 1990).

7. *See* 15 U.S.C. § 2. Section 2 states:

> Every person who shall monopolize, or attempt to monopolize, or combine or conspire with any other person or persons, to monopolize any part of the trade or commerce among the several States, or with foreign nations, shall be deemed guilty of a felony, and, on conviction thereof, shall be punished by fine not exceeding $100,000,000 if a corporation, or, if any other person, $1,000,000, or by imprisonment not exceeding 10 years, or by both said punishments, in the discretion of the court.

multiplication effect.[8] Dominant firms need some concept of the legal boundaries that encompass their position. Monopolization doctrine presents a highly nebulous and ill-defined constraint on behavior. Interestingly, however, the harm in traditional settings—though significant—is ultimately contained. Monopolists operating in such an environment can likely escape exposure to potential liability by simply not employing traditionally suspect business practices such as refusals to deal,[9] price squeezes,[10] product tying,[11] other forms of leverage,[12] and below-cost pricing.[13] More fundamentally still, potential entrants and firms that possess marginal market share are highly unlikely to be subject to section 2 oversight.

A new and great danger exists, however. Unlike in traditional settings, the prospect of monopolization from a fringe position in information markets has become entirely feasi-

8. A negative precedent is apt to cause far greater harm than the direct legal repercussions to the losing party. The total harm of an improper holding will be the aggregate effect of all desirable behavior deterred by the improper rule in addition to the direct pecuniary harm to the defendant in the case from which the precedent emanates.

9. *See* Verizon Commc'ns, Inc. v. Law Offices of Curtis V. Trinko, 540 U.S. 398, 409 (2004) (recognizing a very limited duty to deal on the part of a monopolist); Eastman Kodak Co. v. Image Technical Servs., Inc., 504 U.S. 451, 483 n.32 (1992); Aspen Skiing Co. v. Aspen Highlands Skiing Corp., 472 U.S. 585, 611 (1985) (affirming liability for a unilateral refusal to deal); Otter Tail Power Co. v. United States, 410 U.S. 366, 382 (1973) (same); Lorain Journal Co. v. United States, 342 U.S. 143, 149 (1951).

10. *See* United States v. Aluminum Co. of Am., (Alcoa) 148 F.2d 416, 436-48 (2d Cir. 1945) (requiring that a vertically integrated monopolist charge downstream rivals no more than a "fair price" for its bottleneck input and demanding further that such a monopolist charge end users a sufficiently high price to enable its rivals to enjoy a "living profit"). Although historically suspect, the U.S. Supreme Court has essentially eliminated the concept of a price squeeze as a basis for an antitrust claim. *See* Pac. Bell Tel. Co. v. linkLine Communs., 129 S. Ct. 1109 (2009).

11. *See* Jefferson Parish Hosp. Dist. No. 2 v. Hyde, 466 U.S. 2, 14-19 (1984); N. Pac. Ry. v. United States, 356 U.S. 1, 5-7 (1958).

12. *Eastman Kodak*, 504 U.S. at 479 n.29 (holding that a seller violates section 2 if he "exploits his dominant position in one market to expand his empire into the next"); Intergraph Corp. v. Intel Corp., 195 F.3d 1346, 1359 (Fed. Cir. 1999); United States v. Griffith, 334 U.S. 100, 108 (1948).

13. Brooke Group Ltd. v. Brown & Williamson Tobacco Corp., 509 U.S. 209, 222-24 (1993); Cargill, Inc. v. Monfort of Colorado, Inc., 479 U.S. 104, 117-18 (1986).

ble.[14] In the conventional context, prohibitive short-run capacity constraints foreclose any possibility of swift market share accumulation by a new entrant or small player.[15] Such fringe entities can safely engage in whatever unilateral behavior they desire, short of destroying competitors' facilities.[16] Their immunity stems from the fact that the *Grinnell* rule only applies where a defendant has monopoly power. Marginal competitors simply escape section 2 oversight altogether and, due to capacity constraints in the presence of growing demand, swift monopolization and inadvertent exposure to section 2 is unlikely. Thus, a fringe firm could impose a tying arrangement or price below cost, for example, yet know that its market share would not rapidly grow to a level likely to expose it to scrutiny under section 2. These assumptions are no longer universally valid.

In network markets[17] the marginal cost of expanding production of information goods is often low, sometimes approximating zero.[18] The result of this is instant scalability.[19] In other words, expanding output is relatively costless and rapid displacement of an incumbent—i.e. monopolization—can follow. Given the externalities in consumption that cause demand for a product to increase in tandem with the number of consumers purchasing it, entrants into such markets face new

14. *See* STAN J. LIEBOWITZ & STEPHEN E. MARGOLIS, WINNERS, LOSERS AND MICROSOFT: COMPETITION AND ANTITRUST IN HIGH TECHNOLOGY 137, 235-43 (Independent Institute 2001); *see also* Richard A. Posner, *Antitrust in the New Economy*, 68 ANTITRUST L.J. 925, 930 (2001) (commenting that "the networks that have emerged in the new economy do not seem particularly secure against competition. We have seen all manner of firms rise and fall in this industry falling sometimes from what had seemed a secure monopoly position" and explaining this phenomenon on account of "the extraordinary pace of innovation . . . the extraordinary amount of capital that is available worldwide for investment in new enterprises, and the rapidity with which new networks that are primarily electronic can be put into service," but then noting the potential problem of path dependence).

15. *See* RICHARD A. POSNER, ANTITRUST LAW 209-10 (2d ed., Univ. of Chicago Press 2001).

16. *See, e.g.*, Herbert Hovenkamp, *Antitrust's Protected Classes*, 88 MICH. L. REV. 1, 18 n.45 (1989).

17. *See* OZ SHY, THE ECONOMICS OF NETWORK INDUSTRIES 1-8 (Cambridge Univ. Press 2001) (defining network markets as those characterized by complementarity, compatibility, standards, consumption externalities, switching costs, lock-in, and significant economies of scale in production).

18. *See, e.g.*, LIEBOWITZ & MARGOLIS, *supra* note 14, at 137.

19. *See id.*

challenges. In particular, these include inducing consumers to suffer the switching cost associated with moving to the entrant's new standard[20] and entering on a sufficiently wide scale to capture market share. But such entrants face another related danger—the possibility that rapid monopolization on account of a superior standard accelerated by network effects may be mistakenly condemned.

The counter-argument is that the Court has expressly exempted section 2 liability for monopolization on account of a superior product. Although *Grinnell* does not quite stand for this proposition,[21] it remains true as a matter of law that the mere acquisition of a monopoly does not itself violate section 2,[22] at least if no suspect conduct accompanies the monopolization.[23] But herein lies the catch—while an inability to enter safely into tying arrangements, exclusive contracts and the like unquestionably diminishes the efficiency of dominant companies in traditional settings,[24] that cost is at least contained.

Crucially, however, it may not be possible for the purveyor of a superior product even to enter a network market without employing such tactics.[25] As explored in detail below, the only way an entrant may overcome the excess inertia that threatens

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20. *See* SHY, *supra* note 17, at 4-5.

21. As explored in Part I, the Court declined to consider whether a superior product or business acumen explained the challenged monopoly because it found that the defendant occupied its position willfully. *See* United States v. Grinnell Corp., 384 U.S. 563, 576 n.7 (1966). Thus, a literal reading of *Grinnell* suggests that deliberate monopolization is itself a violation of the Sherman Act, irrespective of a product's superiority or the defendant's efficiency.

22. *See* SMS Sys. Maint. Servs. v. Digital Equip. Corp., 188 F.3d 11, 25 (1st Cir. 1999), *cert. denied*, 528 U.S. 1188 (2000); Int'l Audiotext Network Inc. v. AT&T, 893 F. Supp. 1207, 1219 (S.D.N.Y. 1994), *aff'd per curiam*, 62 F.3d 69 (2d Cir. 1995); Blue Cross & Blue Shield United of Wis. v. Marshfield Clinic, 65 F.3d 1406, 1413 (7th Cir. 1995), *cert. denied*, 516 U.S. 1184 (1996); Catlin v. Wash. Energy Co., 791 F.2d 1343, 1347 (9th Cir. 1986).

23. *See supra* notes 9-13.

24. *See, e.g.*, ROBERT H. BORK, THE ANTITRUST PARADOX 375-81 (1978) (discussing the efficient uses of tying arrangements).

25. *See* LIEBOWITZ & MARGOLIS, *supra* note 14, at 57-58 (arguing that "path dependence" can be overcome by a fringe entrant's internalization of the social benefits of the standard being offered). For a discussion of the theory of path dependence, see Joseph Farrell & Garth Saloner, *Installed Base and Compatibility: Innovation, Product Preannouncements and Predation*, 76 AM. ECON. REV. 940 (1986).

to perpetuate an incumbent's hold on consumers is to set price below cost and potentially engage in product tying or offer buy-back guarantees. Such tactics may facilitate a highly desirable form of Schumpeterian competition, pursuant to which inferior, incumbent standards are rapidly displaced by superior alternatives.[26] Perversely, though, there is every risk under the current law that the successful entrant will be deemed to have violated section 2. As the courts employ an ex post approach to market power assessment, a fringe firm's below-cost introduction of a superior product may be deemed illegal predatory pricing by a dominant firm, if the firm monopolizes the market.

Thus, current section 2 standards threaten to diminish competition in a most serious way in high-tech industries that continue to grow in importance within the national and global economy.[27] Of course, such harm is in addition to the damage unquestionably caused in traditional settings. The question arises of how to improve standards of monopolization. Some may argue that defining a perfect and universal solution to this seemingly obdurate problem would be a Sisyphean undertaking. Ultimately, this may or may not be correct. Although this article does not purport to accomplish such a task, it does offer a structure for significant improvement. This framework has two steps—first, establishing a normative standard to inform subsequent analysis and, second, formulating the rule that most closely serves that standard in application.

With regard to the first step, this article favors an aggregate welfare approach. Although the direct gains that would be accomplished by introducing this norm alone would be modest in immediate impact, it would have a significant long-term effect on the construction of effective rules. The challenge with this step is definitional and requires precise extrapolation of what would and would not be measured by such a norm. In addressing these issues, the article concludes that ag-

26. *See* Posner, *supra* note 14, at 930.

27. For a discussion of the increasing importance of such markets, see Francis Gurry, *The Evolution of Technology and Markets and the Management of Intellectual Property Rights*, 72 CHI-KENT L. REV. 369, 370 (1997). *See generally* Miriam A. Cherry & Robert L. Rogers, *Markets for Markets: Origins and Subjects of Information Markets*, 58 RUTGERS L. REV. 339 (2006).

gregate welfare would constitute a satisfying and coherent normative foundation for section 2 jurisprudence.

Having identified a guiding metric by which to assess the desirability of monopolization in a given case, the next step involves identifying a rule or standard that would enable a judge reliably to distinguish desirable from objectionable unilateral conduct on the basis of the metric identified. This poses a major challenge.

One solution would be to abandon the *Grinnell* line of cases altogether and to replace them with the standard of per se legality sometimes affiliated with a strict reading of the Chicago School.[28] Such a position could be defended not on the basis of economic impossibility—for even Chicago School scholars have recognized the possibility of anticompetitive unilateral conduct[29]—but on heuristic grounds.[30] If a significant proportion of monopolization claims are taken against benign or desirable practices[31] and if, notwithstanding the nature of the legal test at-issue, courts are prone to Type I error,[32] then aggregate welfare may be promoted by foreclosing the possibility of such error altogether.[33] Although such a position is

28. For the classic expression of the strict Chicago view, see BORK, *supra* note 24.

29. *See* Posner, *supra* note 14, at 932-33 (2001) (explaining that the Chicago School's approach is merely skeptical, not dismissive, and explaining how the *Standard Fashion* case involved genuinely exclusionary behavior). *But cf.* BORK, *supra* note 24 (arguing that unilateral conduct is incapable of having anticompetitive effect).

30. *See generally* GERD GIGERENZER & CHRISTOPH ENGEL, HEURISTICS AND THE LAW (2006) (exploring the use of heuristics as an efficient and superior alternative to statistical analysis). A good example of a prominent economist urging a per se approach is Milton Friedman, who declared that the antitrust laws should be scrapped for doing more harm than good. Milton Friedman, *The Business Community's Suicidal Impulse*, CATO POLICY REPORT, March/April 1999, at 6, 7, *available at* http://www.cato.org/pubs/policy_report/v21n2/friedman.html.

31. This is not an unrealistic assumption, given that enhanced efficiency necessarily injures rivals and injured parties are apt to pursue all avenues of recourse open to them.

32. A Type I error arises when a proper null hypothesis is erroneously rejected. *See, e.g.*, Richard A. Posner, *An Economic Approach to the Law of Evidence*, 51 STAN. L. REV. 1477, 1504 (1999) (defining type I and type II errors). As applied to the current context, Type I errors occur when socially desirable business practices are erroneously struck down.

33. In other words, by conclusively deeming all unilateral practices legal.

defensible, it runs counter to the increasing influence of post-Chicago economics, which has specified numerous (albeit limited) instances in which harm to consumer welfare may flow from unilateral conduct.[34]

If we accept that per se legality is neither an ideal, nor even second best outcome, the question thus arises of how to craft an objective rule that would give rise to accurate application. While the subjectivity that so ubiquitously plagues jurisprudence in the section 2 arena is unlikely to dissipate even in the presence of the most perspicacious test, the article presents a novel solution by which to bypass this problem. It does so by turning to the sole element of the *Grinnell* test that is conducive to relatively objective application—namely, the requirement of monopoly power. Although some would posit that inquiry into monopoly power is itself a subjective exercise,[35] such indeterminism is mostly reserved for defendants at the border of the relevant market share cut-off.[36] Where a defendant is a new entrant into a market, however, there is almost no prospect that it will be found to have monopoly power at that time.[37]

To insulate desirable behavior from judicial scrutiny under section 2, an ex ante approach to market power analysis should be adopted. Under this view, a defendant's market power for the purpose of section 2 oversight would be the power it possessed at the moment it initiated the practice alleged to have caused monopoly. Such a rule, heretofore unconsidered by either the judiciary or academy, would remove many forms of commendable unilateral conduct from the stochastic oversight of section 2. In particular, this approach would serve to protect some of the most highly desirable, yet currently endangered, forms of competition in high-technology network markets.

The article addresses these issues in a series of sections. Part I addresses the foundational question of what standard

34. *See generally* Herbert Hovenkamp, *Post-Chicago Antitrust: A Review and Critique*, 2001 COLUM. BUS. L. REV. 257.

35. *See* Elhauge, *supra* note 1, at 257-60.

36. *See id.* at 259 (observing that courts hold that "90% [market share] is certainly enough, 33% is certainly not, and 60-64% is close to the line").

37. *See, e.g.*, Eastman Kodak Co. v. Image Technical Servs., Inc., 504 U.S. 451, 464 (1992) ("The existence of [market] power ordinarily is inferred from the seller's possession of a predominant share of the market").

should inform analysis in actual monopolization cases. As explored, the judiciary's failure to enunciate such a normative metric is serious. In the confused context that follows, the courts have struggled mightily in formulating tests to distinguish "pro-competitive" and "anti-competitive" practices. Nor has the academy been of much assistance. Part I concludes by making the case for aggregate welfare as the appropriate guiding norm. Part II explores the potentially grave repercussions of failing to revisit doctrine in the section 2 arena. Modern information markets are highly predisposed to "tipping effects" and efficient monopolization; yet, it is here that the danger of erroneous judgment is greatest. Part III articulates this article's central contribution, namely that section 2 defendants' market power should be construed ex ante. The effect of this would be to immunize conduct alleged to have led to monopoly, if that conduct was initiated from a fringe position. Economic analysis suggests that unilateral business practices that are launched from such a position are incapable of leading to monopoly on grounds that are inconsistent with aggregate welfare. This section also addresses the potential weakness and objections to an ex ante approach, but ultimately demonstrates that such concerns are not prohibitive. A brief conclusion follows.

I.
To What End?

A. *The Failure of Monopolization Standards*

Antitrust rules governing unilateral behavior are discordant and incongruous. The result is an uncertainty-filled world that damages competition in traditional industries and, worse, constitutes a Damoclean threat to desirable competitive behavior in new economy markets. This section explores the relevant rules articulated by the Supreme Court and demonstrates the plethora of deficiencies that fatally undermine them.

Even an aphoristic examination of monopolization doctrine reveals the deep-rooted inadequacies that characterize the law in this field. Take, for instance, the Supreme Court's seminal pronouncement in *Grinnell* that a company violates section 2 of the Sherman Act when it: (1) possesses monopoly power and (2) acquires or maintains that power willfully, as distinguished from growth or development as a consequence

of a superior product, business acumen, or historic accident.[38] This test collapses into self-contradiction before even the most superficial scrutiny.

First, the *Grinnell* test draws a false dichotomy. Any firm that introduces a superior product, or operates with business acumen, embraces the ensuing profitability and enhanced market share with open arms. It is difficult to envision a better example of willful monopolization—an irony that has not escaped judicial notice.[39] The Court's attempt to paint dominance on account of superiority as somehow distinguishable from willful conduct is neither convincing nor logical. The Court's purported exemption is, therefore, tautological.

Thus, an objective interpretation of *Grinnell* requires reading the pleonastic distinction of superiority out of the rule. The standard therefore condemns willful monopolization. Yet, to condemn deliberate monopolization is akin to punishing monopoly itself because "no monopolist monopolizes unconscious of what he is doing."[40]

One might argue that the Court meant to avoid this bizarre result by exempting the specific instances of desirable behavior highlighted in part-two of the *Grinnell* test. This argument has strong logical appeal, for if the mere fact of deliberateness in obtaining and perpetuating a monopoly position sufficed to establish liability, the Court's talk of acumen and superiority would be meaningless. As others have demonstrated, however, this would be an incorrect reading of *Grinnell*.[41] In particular, the Court held that because the "monopoly power was consciously acquired, we have no reason to reach" the question of whether the defendants had established "that their dominance is due to skill, acumen, and the like."[42] In other words, the Court found that willful monopolization is itself a violation of the Act.

There are overwhelming policy reasons for giving *Grinnell* a far more restrictive interpretation than a literal reading would suggest. Primarily, adhering to the Court's command

38. United States v. Grinnell Corp., 384 U.S. 563, 570-71 (1966).

39. *See* United States v. Aluminum Co. of Am., 148 F.2d 416, 430 (2d Cir. 1945).

40. *See id.* at 432.

41. *See* Elhauge, *supra* note 1, at 261.

42. *See Grinnell*, 384 U.S. at 576 n.7.

would fatally undermine the very goal of antitrust policy—namely, the maximization of long-run consumer welfare.[43] It is precisely the prospect of commercial success that facilitates vigorous competition.[44] As has been recently emphasized by the Court, the "possession of monopoly power. . . is an important element of the free-market system. The opportunity to charge monopoly prices. . . is what attracts 'business acumen' in the first place."[45] Thus, *Grinnell* simply cannot mean what it says.

This suspicion has been confirmed by subsequent judicial action. The courts have unequivocally emphasized that the Sherman Act does *not* condemn the fact of monopoly itself.[46] Yet, the judiciary continues to apply *Grinnell* as good law.[47] This is made possible by an artificial reading of the case that exempts monopolization deriving from desirable conduct. As the Federal Circuit recently commented, "[t]he antitrust law has consistently recognized that a producer's advantageous or dominant market position based on superiority of a commercial product and ensuing demand is not the illegal use of monopoly power prohibited by the Sherman Act."[48] But so construed, the utility of *Grinnell* as a means to distinguish legal

43. *See, e.g.*, Reiter v. Sonotone Corp., 442 U.S. 330, 343 (1979) (holding that the Sherman Act created a "consumer welfare prescription"); U.S. DEP'T OF JUSTICE & FED. TRADE COMM'N, ANTITRUST GUIDELINES FOR THE LICENSING OF INTELLECTUAL PROPERTY SECTION 1 (1995) ("INTELLECTUAL PROPERTY GUIDELINES").

44. *See* Verizon Commc'ns., Inc. v. Law Offices of Curtis V. Trinko, 540 U.S. 398, 407 (2004).

45. *Id.* at 407.

46. *See* SMS Sys. Maint. Servs. v. Digital Equip. Corp., 188 F.3d 11, 25 (1st Cir. 1999), *cert. denied*, 528 U.S. 1188 (2000) ("When a party brings a Section 2 claim, it is not enough simply to show that there is monopoly power."); Int'l Audiotext Network v. AT&T, 893 F. Supp. 1207, 1219 (S.D.N.Y. 1994), *aff'd per curiam*, 62 F.3d 69 (2d Cir. 1995) ("Even if a defendant has monopoly power, of course, a plaintiff must show more."); Blue Cross & Blue Shield United v. Marshfield Clinic, 65 F.3d 1406, 1413 (7th Cir. 1995), *cert. denied*, 516 U.S. 1184 (1996); Catlin v. Washington Energy Co., 791 F.2d 1343, 1347 (9th Cir. 1986). While this law is entirely desirable as a normative matter, it is demonstrably inconsistent with a close reading of *Grinnell*.

47. The *Grinnell* test has been applied numerous times by the Supreme Court. *See, e.g.*, Eastman Kodak Co. v. Image Technical Servs., 504 U.S. 451, 480-81 (1992); Aspen Skiing Co. v. Aspen Highlands Skiing Corp., 472 U.S. 585, 596 n.19 (1985).

48. *See* Intergraph Corp. v. Intel Corp., 195 F.3d 1346, 1353 (Fed. Cir. 1999).

from illegal unilateral behavior is eviscerated. The sole metric identified in the case is one of willfulness. To employ the case as binding precedent, as the courts have, thus requires one to use that standard.[49] If we decide artificially to label quite deliberate, though desirable, behavior as non-willful in order to exempt it under *Grinnell*, and deem objectionable conduct willful in order to outlaw it, then the *Grinnell* framework plays only a facilitative and ceremonial role.[50] It provides absolutely no guidance on the critical question of whether the behavior is acceptable (and thus non-willful) or worthy of condemnation (and thus deliberate). The normative inquiry is, accordingly, quite distinct and aided in no way by the Court's standard.

How have the courts gone about conducting this normative inquiry? Subsequent judicial pronouncements have not been particularly helpful. Such attempts have seen the Court in *Aspen Skiing Co. v. Aspen Highlands Skiing Corp.* condemn "anticompetitive or exclusionary" conduct,[51] yet protect unilateral conduct in pursuance of a "normal business purpose."[52] Quite what these terms are supposed to mean is left to the reader's imagination. In any event, they are no more illuminative on the question of what unilateral conduct is acceptable than is *Grinnell*'s focus on "willfulness."

In an ostensibly more nuanced formulation, the Court in *Eastman Kodak Co. v. Image Technical Servs.* condemned "the use of monopoly power 'to foreclose competition, to gain a com-

49. Representative cases that apply *Grinnell* include *Kodak* at 480-81, and *Aspen Skiing* at 596 n.19.

50. Thus, the case provides yet another antitrust example of the judiciary saying one thing and doing another. Two other classic examples that come to mind include the cases of *United States v. Aluminum Co. of Am.*, 148 F.2d 416, 430 (2d Cir. 1945) (enunciating the famous principle that "[t]he successful competitor, having been urged to compete, must not be turned upon when he wins," but nevertheless holding the defendant guilty for expanding its market share by virtue of its efficiency), and *Brown Shoe Co. v. United States*, 370 U.S. 294, 320 (1962) (articulating the bedrock principle that the antitrust laws were enacted for "the protection of competition, not competitors," but proceeding to forbid a merger on the ground of harm to small business).

51. *See Aspen Skiing*, 472 U.S. at 605 n.32 (defining the standard 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.").

52. *See id.* at 605, 608.

petitive advantage, or to destroy a competitor,'"[53] but exempted conduct spurred by "legitimate competitive reasons" or "valid business reasons."[54] Yet, this test also falls flat. The reader should pause to note not only the conclusory and ultimately vacuous nature of the distinctions emphasized by the Court, but also the various perversities associated with a literal application of them. As a general matter, increasing market share will often give rise to lower average costs, thus granting a dominant firm a competitive advantage that may destroy smaller competitors.[55] The self-contradiction does not end there, for achieving efficiency and expanding output to the benefit of consumers not only grants "a competitive advantage" that can "destroy a competitor," it can also "foreclose competition." This is because the acquisition of greater efficiency can deny fringe entrants the ability to enter profitably on a modest scale.[56] Even though the better view no longer regards such foreclosure as being worthy of antitrust concern, this perspective has yet to achieve ubiquitous favor.[57]

The mere act of efficiently increasing output in response to consumer demand meets the Court's standard in *Kodak*, even though output enhancement is otherwise seen as an unequivocal good.[58] A literal application of the *Kodak* test thus

53. *See Eastman Kodak*, 504 U.S. at 482-83 (quoting United States v. Griffith, 334 U.S. 100, 107 (1948)).

54. *See id.* at 483 & n.32.

55. This holds true insofar as the company in question is operating on the downward-sloping portion of its long-run average cost curve.

56. The chief proponent of this view was Joe Bain, who argued that entry barriers exist to "the extent to which established firms can persistently raise their prices above a competitive level without attracting new firms to enter the industry." *See* JOE S. BAIN, BARRIERS TO NEW COMPETITION 3 (Harvard Univ. Press 1956). As a normative matter, however, this position has been widely discredited by the academic literature, most directly by George Stigler, on the ground that Bain's approach necessarily views profitability on account of efficiency as an evil. *See* George Stigler, *Barriers to Entry, Economies of Scale, and Firm Size*, *in* THE ORGANIZATION OF INDUSTRY 67 (1968) (defining an entry barrier as "a cost of producing . . . which must be borne by a firm which seeks to enter an industry but which is not borne by firms already in the industry").

57. Although Stigler's view has largely gained acceptance in the United States, its dominance has not been universal. *See generally* Richard Schmalensee, *Sunk Costs and Antitrust Barriers to Entry*, 94 AM. ECON. REV. 471 (2004).

58. *See* DENNIS W. CARLTON & JEFFREY M. PERLOFF, MODERN INDUSTRIAL ORGANIZATION 69-73 (Addison Wesley 4th ed. 2005).

leads to Judge Learned Hand's infamous—and now thoroughly discredited[59]—notion in *United States v. Aluminum Co. of America* (hereinafter "*Alcoa*") that there is "no more effective exclusion than progressively to embrace each new opportunity as it opened, and to face every newcomer with new capacity already geared into a great organization, having the advantage of experience, trade connections and the elite of personnel."[60]

Judge Learned Hand's standard effectively forbade dominant companies from competing on the basis of their efficiency and superiority. It is now well-settled that this view was perverse and served only to harm the intended beneficiaries of antitrust policy—namely, consumers.[61] As a result, monopolists are now free to employ their efficiency to profitable end.[62] Yet, such freedom remains inconsistent with the literal command of controlling law. Indeed, the *Kodak* test ultimately descends into the same, now discredited, *Alcoa* standard. Judges, aware of this absurdity, simply avoid applying *Kodak* in literal fashion.

If the rule does not mean what is says, though, what kind of meaningful objective guidance can it convey? The answer, of course, is that it provides none and merely serves as precedential support for whatever decision a particular judge independently reaches. Such malleable rules enable judges to impose liability decisions on whatever policy ground seems best at the time, whilst remaining within the confines of the law. Monopolization standards are essentially treated as if they stand for something other than what they say and, as a result, are open-ended.

Monopolization standards are, as Harvard Professor Einer Elhauge declared, vacuous.[63] What black letter principles exist? There are few. By far the most definite is that monopoly power must exist before a firm can be deemed guilty of actual

59. *See* Posner, *supra* note 14, at 930.

60. *See* United States v. Aluminum Co. of Am., 148 F.2d 416, 431 (2d Cir. 1945).

61. *See* Reiter v. Sonotone Corp., 442 U.S. 330, 343 (1979) (holding that the Sherman Act created a "consumer welfare prescription").

62. *See, e.g.*, Conwood Co., L.P. v. U.S. Tobacco Co., 290 F.3d 768, 783 (6th Cir. 2002), *cert. denied*, 537 U.S. 1148 (2003) ("[M]erely because an entity has monopoly power, does not bar it from taking advantage of its scale of economies because of its size.").

63. *See* Elhauge, *supra* note 1, at 261.

monopolization.[64] Indeed, without such power, a firm will not be subject to section 2 oversight at all. This is central to the article's argument for introducing an ex ante market power test to inoculate desirable behavior. Once a defendant is shown to occupy a dominant position, however, the only clear rule is that a monopoly acquired on account of innate superiority alone is legal.[65] Although this is apt to be a satisfactory rule in obvious cases where a monopolist's technological preeminence is wildly beyond that of its rivals, or where consumer demand for its product far outweighs that for its competitors, such instances will be in the minority.

The reason why this bright-line rule is wholly inadequate is because real-world monopolization cases rarely, if ever, attack inherent superiority leading to dominance alone but are aimed at business practices that accompany a monopolist's rise to, or rest at, the top. For instance, when a dominant company sells its products at lower prices than its rivals, are those low prices predatory and hence illegal?[66] Can a monopolist refuse to supply its valuable technology or decline access to an essential facility?[67] May that company enter into exclusive contracts with its clients so that the latter are contractually prohibited from dealing with its rivals?[68] What about vertical market price discrimination in the form of a price squeeze?[69] All these practices and more have been deemed to violate section 2 of the Sherman Act in certain circumstances.[70] Yet, the calculus according to which the propriety of such practices are judged

64. *See* United States v. Grinnell Corp., 384 U.S. 563, 570-71 (1966).

65. *See* Intergraph Corp. v. Intel Corp., 195 F.3d 1346, 1352 (Fed. Cir. 1999).

66. *See* Brooke Group Ltd. v. Brown & Williamson Tobacco Corp., 509 U.S. 209, 222-24 (1993); Cargill, Inc. v. Monfort of Colorado, Inc., 479 U.S. 104, 117-18 (1986).

67. *See* Verizon Commc'ns, Inc. v. Law Offices of Curtis V. Trinko, 540 U.S. 398, 409 (2004); Eastman Kodak Co. v. Image Technical Servs., Inc., 504 U.S. 451, 483 n.32 (1992); Aspen Skiing Co. v. Aspen Highlands Skiing Corp., 472 U.S. 585, 603 (1985); Otter Tail Power Co. v. United States, 410 U.S. 366, 378 (1973); Lorain Journal Co. v. United States, 342 U.S. 143, 146-49 (1951).

68. *See* United States v. Microsoft Corp., 253 F.3d 34, 58-84 (D.C. Cir. 2001) (en banc) (per curiam).

69. *See* United States v. Aluminum Co. of Am., 148 F.2d 416, 436-38, 447-48 (2d Cir. 1945).

70. *See Trinko*, 540 U.S. at 408-09; *Brooke Group*, 509 U.S. at 222-24; *Eastman Kodak*, 504 U.S. 451; *Aspen Skiing*, 472 U.S. 585; *Otter Tail*, 410 U.S. 366;

from case-to-case is far from simple and not, in any event, aided by the monopolization standards laid down by *Grinnell* and its progeny. Off-setting issues invariably arise for any of the aforementioned practices are capable of both enhancing a monopolist's efficiency and injuring its rivals.[71] Thus, it is incorrect to conclude that the employment of such business strategies is inconsistent with superiority, efficiency, or other forms of desirable monopolization. The result therefore turns not only on the particular test applied but on the underlying norm that informs analysis.

In order to bestow the Court's hopelessly conclusory standards with some semblance of objectivity, the courts have sought to distinguish legitimate competition from improper monopolization on the basis of economic rationality. The most important example involves the "profit-sacrifice" test, which states that specific instances of conduct should be assessed according to whether the challenged acts involve a forfeit in short-run profits that would not make long-term sense but for the elimination of a competitor.[72] While intuitively pleasing, particularly in the realm of predatory pricing where below-cost selling may only be profitable in the long-run by suffering short-term losses to eliminate competition, even this test has been proven demonstrably erroneous.[73] Thus, even subsequent definitional efforts have been in vain.

It has thus become clear that current monopolization standards are incapable of objective application.[74] Feeding this inadequacy are the dual failures: first, to elucidate a clear normative standard by which to inform analysis and, second, to extrapolate a clear test by which to apply the standard. Any solution to the problem of poor doctrine in this area must be-

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Lorain Journal, 342 U.S. at 152-53; *Microsoft*, 253 F.3d 34; *Alcoa*, 148 F.2d at 429-32, 436-38, 447-48.

71. *See* BORK, *supra* note 24, at 7-8, 107-09, 116, 122-29.

72. *See Aspen Skiing*, 472 U.S. at 610-11; LePage's Inc. v. 3M, 324 F.3d 141, 164 (3d Cir. 2003) (en banc).

73. *See* Elhauge, *supra* note 1, at 268-94 (arguing that much desirable behavior by dominant companies involves a sacrifice in short-run profits and that objectionable unilateral conduct can occur without a short-run loss in profitability); Steven C. Salop, *Exclusionary Conduct, Effect on Consumers, and the Flawed Profit-Sacrifice Standard*, 73 ANTITRUST L.J. 311, 313 (2006).

74. Although, as we shall see, accuracy requires a subjective determination as to an appropriate metric of quality.

gin by addressing the first goal. An attempt to formulate satisfactory tests to define acceptable behavior is doomed to failure absent an underlying norm.

B. *The Elusive Guiding Star*

We have seen that monopolization standards ultimately regress to a simple command to sanction or condemn unilateral behavior based on little more than a particular judge's subjective understanding of what constitutes "normal competition," as opposed to "exclusionary" conduct. Such an approach is bereft of logical substance and is inimical to legal certainty. A major reason why all the various distinctions and tests enunciated by the courts fail to provide objective guidance is that the Supreme Court has not articulated a foundational norm by which to guide enforcement. Thus, the judiciary is left with little formal direction in seeking to define the boundaries of appropriate unilateral behavior.

One might be tempted to argue that efficiency, as applied through price theory, is the lodestar of modern competition law.[75] As a result, one may argue, it does and should constitute the sole, relevant benchmark underlying monopolization analysis. Although there is some force to this assertion—given both the Supreme Court's reference to efficiency justifications in the section 2 context[76] and the weight of academic support in its favor[77]—it is nevertheless the case that the courts have eschewed monopolization standards focused purely on efficiency.[78]

For starters, the Supreme Court has only drawn reference to an efficiency defense in this context *once*.[79] Moreover, it is widely understood that there is no unqualified efficiency-de-

75. After all, there is no lack of support for such a proposition in antitrust generally. *See* POSNER *supra* note 15, at 2, 9, 22-23; BORK, *supra* note 24, at 91, 116-17, 122-23.

76. *See* Aspen Skiing Co. v. Aspen Highlands Skiing Corp., 472 U.S. 585, 597, 605, 610-11 (1985).

77. *See* POSNER, *supra* note 15, at 194-95; BORK, *supra* note 24, at 107-15.

78. *See* Elhauge, *supra* note 1, at 256. Although this tenet of monopolization law looks somewhat anomalous in the greater context of antitrust jurisprudence, it remains the fact that efficiency is not hegemonic in the section 2 setting.

79. As will be explored momentarily, the Roberts Court has spoken in terms that strongly suggest that efficiency is the broad policy underlying anti-

fense for actual monopolization.[80] Most notably, one cannot defend a deliberate monopolization charge on the ground that the ensuing market structure is more efficient.[81] To the extent efficiency concerns remain relevant as a defense, they appear focused on the subjective motivation of the defendant.[82] Indeed, several seminal monopolization cases have placed the conscious intent of the accused monopolist at the center of their analysis.[83] It is thus highly instructive that in *Aspen Skiing*—the closest the Supreme Court has come to adopting an efficiency defense for monopolization—the Court spoke not of structural market efficiency, but of subjective *motivation.*[84] More particularly, the Court opined:

> Thus the evidence supports an inference that [the 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.[85]

This analysis is curious, both because the Court has held elsewhere that even an act of pure malice by one competitor against another gives rise to no cause of action under the Sherman Act[86] and because it is widely accepted that intent ought

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trust enforcement generally. Nevertheless, it is indisputable that efficiency concerns neither explain nor govern the outcome of monopolization cases.

80. *See, e.g.*, Elhauge, *supra* note 1, at 256.

81. *Id.*

82. *See Aspen Skiing*, 472 U.S. at 610-11; *see also* Elhauge, *supra* note 1, at 256 (advocating a test that focuses on whether a practice damages rivals' efficiency without enhancing the monopolist's).

83. In earlier cases, subjective intent played a determinative role. *See* United States v. Griffith, 334 U.S. 100, 106-07 (1948) (holding that monopoly power "coupled with the purpose or intent to exercise that power" constitutes an antitrust violation); *see also* Am. Tobacco Co. v. United States, 328 U.S. 781, 809-14 (1946); Standard Oil Co. v. United States, 221 U.S. 1, 75-77 (1911) (stressing "purpose and intent" in exclusionary behavior). More modern cases have moderated this view, though it remains the case that the current test for monopolization is the *deliberate* maintenance or acquisition of monopoly power. *See* United States v. Grinnell Corp., 384 U.S. 563, 570-71 (1966).

84. *Aspen Skiing*, 472 U.S. at 610-11.

85. *Id.* (emphasis added).

86. *See* Brooke Group Ltd. v. Brown & Williamson Tobacco Corp., 509 U.S. 209, 225 (1993) (holding that "[e]ven an act of pure malice by one business competitor against another does not, without more, state a claim under the federal antitrust laws").

to be irrelevant.[87] Most fundamentally, however, "efficiency" in itself constitutes an insufficiently precise metric to guide enforcement. In particular, the term's inclusive meaning is somewhat nebulous. This bare label proves to be of more use than "willfulness" or "legitimate business reasons", but not much. How does one elucidate the Court's use of the term?

The most likely explanation emanates from the fact that recently the Court has been concerned with consumer welfare, which mandates a test associated, but not commensurate, with efficiency considerations.[88] Indeed, this suspicion gains further credibility in light of the Court's own proclamation that the Sherman Act creates a "consumer welfare prescription."[89] Furthermore, a reading of the Court's recent judgments would seem consistent with the primacy of consumer well-being, even though they have failed to make such a standard explicit.[90]

It is worth exploring the relationship between a consumer welfare standard and efficiency considerations. If one adopts an economic definition of consumer surplus, efficiencies are relevant only if they translate into lower prices. Productive effi-

87. *See, e.g.*, Ocean State Physicians Health Plan, Inc. v. Blue Cross & Blue Shield, 883 F.2d 1101, 1113 (1st Cir. 1989), *cert. denied*, 494 U.S. 1027 (1990) ("[T]he desire to crush a competitor . . . is insufficient to make out a violation of the antitrust laws"); Morgan v. Ponder, 892 F.2d 1355, 1359 (8th Cir. 1989) ("This court has realized the futility in attempting to discern predatory conduct solely through evidence of a defendant's 'predatory intent.'"); Barry Wright Corp. v. ITT Grinnell Corp., 724 F.2d 227, 231-32 (1st Cir. 1983); Ball Memorial Hosp. v. Mutual Hosp. Ins., 784 F.2d 1325, 1338-39 (7th Cir. 1986) ("Intent to harm rivals is not a useful standard in antitrust."); Byars v. Bluff City News Co., 609 F.2d 843, 860 (6th Cir. 1979) ("[W]e think it is clear that what should matter is not the monopolist's state of mind, but the overall impact of the monopolist's practices.").

88. The distinction emanates from the fact that not every efficiency gain will be passed on to consumers. So, for instance, the enforcement agencies often place considerable focus on whether "consumer pass-through" of merger-specific cost savings will occur. As a matter of economic theory, efficiencies that reduce a dominant firm's marginal cost will result in higher allocative efficiency, lower prices, and higher consumer welfare. In contrast, reductions in fixed costs will enhance a dominant firm's profitability, but will not benefit consumers. Under consumer welfare analysis, only the former concern weighs favorably on the sanction decision. In contrast, an aggregate welfare inquiry would place equal emphasis on both.

89. Reiter v. Sonotone Corp., 442 U.S. 330, 343 (1979).

90. *See, e.g.*, Levin, *supra* note 3, at 353 (noting with respect to the 2007 *Weyerhaeuser* case that the Court elided the issue of whether antitrust laws protect only consumers).

ciency gains that take the form of fixed cost reductions will not affect marginal cost and, as a result, will not impact the price at which the market clears. Despite the very real social gains achieved in such cases, a consumer welfare standard views them with indifference. The closely related field of merger clearance is representative. Under the 1992 Horizontal Merger Guidelines, the enforcement agencies will favorably consider merger-specific efficiencies that can be expected to give rise to consumer "pass-through."[91] Efficiencies enjoyed only by the merging parties will have no impact on the sanction decision.[92] Similarly, a firm that deliberately eliminates its rivals to achieve fixed cost savings will enjoy no favorable antitrust treatment because prices will rise. In short, monopolization doctrine driven by consumer welfare concerns considers some, but by no means all, efficiency justifications underlying otherwise exclusionary conduct.

There is, however, good reason to question the normative desirability of adhering to a strict consumer welfare standard. Instead, a total welfare metric should be employed.[93] There are two major grounds for favoring the latter. First, the distinction between producers and consumers is an artificial and unconvincing one. Most obviously, a producer in one context is a consumer in another and vice versa. Indeed, companies' purchases account for a highly significant proportion of consumer sales. Attempting to define consumers and manufacturers as distinct and opposed classes is incongruous. Second, to the extent society nevertheless considers the utility of the individual consumers to be paramount, an aggregate welfare ap-

91. U.S. Dep't of Justice & Fed. Trade Comm'n, 1992 Horizontal Merger Guidelines Section 4 (rev. ed. 1997), *available at* http://www.usdoj.gov/atr/public/guidelines/horiz_book/hmg1.html.

92. *See id.* at section 4 (placing an emphasis on efficiency "pass-through," pursuant to which supply-side savings will percolate through to consumers downstream and thus stating a merger will not be challenged where the consumer pass-on outweighs the market power involved so that a net price decrease likely takes place); *Id.* at n.36 (stating that the enforcement agency, in its prosecutorial discretion may in rare cases take account of "inextricably linked" efficiencies; but stating further that "[i]nextricably linked efficiencies rarely are a significant factor in the Agency's determination not to challenge a merger").

93. *See* Kenneth Heyer, *Welfare Standards and Merger Analysis: Why Not the Best?*, (2006), *available at* http://www.abanet.org/antitrust/at-source/pdf/references/heyer-ken-06-8.pdf; Devlin, Jacobs & Peixoto, *infra* note 142.

proach would still be superior. Acts of monopolization (and merger) that give rise to total welfare gains, though consumer welfare losses in the relevant market, make society better off. They are, in the jargon of law and economics, Kaldor-Hicks efficient.[94] Pareto-superiority can be achieved by adopting ex post means of redistribution to channel wealth back to individual consumers.[95] One way to accomplish this is through taxation, though this is imperfect given its distortion on otherwise efficient behavior. The best method for achieving capital flowback is by increasing individuals' participation in capital markets. At present, approximately one out of every two U.S. households holds stock. In situations where a company efficiently monopolizes a market, the ensuing wealth flows not only to the dominant company itself but also to its stock-holders, who are themselves consumers.

What are the practical repercussions of a move from consumer to aggregate welfare? The major difference will lie in sanctioning monopolization that gives rise to productive efficiency gains that outweigh consumer losses caused by higher prices. Weighing the two poses a challenge, but is made considerably easier by Oliver Williamson's model of 1968, which demonstrated that even a slight rise in productive efficiency could lead to producer gains that vastly exceed allocative efficiency losses.[96]

94. An exchange is Kaldor-Hicks efficient where it enhances net social welfare, but leaves at least one party worse off than he was ex ante. *See* RICHARD POSNER, ECONOMIC ANALYSIS OF LAW 13 (Aspen 6th ed. 2003); *see also* Guido Calabresi, *The Pointlessness of Pareto: Carrying Coase Further*, 100 YALE L.J. 1211, 1221 (1991) (describing Kaldor-Hicks or Potential Pareto Superiority).

95. Pareto-superior exchanges are those wealth-generating transactions that make no one worse off; in other words, the marginal rate of substitution among consumers is zero. *See* Posner, *supra* note 94, at 12; Calabresi, *supra* note 94, at 1221.

96. Oliver E. Williamson, *Economies as an Antitrust Defense: The Welfare Tradeoffs*, 58 AM. ECON. REV. 18 (1968).

FIGURE 1: EFFICIENT MONOPOLIZATION

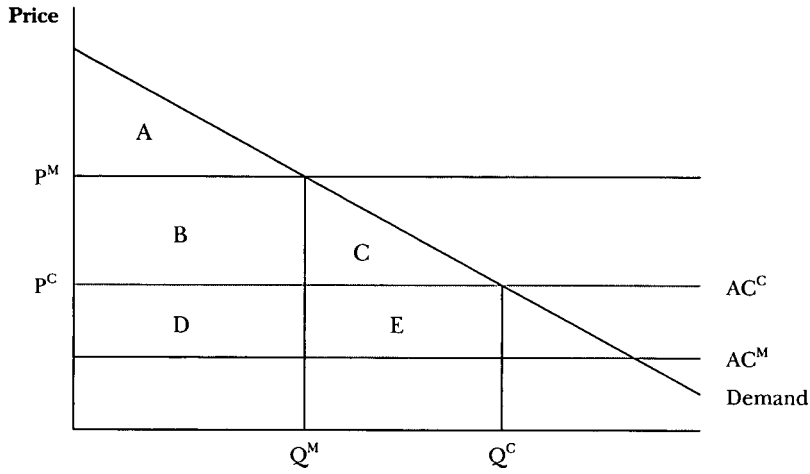

Figure 1 presents a situation in which a company monopolizes a market with a number of consequences. The results of monopolization are higher consumer prices, higher productive efficiency on the part of the now-dominant company, and aggregate welfare gains. More formally, before monopolization, price was at the competitive level of P^C, which was equal to the average cost of the soon-to-be monopolist. After eliminating its competitors, the company acquires monopoly power and thus sets its price at P^M. Consumer welfare before monopolization was A + B + C; afterward, it is merely A. C is the deadweight loss caused by the allocative inefficiency of monopoly pricing. However, D + E are the efficiency gains achieved by the monopolist. Professor Williamson formally proved that D + E will be larger than C in most settings, even where the efficiency gains are modest and the price rise is significant. In this example, because D + E > C, the monopolization is desirable under a total welfare standard. However, as consumer welfare is decreased, such monopolization would be struck down.

Notwithstanding the foregoing, the courts have yet to articulate an aggregate welfare principle. Moreover, the role of efficiencies even under the consumer standard is somewhat uncertain, given that the Court has referred to them as a justi-

fication on one occasion only.[97] Meanwhile, purely populist notions of protecting competitors have been resoundingly rejected.[98] What then can we say about the current guidance given by the judiciary? It is clear that an uneasy tension pervades the law, which undermines legal certainty in a serious way.

Although explicit acknowledgement of consumer welfare as the guiding norm to section 2 enforcement aids analysis in a meaningful way, equivocation remains. In particular, is consumer welfare measured according to economists' understanding of surplus or is a more colloquial definition employed? It is not entirely clear. More fundamentally still, should a static or dynamic view of utility hold sway? Traditional economic models often freeze-frame the world and calculate consumer welfare accordingly. Yet, highly innovative information markets often display limited consumer welfare in any single period. A static interpretation of consumer surplus would thus erroneously suggest a lack of competition.[99] Once these and other definitional questions are answered, one is still left with the difficulty of application. Assessing whether a given business practice likely affects consumer welfare in a negative way can prove remarkably difficult. Indeed, this question will often involve measuring explicit short-run harm to consumers against a potentially superior, yet indeterminate, future caused by greater innovation incentives.[100] The paradigmatic example involves refusals-to-deal cases, where compulsory licensing enhances consumer surplus in the short-run, but threatens to reduce future innovation. A consumer-oriented approach is likely to color analysis in such a way as to create an enforcement bias in favor of the short-run. This is likely to become increasingly true to the extent enforcers elect to employ collo-

97. Aspen Skiing Co. v. Aspen Highlands Skiing Corp., 472 U.S. 585, 610-11 (1985).

98. *See* Brooke Group Ltd. v. Brown & Williamson Tobacco Corp., 509 U.S. 209, 225 (1993); Brown Shoe Co. v. United States, 370 U.S. 294, 320 (1962) ("[T]he antitrust laws were enacted for the protection of competition, not competitors").

99. *See infra* Part II.A.

100. The problems encountered in comparing one indeterminate metric to another are well-known. For a classic expression of this difficulty, see Bendix Autolite Corp. v. Midwesco Enters., Inc., 486 U.S. 888, 897 (1988) (Scalia, J., concurring) (opining that "[i]t is like judging whether a particular line is longer than a particular rock is heavy").

quial conceptions of consumer well-being. In such circumstances, immediate gain and fairness acquire particular prominence.[101]

Consider again the seminal case of *Aspen Skiing*.[102] The Court there placed near-determinative significance on the fact of consumer distaste for the challenged exclusionary practice, noting that:

> the evidence supports a conclusion that consumers were adversely affected by the elimination of the 4-area ticket. In the first place, the actual record of competition. . . indicated that skiers demonstrably preferred four mountains to three. . . . Expert testimony and anecdotal evidence supported these statistical measures of consumer preference. . . During the 1977-1978 and 1978-1979 seasons, people with Ski Co.'s 3-area ticket came to Highlands "on a very regular basis" and attempted to broad the lifts or join the ski school. Highlands officials were left to explain to angry skiers that they could only ski at Highlands or join its ski school by paying for a 1-day lift ticket. Even for the affluent, this was an irritating situation because it left the skier the option of either wasting 1 day of the 6-day, 3-area pass or obtaining a refund which could take all morning and entailed the forfeit of the 6-day discount. An active officer. . . testified that the elimination of the 4-area pass "infuriated" him.[103]

This is a potentially dangerous way to frame the issue and highlights the peril of adhering to a literal consumer welfare standard. In the new economy setting, analogous reasoning would compel a court to order compulsory licensing of a dominant firm's intellectual or other property to facilitate interoperability and consumer satisfaction. Consider a case in which a hypothetical company invents a product of prodigious innovative brilliance, which generates consumer demand to match. Relying on its intellectual property, the successful company refuses to supply its technology to rivals, thereby denying

101. Empirical evidence of this fact is apparent in comparing the European and U.S. competition regimes.

102. *See Aspen Skiing*, 472 U.S. 585

103. *Id.* at 603, 605-06.

consumers the luxury of choice. A U.S. court applying *Aspen Skiing* would note that consumers would demonstrably prefer more options than few and would have little difficulty finding consumer surveys to support the same. Although the Court's recent holding in *Verizon Comm'ns, Inc. v. Law Offices of Curtis V. Trinko* would likely preclude liability in this setting, were our hypothetical inventor initially to license its technology, only later to revoke it, there is reasonable ground to think that liability would follow.[104]

Modern information markets are replete with successful companies that deny rivals the ability to access their technology. Such refusals-to-deal can be, and have been, found to be illegal monopolization. Yet, such cases create dangerous precedent that may lead antitrust enforcers to attack short-run monopoly myopically in the name of the consumer. Illustrative examples can be readily found in Europe. France passed its Dadvsi law, which granted individuals the right to petition the government to require the dissemination of source code to facilitate interoperability.[105] Meanwhile, the European Commission has hit Microsoft with a record fine for failing to share its code at an acceptably low price with rivals.[106] Such phenomena flow naturally from a literal implementation of consumer welfare principles. Yet, they are apt to cause serious long-term harm to those very consumers by reducing successful companies' innovation incentives. This insight can easily elude an enforcer focused squarely on consumers, who may themselves be calling for intervention on their behalf.

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104. Verizon Commc'ns, Inc. v. Law Offices of Curtis V. Trinko, 540 U.S. 398, 409 (2004) (noting that *Aspen* lies at, or near, the border of a duty to deal with competitors in antitrust law and thus implying that analogous facts to *Aspen* would give rise to such a duty); *see also* U.S. DEP'T OF JUSTICE & FED. TRADE COMMI'N, *Antitrust Enforcement and Intellectual Property Rights: Promoting Innovation and Competition* 28 n.97 (2007).

105. *See* Deana Sobel, Note, *A Bite out of Apple? iTunes, Interoperability, and France's Dadvsi Law*, 22 BERKELEY TECH. L.J. 267, 267 (2007).

106. *See* Press Release, European Commission, Antitrust: Commission Imposes €899 Million Penalty on Microsoft for Non-Compliance with March 2004 Decision (Feb. 27, 2008), *available at* http://ec.europa.eu/comm/competition/antitrust/cases/microsoft/implementation.html (followIP/08/318 hyperlink).

II.
THE DANGER POSED IN THE NETWORK ECONOMY

A. *Information Markets and Path Dependence*

The preceding discussion explored the myriad shortcomings in monopolization law and argued that contemporary standards have an invidious effect on both legal certainty and efficient companies' incentives to engage in desirable competition. Nevertheless, it is likely that the harm caused by such indeterminism is relatively contained within traditional industries. To understand why, it is necessary to possess a foundational understanding of industrial organization economics in such market settings.

Firms operating in traditional industries face significant marginal costs in production and typically experience increasing long-run average costs beyond a certain level of output,[107] which for our purposes has two major implications. The first is that the cost of monopoly is not limited to the typical allocative inefficiency associated with supracompetitive pricing.[108] Rather, considerable supply-side inefficiencies also result because the net cost of production will be higher under monopoly than under competition.[109] Second, there is little gain from monopoly in terms of dynamic efficiency.[110] As the goods offered are largely homogenous and there is little innovation,[111] increasing ex post reward in the form of monopoly will not have a significant effect on ex ante research and development. Thus, aggregate welfare is generally maximized by exposing markets to the highest levels of ex post competition.[112] The second implication is that it is infeasible for firms swiftly

107. *See* POSNER, *supra* note 15, at 245.

108. *See id.* at 9-32 (discussing the costs and occasional benefits of monopoly).

109. More specifically, productive efficiency will be far higher when a number of firms operate at minimum long run average cost than where one company operates on the upward-sloping portion of its long-run average cost curve.

110. *Cf.* Thomas O. Barnett, *Interoperability Between Antitrust and Intellectual Property*, 14 GEO. MASON L. REV. 859 (2007) (explaining the importance of dynamic efficiency in information markets).

111. *See* POSNER, *supra* note 15, at 245.

112. *See* DENNIS W. CARLTON & JEFFREY M. PERLOFF, MODERN INDUSTRIAL ORGANIZATION 69-73 (Addison Wesley 4th ed. 2005) (discussing the benefits of competition).

to capture majority market share from a fringe or even oligopolistic[113] position, whether on the basis of consumer demand for a superior product or "predatory" tactics.[114]

These two features combine to suggest that there will be little short-run difference between ex ante and ex post market power for the purpose of section 2 analysis. In other words, although some fluctuation in market share is likely, it is unrealistic to expect a small rival with trivial market share to initiate a predatory plan and so capture a majority of the market. Importantly, nor is it unlikely that a new good will be so revolutionary and superior as to render incumbent products obsolete.

The markets described by the preceding attributes are limited in number.[115] An increasing volume of commerce now involves the information age, where the existence of knowledge itself is a primary product of immense value.[116] Representative markets include computer software, music, video and other digital goods capable of being sold online or in CD form, as well as know-how in high-tech industries.[117] The economic characteristics of this so-called "new economy" bear little relation to the traditional industries in which antitrust doctrine was largely developed. In particular, there are two major policy consequences.

First, information goods are characterized by large ex ante fixed costs in development, yet trivial marginal costs in production.[118] As a result, exposing such markets to high levels of ex post competition causes insolvency.[119] This phenomenon is aggravated by the "public good" nature of information—due to the ease with which information can be appropriated and because there is no rivalry in consumption,

113. *See id.* at 157-99 (describing the economic functioning of oligopolies, which are markets in which the level of concentration causes firms residing therein to operate strategically).

114. *See* POSNER, *supra* note 15, at 209-10 (observing that "to *obtain* a monopoly through predatory pricing would require building enormous productive capacity in advance of the campaign" and concluding that "monopoly power is a condition precedent to the rational employment of predatory pricing").

115. Almost all markets display network effects to some degree.

116. *See* Gurry, *supra* note 27, at 370; Cherry & Rogers, *supra* note 27.

117. *See* SUZANNE SCOTCHMER, INNOVATION AND INCENTIVES 31 (2004).

118. *See id.* at 31, 35.

119. *See id.* at 35-36.

there is little incentive for a commercially motivated inventor to develop the information in question.[120] The legal response is intellectual property protection, which artificially bestows qualifying information with the trait of excludability.[121] A result of this, however, has been an ostensible tension between traditional competition principles that frown upon monopoly, on the one hand, and the patent and copyright laws that appear to do the opposite by granting exclusivity, on the other.[122] This presents antitrust policy in the new economy with a unique challenge, though the more nuanced view now holds that there is no inconsistency in the antitrust and intellectual property laws.[123]

Second, and most importantly, information markets display network effects that both cause a natural regression toward monopoly and tend to fortify a monopoly position once obtained.[124] As a result, it is no longer appropriate to assume that short-run monopolization cannot take place from a position of minority market share. Because marginal cost is minimal, the purveyor of a desirable product can rapidly expand production to meet consumer demand and thus move swiftly from a fringe to a dominant position. A closely related, though no less important, issue is whether such displacement of an incumbent can occur only on the basis of superiority or whether an entrant could employ "nefarious" strategies, such as predatory pricing, to coerce the acceptance of an inferior technology.[125] As explained below, not only is it extraordinarily unlikely that the latter outcome can arise, but conventionally suspect tactics such as below-cost pricing are apt to accompany the emergence of superior standards.[126] The importance

120. *See generally* MANCUR OLSON, THE LOGIC OF COLLECTIVE ACTION: PUBLIC GOODS AND THE THEORY OF GROUPS (1971).

121. *See* SCOTCHMER, *supra* note 117, at 36.

122. *See, e.g.*, SCM Corp. v. Xerox Corp., 645 F.2d 1195, 1203-05 (2d Cir. 1981) (discussing the circumstances in which "the patent and antitrust laws necessarily clash").

123. *See* INTELLECTUAL PROPERTY GUIDELINES, *supra* note 43, at section 1.

124. *See* Michael L. Katz & Carl Shapiro, *Network Externalities, Competition, and Compatibility*, 75 AM. ECON. REV. 424, 424 (1985).

125. *See* LIEBOWITZ & MARGOLIS, *supra* note 14, at 110 (observing that it will not be rational for the owner of an inferior standard to compete against the owner of a superior technology who moved first).

126. *See* Part II.B *infra*.

of the network phenomenon that drives this outcome is such as to be worth expounding.

Direct network effects, alternatively known as positive externalities in consumption, arise whenever the utility enjoyed by a consumer of a good increases in response to an increase in the number of other users of the same good.[127] Indirect network effects arise when an increase in the number of consumers of a product spurs the creation and manufacture of complementary products. Computer hardware, software, and operating systems all constitute effective examples. In any of these cases, an increase in the number of users of the primary good increases the demand for products predicated on the use of that good. As the number of complementary products increases, the demand for the underlying good similarly rises. This forms a "positive feedback loop."[128] The bottom line is that the same product can experience vastly different consumer demand depending on the level of market share it commands, if the market displays powerful direct or indirect network externalities.

The major consequence is a potentially significant "first mover advantage" in network markets that ultimately gives rise to the concern of "path dependence."[129] Many scholars have argued that this phenomenon may perpetuate an inferior standard ("excess inertia") because even though a new potential technology being offered to the public is objectively superior, its lack of market share may render its value to the marginal consumer less than that of the incumbent standard.[130] Further entrenching the monopolist's technology is the switching cost associated with having to learn a new standard.[131] The central example offered by proponents of this view is the QWERTY keyboard, which continues to command the market notwithstanding the historical presence of a (supposedly) superior al-

127. The classic example is the telephone, which is of no use to the owner of one if no one else is linked to the network. As the number of users increases, the value of telephone ownership increases in tandem.

128. *See* WILLIAM H. PAGE & JOHN E. LOPATKA, THE MICROSOFT CASE: ANTITRUST, HIGH TECHNOLOGY, AND CONSUMER WELFARE 91-92 (2007).

129. *See id.* at 93-94.

130. *See* Farrell & Saloner, *supra* note 25.

131. *See* SHY, *supra* note 17, at 4-5.

ternative in the form of one Dvorak keyboard.[132] Beta's inability to defeat the (allegedly) inferior VHS standard is another example.[133]

From an antitrust enforcer's perspective, the theory of excess inertia suggests that antitrust scrutiny should be especially vigorous where a company occupies a dominant position protected by network effects.[134] Given the natural entry barrier created by scale economies, any further effort on the part of a dominant company to foreclose entry should be closely examined.[135] Antitrust enforcers have clearly heeded this call. For example, the U.S. action against Microsoft alleging that the company both possessed a monopoly in the market for operating systems, protected by an "applications barrier to entry" (i.e. indirect network effects), and sought to perpetuate its dominant position by foreclosing rival browsing software as a means of entry.[136] Yet, the fact of network effects does not in itself suggest that unilateral behavior by a monopolist is necessarily harmful.[137] Indeed, given the inevitability of monopoly, enforcers must be careful to avoid punishing companies for assuming the position that the market demanded. The danger, of course, lies in the fact that section 2's vacuous and conclusory standards could be employed to mistakenly attack monopoly positions on account of actual monopolization.

How great a danger of overzealous enforcement is posed? Although some leading commentators have prudently warned that the fact of monopoly in the new economy is not in itself a matter of antitrust concern,[138] the fact that monopoly could well be inevitable—and thus "thrust upon" the dominant com-

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132. *See* JEAN TIROLE, THE THEORY OF INDUSTRIAL ORGANIZATION 405 (1988); Katz & Shapiro, *supra* note 124; Joseph Farrell & Garth Saloner, *Standardization, Compatibility and Innovation*, 16 RAND J. ECON. 70, 71 (1985).

133. *See* Brian Arthur, *Positive Feedbacks in the Economy*, 262 SCIENTIFIC AMERICAN 92, 92 (1990); *But see* Stan J. Liebowitz & Stephen E. Margolis, *The Fable of the Keys*, 33 J.L. & ECON. 1 (1990).

134. *See* Posner, *supra* note 14, at 931-36 (arguing that even the skeptical Chicago School will assess unilateral behavior by dominant companies in new economy industries with some scrutiny).

135. *See id.* at 931-32.

136. *See generally* PAGE & LOPATKA, *supra* note 128, at 28.

137. Indeed, Judge Posner has noted that antitrust has little to say about the existence of monopoly in itself, even in the new economy context. *See* Posner, *supra* note 14, at 930-31.

138. *See id.*

pany for purposes of pertinent law[139]—may not be obvious to a judge not versed in the nuances of economics. More important still, the economics of innovation require supracompetitive ex post returns to spur desirable rates of innovation.[140] As the ex ante probability of failure increases, the necessary level of monopoly return required to spur ex ante innovation becomes larger. Given that many innovative markets are characterized by high levels of research failure,[141] seemingly excessive ex post profitability may in fact be entirely desirable.[142] Yet, such profits may constitute a highly attractive target for an antitrust enforcer seeking to aid consumers by lowering market prices.[143]

Were path dependence indeed capable of foreclosing entry by the purveyor of a superior technology, the article's focus on ex ante market power analysis would be of little relevance. If an entrant is incapable of capturing sales, its actions will not lead to potential section 2 liability. With regard to an incumbent monopolist charged with violating that section, neither an ex ante nor ex post approach will markedly impact analysis, given that a dominant position will be found to exist under either variant.

However, does excess inertia necessarily foreclose entry with a superior standard? Despite the force of some early scholarship,[144] it is now becoming clear that network effects do not possess the exclusionary potence many once thought.[145] As the following sub-section briefly explains, the inventor of such a technology may indeed be able successfully to displace an incumbent by offering its superior product in combination with certain practices. The process by which such

139. *See* United States v. Aluminum Co. of Am., 148 F.2d 416, 429 (2d Cir. 1945).

140. *See* SCOTCHMER, *supra* note 117, at 34-38.

141. The pharmaceutical industry provides a particularly good example. *See, e.g., id.* at 41 (noting that PhRMA estimates that fewer than one fifth of drug developments efforts result in a successful drug).

142. *See* Alan Devlin, Michael Jacobs & Bruno Peixoto, *Success, Dominance and Interoperability*, 84 IND. L.J. (forthcoming 2009) (expanding on this point).

143. *See* Barnett, *supra* note 110, at 861.

144. *See* Katz & Shapiro, *supra* note 124; *see also* Posner, *supra* note 14, at 930-31 (expressing uncertainty as to how path dependence can be solved by the antitrust laws).

145. *See* LIEBOWITZ & MARGOLIS, *supra* note 14, at *passim*.

entry occurs is, of course, of the utmost desirability. Yet, perversely, it is precisely such conduct that is in danger of being attacked under section 2. The social cost of erroneously condemning such efficient competition is unacceptable. Given the indeterminate nature of part-two of the *Grinnell* test, this article argues that an ex ante market share test should be employed. This would immunize desirable monopolization in information markets.

B. *Overcoming Path Dependence*

The theory of path dependence implies that an inferior standard may last in perpetuity against a superior alternative, given the latter's failure to achieve adequate market penetration. The resulting "excess inertia" has been labeled by some as an impassable entry barrier.[146] As even an inferior information good can be of greater value to the marginal purchaser, given sufficient market share, the owner of an objectively superior product faces a significant network barrier. Much scholarship has lamented the tragedy of such "consumer lock-in", arguing that second-movers are condemned to exclusion.[147]

This view has been increasingly discredited. In particular, Liebowitz and Margolis have argued that path dependence theory rests on remarkably strict and static assumptions, including consumer myopia and an inexplicable unwillingness or inability on the part of the owner of a superior standard to internalize the benefits of introducing her technology.[148] Finding this view compatible with neither economic theory nor empirical reality, Liebowitz and Margolis conclude that excess inertia is unlikely to preserve an outdated standard inefficiently.[149] The owner of a novel and attractive technology will rationally introduce his product below-cost, with a buyback guarantee, bundled with a complementary and desirable

146. *See* Farrell & Saloner, *supra* note 25.

147. *See generally* Matthew T. Clements, *Inefficient Standard Adoption: Inertia and Momentum Revisited*, 43 ECONOMIC INQUIRY 507 (2005).

148. *See* LIEBOWITZ & MARGOLIS, *supra* note 14, at 14-16, 109-12.

149. *See id. passim.* The qualification of "efficient" is importance, for it is not always desirable to substitute an incumbent, albeit inferior, technology for a new standard. This is because the cost of changeover must be incorporated into the relevant calculus. Only where the societal opportunity cost of employing an outdated technology, minus the cost of changeover, is positive will changeover be desirable.

good, or with such other attractive features designed to induce consumer acceptance. Perhaps the most likely mechanism is pricing, so that an inventor will sell her product at a sufficiently low price to render the good more attractive than the incumbent's to the marginal purchaser.

This situation may be simply illustrated: Figure 2 displays the path dependence dilemma, which causes an objectively superior product with limited market penetration to be less attractive to the marginal consumer than the incumbent good. The upward-sloping curve reflects a positive correlation between marginal demand[150] and the number of consumers who already own the product. This relationship, of course, demonstrates that the market displays positive externalities in consumption. The curve intersects the Y-axis above the origin because consumers will gain some utility from the product notwithstanding an absence of prior sales. Also, the shape of the curve demonstrates that there are diminishing marginal network effects beyond a certain level of consumer acceptance.[151] Point A represents the incumbent monopolist's market position immediately following entry by the superior rival. Point B represents the entrant's position at the same time. D^A and D^B show the consumer demand for the incumbent's and new entrant's products with consumer purchases N^A and N^B respectively. An assumption underlying the model is that the standards are not interoperable.

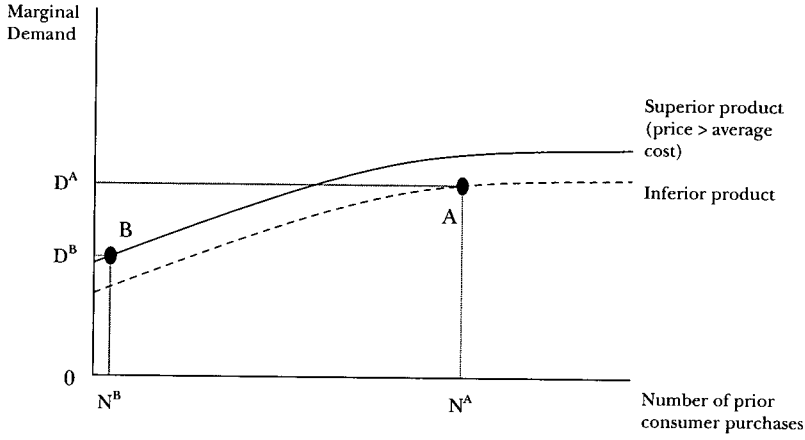
One can readily see from the graph that consumer demand for the rival's standard is greater at any point where the incumbent and entrant have sold to an equal number of consumers. Were the two companies to enter the market simultaneously, the purveyor of the inferior product would not be able to make any sales. Due to network effects, however, the incumbent's first-mover advantage now causes the demand for

150. Marginal demand is usually meant to refer to the change in demand caused by a change in price. The term is used here to refer to the change in demand that follows a change in the number of consumers who have purchased the product.

151. In some situations, consumer demand may decrease with further increases in sales. An illustrative example would be the market for automobiles. Indirect network effects increase demand for cars as the number sold rises, primarily because of spending on roads and increasing numbers of gas stations and service depots, but increasing sales may eventually cause more harm, i.e. congestion and pollution, than good.

its product to be greater than the demand for the new product, at the moment of entry ($D^A > D^B$). The inventor of the product that everyone agrees is superior will be unable to make any direct sales in this situation.

FIGURE 2: PATH DEPENDENCE IN ACTION

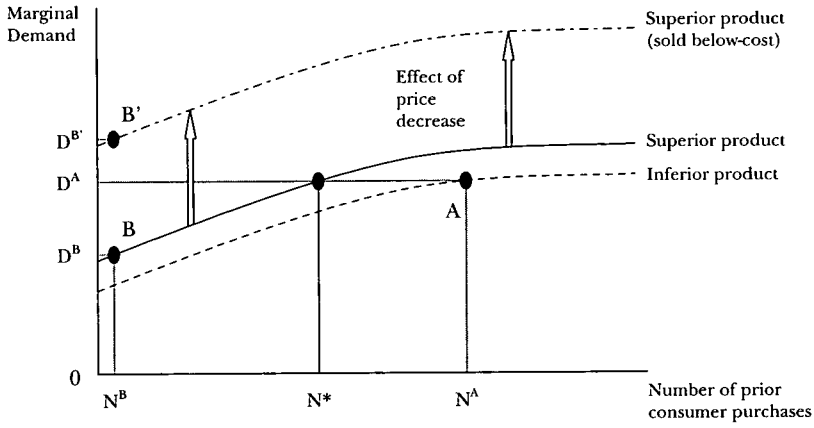


As Liebowitz and Margolis point out, however, this outcome requires extraordinary short-sightedness on the part of all involved.[152] First, consumers who first purchased the inferior product must not have been able to foresee the future presence of a qualitatively superior alternative.[153] Second, the marketer of the superior product must be unwilling to suffer short-term financial harm for unequivocal long-run gain.[154] Even though consumers suffer from a collective action problem, in that they would all be better off if they agreed to purchase the new good, in reality the dilemma will be solved by the inventor.[155] The purveyor of such a standard will rationally induce consumer purchasers by taking steps to shift D^B upward to a new level such that it is greater than D^A. The most likely mech-

152. *See* LIEBOWITZ & MARGOLIS, *supra* note 14, at 20-23.
153. *See id.* at 22.
154. *See id.* at 21-22.
155. *See id.* at 21-23.

anism manner in which to accomplish this is to set price below-cost—an action strongly predicted by economic theory.[156]

FIGURE 3: RATIONAL ENTRY AND MONOPOLIZATION



In return for her short-run losses, the seller of the superior product will now experience greater consumer demand than will the incumbent, notwithstanding the limited market share. Maintaining low prices will allow her to induce further consumer acceptance (an increase in N) and achieve yet greater gains in demand. Indeed, assuming strategic inaction by the incumbent,[157] once the entrant achieves sales of N*, she may return price to profitable levels. At this stage, the only equilibrium in the market will be monopolization by the incumbent. This, of course, is an attractive outcome.[158]

C. *The Threat of* Grinnell

Given the superiority of a new information product and diminishing long-run average cost, monopolization is not only inevitable, it is desirable.[159] This, of course, is in contrast to

156. Posner, *supra* note 14, at 929 ("[T]he successful monopolist [in the new economy setting] is likely to be a firm that initially charges a very low price for the new product it has created.").

157. This assumption highlights the importance of antitrust scrutiny over a dominant firm in control of a network market.

158. This assumes that the cost of changing over to the superior standard is less than the social benefit of embracing the new technology.

159. *See* LIEBOWITZ & MARGOLIS, *supra* note 14, at 20-23.

traditional manufacturing industries, where stable market equilibrium consists of multiple firms competing on the basis of price for marginal gains in market share.[160] The major threat posed by monopolization standards arises from the fact that they were constructed with regard to traditional market structures. In such a setting, and unlike with regard to the new economy, a suspicion of monopoly may be justified. One can readily appreciate how section 2 principles threaten the very fact of competition in information markets under *Grinnell* and its progeny.

Take the scenario presented in Figure 3 and assume that the entrant set price-below cost, displaced the incumbent, and has now raised prices to monopoly levels.[161] Under *Grinnell*, our hypothetical victor will be held to have monopoly power. Unlike attempted monopolization claims, the courts in actual monopolization cases assess market power from an ex post perspective.[162] Thus, under the first element of the test, it is irrelevant how a defendant acquired its power. The entrant in our case will have displaced the incumbent and achieved a monopoly, and this ends the inquiry under the first prong of *Grinnell*.

The issue of normative desirability lies at the heart of the second element of the *Grinnell* test. Yet, it is precisely in this vague, uncertain and risk-filled area that an antitrust defendant does not want to find itself. Worse, the various tests enunciated by the Court do little to aid the judiciary in assessing the phenomenon of monopolization in network markets.

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160. *See* RICHARD A. POSNER, NATURAL MONOPOLY AND ITS REGULATION (1999).

161. Such an increase in price is directly predicted by economy theory, which posits that the price in a network market will increase with increasing sales. *See* LIEBOWITZ & MARGOLIS, *supra* note 14, at 139.

162. *Compare* Lantec, Inc. v. Novell, Inc., 146 F. Supp. 2d 1140, 1145 (D. Utah 2001), *aff'd*, 306 F.3d 1003 (10th Cir. 2002) ("The probability of success in monopolizing the relevant market is determined as of the time of the commencement of the alleged predatory scheme."); McGahee v. N. Propane Gas Co., 858 F.2d 1487, 1505 (11th Cir. 1988) (same); Tops Mkts., Inc. v. Quality Mkts., Inc., 142 F.3d 90, 100 (2d Cir. 1998) (same) (citing H.L. Hayden Co. v. Siemens, Inc., 879 F.2d 1005 (2d Cir. 1989)); Taylor Publ'g Co. v. Jostens, Inc., 216 F.3d 465, 474 (5th Cir. 2000) (same); Gen. Indus. Corp. v. Hartz Mountain Corp., 810 F. 2d 795, 807 (8th Cir. 1987) (same) *with* United States v. Grinnell Corp., 384 U.S. 563, 570-71 (1966).

Considering *Grinnell*'s second step, "willfulness" will axiomatically exist—one entering on the basis of a superior standard hopes to capture, or to "monopolize", the market. One does not develop and introduce a novel technology, backed by intellectual property-protection, without a specific intent to "monopolize" the market. Under *Kodak*, the entrant's below-cost strategy will enable it to achieve scale efficiencies to the direct cost of the incumbent, thus allowing it "to foreclose competition, to gain a competitive advantage [and ultimately] to destroy a competitor."[163] *Kodak* would exempt conduct spurred by "legitimate competitive reasons" or "valid business reasons,"[164] but there is a grave risk that the social good of the monopolization will be obscured by the ostensibly predatory below-cost prices and other inducive tactics employed by the successful entrant. The point that its successful entry may never have occurred but for those practices may be entirely lost on a myopic judge, whose sole focus may be on the literal command of the precedent before him. As Liebowitz and Margolis observe

> [such pricing and other] pump-priming measures are likely to look predatory, especially after the fact. Actions to establish a standard may appear to be actions to defeat, kill, or destroy rivals. . . But these seemingly predatory actions are exactly the mechanisms that prevent lock-in to inferior standards.[165]

The fact that the displaced rivals will be screaming blue murder would likely do little to improve the prospect of a favorable outcome.

The saving grace may be the courts' repeated assertions that monopolization on account of superiority alone does not violate section 2.[166] This would provide meaningful protection to the competitive process if $D^B > D^A$ were necessarily true for all situations in which a superior technology was introduced to

163. *See* Eastman Kodak Co. v. Image Technical Servs., Inc., 504 U.S. 451, 482-83 (1992).

164. *See id.* at 483.

165. *See* LIEBOWITZ & MARGOLIS, *supra* note 14, at 110.

166. *See* Intergraph Corp. v. Intel Corp., 195 F.3d 1346, 1353 (Fed. Cir. 1999) ("The antitrust law has consistently recognized that a producer's advantageous or dominant market position based on superiority of a commercial product and ensuing market demand is not the illegal use of monopoly power prohibited by the Sherman Act.").

a market. As this is evidently not the case, however, superiority may not be obvious. Indeed, it will likely materialize in conjunction with other strategies, such as below-cost pricing, that the courts have traditionally viewed as objectionable. Thus, current monopolization standards pose a very significant threat to highly desirable competition in the new economy.

III.
EX ANTE MARKET SHARE AS SECTION 2 IMMUNITY

A. *An Ex Ante Solution to the Monopolization Dilemma*

The prospect of success lies at the heart of the great American enterprise, as it does with regard to capitalist economies generally.[167] Firms and other inventors are spurred to effort and ingenuity by the reward that awaits their success.[168] Never has the entrepreneurial spirit been so vivaciously apparent than in recent years, which have borne witness to stunning rates of technological progress, capital availability, and consumer gain.[169] Given this desirable reality, we should be hesitant about dampening the fire that fuels such innovation, lest we endanger future levels of desirable ex ante competition.[170] U.S. monopolization law should therefore be applied with caution, given its undeniable capacity to impact long-run ex ante investment negatively.[171] Obviously, the most insidious possible application of the antitrust laws would be to deem the vic-

167. The Supreme Court has itself recognized this fact. *See* Verizon Commc'ns, Inc. v. Law Offices of Curtis V. Trinko, 540 U.S. 398, 407 (2004) (holding that "possession of monopoly power . . . is an important element of the free-market system. The opportunity to charge monopoly prices . . . is what attracts 'business acumen' in the first place").

168. *See generally* WILLIAM M. LANDES & RICHARD A. POSNER, THE ECONOMIC STRUCTURE OF INTELLECTUAL PROPERTY (2003).

169. *See* Posner, *supra* note 14, at 930.

170. *See* Devlin, Jacobs & Peixoto, *supra* note 142.

171. The interoperability phenomenon poses one such danger, which seeks to protect consumers by dividing a victor's spoils amongst its rivals. *See, e.g.*, Barnett, *supra* note 110, at 865; *see also Trinko*, 540 U.S. at 409 (emphasizing that the circumstances in which a monopolist will be required to share the fruits of its success are immensely limited). Nevertheless, a far more serious peril flows from the danger of desirable monopolization being erroneously condemned. Unlike the empirically uncertain allure of interoperability, which requires weighing short-term consumer gains against unobservable harm to long run innovation, the mistaken condemnation of dominance is unequivocally harmful.

tors of intense competition liable for improper monopolization. To punish success, and nothing more, is folly. Yet, the law is quite capable of reaching this iniquitous end.

Of course, U.S. antitrust law neither purports nor actively seeks to accomplish such a nefarious goal—indeed, the law clearly provides that the mere possession or acquisition of monopoly is not an offense in itself.[172] Additionally, the courts have affirmatively stated that dominance on the basis of consumer demand for a superior product is perfectly legal.[173] More encouragingly still, the Supreme Court has displayed increasing sensitivity to the critical importance of potential and actual monopoly in the U.S. economy.[174] Although this is all markedly helpful in constricting the precedential value of self-contradictory monopolization standards, and aids in constructing a reasonably coherent underlying norm for section 2 enforcement, it has not led to a change in the actual test for illegal monopolization.

Thus, the fact remains that *Grinnell* views dominant positions with some suspicion, first inquiring as it does into the fact, but not desirability, of the position at hand. The effect is a near de facto presumption against the legitimacy of commercial success.[175] Although the modern U.S. view wisely ap-

172. *See* SMS Sys. Maint. Servs. v. Digital Equip. Corp., 188 F.3d 11, 25 (1st Cir. 1999), *cert. denied*, 528 U.S. 1188 (2000) ("When a party brings a Section 2 claim, it is not enough simply to show that there is monopoly power."); Int'l Audiotext Network v. AT&T, 893 F. Supp. 1207, 1219 (S.D.N.Y. 1994), *aff'd per curiam*, 62 F.3d 69 (2d Cir. 1995) ("Even if a defendant has monopoly power, of course, a plaintiff must show more."); Blue Cross & Blue Shield United v. Marshfield Clinic, 65 F.3d 1406, 1413 (7th Cir. 1995), *cert. denied*, 516 U.S. 1184 (1996); Catlin v. Washington Energy Co., 791 F.2d 1343, 1347 (9th Cir. 1986).

173. *See* Intergraph Corp. v. Intel Corp., 195 F.3d 1346, 1353 (Fed. Cir. 1999) ("The antitrust law has consistently recognized that a producer's advantageous or dominant market position based on superiority of a commercial product and ensuing market demand is not the illegal use of monopoly power prohibited by the Sherman Act."). Of course, the danger is that courts will misconstrue monopolization on account of a superior product for the result of some "exclusionary" practice. As explored in *supra* Part II this danger is most acute with regard to the new economy.

174. *See* Verizon Commc'ns, Inc. v. Law Offices of Curtis V. Trinko, 540 U.S. 398, 407 (2004).

175. Indeed, for a time it was believed that a once a plaintiff in a section 2 action proved that the defendant had monopoly power, the burden of proof then lay on the latter to show that it acquired or maintained its position in a

proaches claims of unilateral impropriety with some skepticism,[176] actual monopolization cases nevertheless see some innocent defendants being subjected to scrutiny. It is a mistake to equate a defendant's acquittal under *Grinnell* with a situation in which a defendant is never exposed to section 2 oversight at all[177]—the two scenarios are not remotely the same. The mere presence of antitrust scrutiny plays an inhibitive role, a fact interestingly recognized by the Supreme Court itself in *Copperweld Corp. v. Independence Tube Corp.*[178] There the Court noted that "[s]ubjecting a single firm's every action to judicial scrutiny for reasonableness would threaten to discourage the competitive enthusiasm that the antitrust laws seek to promote."[179] This observation is precisely on point, though it has yet to be formally implemented into structural analysis under section 2. Courts, like any man-made institution, are prone to error.[180] As a result, judges can all too easily make the jump from the fact of monopoly alone to a violation of section 2.[181] As we have

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legal way. *See* MCI Commc'ns Corp. v. AT&T, 708 F.2d 1081, 1107-08 (7th Cir. 1983), *cert denied*, 464 U.S. 891 (1983) ("Some courts . . . have concluded that monopolistic conduct can be presumed from the possession of monopoly power unless [the defendant] affirmatively demonstrates that its monopoly position has been "thrust upon it.""). Although an explicit presumption of monopolization no longer exists, *see, e.g.*, Image Technical Servs. v. Eastman Kodak Co., 903 F.2d 612, 620 n.9 (9th Cir. 1990), *aff'd*, 504 U.S. 451 (1992), it remains the case that the *Grinnell* test is framed in such a way as to cast the fact of monopoly itself in suspicious light.

176. *See Trinko*, 540 U.S. 398, 414 (warning that over-zealous enforcement could "chill the very conduct the antitrust laws are designed to protect").

177. The latter situation being explained, for example, by inadequate market power.

178. Copperweld Corp. v. Independence Tube Corp., 467 U.S. 752 (1984).

179. *Id.* at 775.

180. *See* W. Kip Viscusi, *Jurors, Judges, and the Mistreatment of Risk by the Courts*, 30 J. LEGAL STUD. 107 (2001).

181. The Supreme Court has itself recognized this. *See* Spectrum Sports, Inc. v. McQuillan, 506 U.S. 447, 458-59 (1993) (noting that it is "sometimes difficult to distinguish robust competition from conduct with long-term anticompetitive effects"). The major benefit to the ex ante approach introduced by this paper is that its application would ensure that robust competition is never mistaken for conduct with long-term anticompetitive effect, as will be explored.

seen, this risk is particularly acute in the context of the new economy.[182]

Of course, one might argue that it would be unrealistic to frame the test for monopolization any other way. Certainly, the two-step *Grinnell* test has strong logical and intuitive appeal, shielding unilateral acts not resulting in monopoly by requiring a high showing of market power, yet normatively assessing the desirability of those monopolies that do exist. Clearly, the tests employed by the courts to undertake this normative analysis are questionable, at best, but articulating a truly satisfactory standard is immensely challenging. The major question, therefore, is whether there is a way out of this legal quagmire.

There is a way to improve the reliability of judicial oversight of unilateral behavior, whilst remaining within the *Grinnell* framework. The indeterminism that fatally undermines every test articulated in this context can be avoided by looking to the relatively definite and objective part of the Court's two-part test, namely the existence of monopoly power. The key here is to derive a rule that would compel courts to construe certain dominant firms as lacking the requisite monopoly power for section 2 exposure.

This suggestion may initially strike the reader as bizarre—after all, how can a court hold that what clearly exists in fact, does not exist in law? But the paradox is resolved by linking the monopoly power inquiry to clearly defined conduct. Modern monopolization cases rarely, if ever, challenge the validity of a monopoly in itself.[183] Instead, some *abuse* of that power is alleged and such "abuse" is linked to particular conduct.[184] Most typically, a dominant firm may be accused of predatory pricing, tying, exclusive contracting, or refusing to supply its smaller rivals.[185] Under the current approach, the court would

182. *See supra* Part II.B; *see also* LIEBOWITZ & MARGOLIS, *supra* note 14, at 110 (noting that "seemingly predatory actions are exactly the mechanisms that prevent lock-in to inferior standards/).

183. This derives from the explicit law that provides that monopoly in itself is lawful. Therefore, in order to survive a 12(b)(6) motion to dismiss, a plaintiff will have to allege some sort of additional, improper behavior that states a plausible claim of illegal monopolization. *See* Bell Atl. Corp. v. Twombly, 127 S. Ct. 1955, 1965-69 (2007).

184. *See supra* notes 65-68.

185. *See* Intergraph Corp. v. Intel Corp., 195 F.3d 1346 (Fed. Cir. 1999); Brooke Group Ltd. v. Brown & Williamson Tobacco Corp., 509 U.S. 209

conclude that a monopolist has sufficient economic power and would then consider the dominant position to have been improperly acquired if obtained on the basis of suspect conduct of the aforementioned kind. This article urges the courts instead to adopt an ex ante approach to monopoly power analysis by considering the defendant's economic might at the time the challenged conduct was initiated.

As explored above, defendants in traditional industries are likely to possess comparable levels of market power, whether calculated from an ex ante or ex post perspective. This is not necessarily the case with respect to firms operating in network industries that produce information goods. Here, the initiation of a below-cost pricing strategy, for example, may accompany an entrant's rise from the fringe of a market to becoming its monopolist. Alternatively, two or more firms may compete with comparable market share for consumer acceptance of a single standard, in which case sudden "tipping effects" can lead to monopolization by one and exit by the others.[186] If an ex post perspective to *Grinnell* is employed, then successful defendants will be deemed to be dominant on the basis of their monopolies and may be held to have abused their dominance by engaging in predatory pricing.[187] This, of course, is a perverse outcome because below-cost pricing may have been the sine qua non for an efficient outcome.[188] The same calculus holds true with regard to other tactical means of entry, including bundling, rebates, buy-back guarantees, and exclusive contracting. The tragedy is avoided by adopting an ex ante approach. As the facilitative practice will have been

(1993); Cargill, Inc. v. Monfort of Colorado, Inc., 479 U.S. 104 (1986); Verizon Commc'ns, Inc. v. Law Offices of Curtis V. Trinko, 540 U.S. 398 (2004); Eastman Kodak Co. v. Image Technical Servs., Inc., 504 U.S. 451 (1992); Aspen Skiing Co. v. Aspen Highlands Skiing Corp., 472 U.S. 585 (1985); Otter Tail Power Co. v. United States, 410 U.S. 366 (1973); Lorain Journal Co. v. United States, 342 U.S. 143 (1951); United States v. Microsoft Corp., 253 F.3d 34 (D.C. Cir. 2001).

186. The recent standard war between HD-DVD and Blu-Ray provides a good example, where after several months of fierce price-based competition, the latter suddenly took off and captured the market, to the former's demise. Such scenarios are well capable of giving rise to improper antitrust scrutiny, but would be similarly protected by an ex ante market power rule.

187. This would be the outcome compelled by contemporary legal standards.

188. *See* LIEBOWITZ & MARGOLIS, *supra* note 14, at 110.

initiated as a means of entering the market, the defendant's ex ante market power will be defined at the moment of entry and will therefore be minimal.[189] The market share will be by definition below the minimum necessary for section 2 oversight.[190] In the case of fierce competition between relatively equal players, possessing comparable market share, an ex ante reading of power would also suffice to remove the victor from scrutiny.

The ex ante approach to market power analysis is therefore a means to escape a new antitrust paradox—namely, the Sherman Act—condemning desirable behavior in the new economy on the basis of standards developed in traditional market structures. Given the critical function played by the prospect of commercial triumph in information markets, the erroneous condemnation of such success is apt to have deep and far-ranging repercussions on long-term welfare. The ability of a jurist to assess effectively the desirability of a given monopoly is thus of paramount importance. Given the courts' demonstrable inability to accomplish this task, the case to be made for continuing adherence to the two-step *Grinnell* standard grows attenuated.

If some find this suggested approach odd, it bears noting that the law governing *attempted* monopolization operates in precisely this way. Pursuant to this approach, "a court examines the relevant market and defendant's market power before the attempt to monopolize began."[191] From this fact alone, we

189. Note however that market power will not be inexistent. Such power is defined in economic terms as the ability to profitability set price above competitive levels, defined by marginal cost. As Judge Posner has written, though, the seller of virtually any good in the most competitive markets has some ability to choose price (that is, faces a downward-sloping demand curve), though the fact of such power is utterly immaterial for antitrust policy. *See* POSNER, *supra* note 14, 15.

190. Market shares in excess of seventy percent usually demonstrates the existence of monopoly power. *See* United States v. Al. Co. of Am., 148 F.2d 416, 424 (2d Cir. 1945) (opining that 90% market share constitutes a monopoly, but that "it is doubtful whether sixty or sixty-four percent would be enough; and certainly thirty-three percent is not."

191. McGahee v. N. Propane Gas Co., 858 F.2d 1487, 1505 (11th Cir. 1988); *see also* Lantec, Inc. v. Novell, Inc., 146 F. Supp. 2d 1140, 1145 (D. Utah 2001), *aff'd*, 306 F.3d 1003 (10th Cir. 2002) ("The probability of success in monopolizing the relevant market element is determined as of the time of the commencement of the alleged predatory scheme"); Tops Mkts., Inc. v. Quality Mkts., Inc., 142 F.3d 90, 100 (2d Cir. 1998) (citing H.L. Hayden Co. v. Siemens Med. Sys., Inc., 879 F.2d 1005, 1017 (2d Cir. 1989)) (as-

can be confident that ex ante analysis in the actual monopolization context would find quite straightforward application.

How exactly would the process work? After all, ex ante treatment of market power fits more comfortably in the attempted monopolization field, where by definition monopoly was not obtained and the failed aggressor's market share has likely regressed near to where it began. In the majority of cases, there should be little difficulty. In particular, the application of the ex ante approach will be simple in cases in which a specific business practice is alleged to have created a monopoly over a clearly defined period. A primary benefit of the ex ante approach would be its summary disposal of undeserving cases. For instance, if a complaint alleges a violation of section 2 on the basis that the defendant entered the market, pricing below-cost or employing another suspect practice, and succeeded in gaining a monopoly as a result, the case would be ripe for dismissal under Rule 12(b)(6).[192] This would be because a showing of monopoly power is a prerequisite to stating a cause of action for actual monopolization and the complaint itself would foreclose such a showing. Some straightforward cases would proceed to discovery to establish the contours of the actual conduct at issue, in addition to when they were initiated. Upon a showing that the pertinent behavior was initiated at a certain time and on the basis of certain market power, the court will dismiss the lawsuit at summary judgment.

Even this cursory examination of the rule suggests that plaintiffs in section 2 cases would face considerably enhanced difficulty in successfully bringing a claim of actual monopolization. Consider the quandary faced by a defeated rival, seeking recourse through the antitrust laws. Assuming that he was forced out by lower prices and superior technology, he faces a

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sessing market power at the start of the challenged conduct); Taylor Publ'g Co. v. Jostens, Inc., 216 F.3d 465, 474 (5th Cir. 2000) (examining market power at time when acts occurred and declining to focus exclusively on subsequent effects on market share); Gen. Indus. Corp. v. Hartz Mountain Corp., 810 F.2d 795, 807 (8th Cir. 1987). *But see* Multistate Legal Studies, Inc. v. Harcourt Brace Jovanovich Legal and Prof'l Publ'ns, Inc., 63 F.3d 1540, 1554 (10th Cir. 1995) (holding that "the largest share [the defendant] possessed during the period of the alleged offense" is relevant to determining what market share satisfies the "dangerous probability of success" requirement).

192. *See* Fed. R. Civ. P. 12(b)(6).

major challenge in formulating an effective complaint. Although the literal minimum standard is a "short and plain statement of the claim",[193] which would suggest the mere outline of the offense (for instance, predatory pricing), the claim (actual monopolization as a violation of section 2), the parties, and the relief sought, the Supreme Court has recently set the bar higher. In *Bell Atlantic Corp. v. Twombly*, the Court held that to survive a 12(b)(6) motion to dismiss, a complaint must plead sufficient facts giving rise to a "plausible" right of recovery.[194] Such plausibility "requires more than labels and conclusions, and a formulaic recitation of the facts will not do."[195] More specifically, the Court now requires "enough facts to raise a reasonable expectation that discovery will reveal evidence of illegal [behavior]."[196]

To state a claim for actual monopolization, a plaintiff would thus have to plead facts that plausibly suggest that monopoly exists and that such dominance was improperly acquired or maintained.[197] Merely stating that monopoly existed and that abuse had occurred would be insufficient.[198] This holds true under the current ex post standard of market power analysis. Under an ex ante rule, however, a plaintiff would have to show more than improper behavior and the existence of a dominant position at the time of suit—he would have to plead facts showing that the offending conduct was initiated while the defendant had monopoly power. This would not be easy to achieve in the new economy setting. In particular, a complaint could not allege that monopolization had occurred because of consumer demand, technological superiority, or legal advantages such as intellectual property. Rather, some nefarious conduct must be alleged. Indeed, the ultimate effect of the rule would be to essentially confine such claims to those for the *maintenance*, not acquisition, of monopoly power. Rivals alleging the illegal acquisition of dominance will have to plead—and later prove—that the behavior they paint as exclusionary was initiated from a position of sufficient strength to constitute monopoly power. In real terms, this will

193. *See* Fed. R. Civ. P. 8(a)(2).
194. Bell Atlantic Corp. v. Twombly, 127 S. Ct. 1955, 1965, 1974 (2007).
195. *Id.* at 1965.
196. *Id.*
197. *See* United States v. Grinnell Corp., 384 U.S. 563, 570-71 (1966).
198. *See Twombly*, 127 S. Ct. at 1965-66.

mean that a company's decision to engage in harmful conduct to its rivals will not give rise to liability if the company did not possess in excess of fifty percent market share.[199]

B. *The Ex Ante Market Power Test Applied*

This section briefly outlines three broad scenarios, which present a spectrum of increasing difficulty in applying an ex ante standard. The ensuing discussion explores the possible challenges that could be encountered by the courts in implementing this mechanism of market power analysis.

1. *The Case of Simple Fringe Entry*

The paradigmatic case arises where a company invents a technologically superior product, introduces it to the market at a price below that of the incumbent, and rapidly monopolizes the market based on overwhelming consumer demand. Having displaced the incumbent competitor, the new dominant company increases price to monopoly levels.

The defeated rival will no doubt seek any legal recourse potentially available and will, naturally, look toward the antitrust laws as a remedy. Under *Grinnell* and the current ex post approach, the rival will allege the possession of monopoly power and the improper maintenance thereof based on below-cost pricing. As explored above, a well-informed court would note the existence of a dominant position, but would decline to rule its acquisition a violation of the antitrust laws because monopolization on account of a superior product is not ille-

199. *See* AD/SAT v. Associated Press, 181 F.3d 216, 229 (2d Cir. 1999) (holding that forty percent market share is insufficient); Fineman v. Armstrong World Indus., Inc., 980 F.2d 171, 201 (3d Cir. 1992), *cert. denied*, 507 U.S. 921 (1993) ("As a matter of law . . . a 55 percent market share will not prove the existence of monopoly power."); Domed Stadium Hotel, Inc. v. Holiday Inns, Inc., 732 F.2d 480, 489 (5th Cir. 1984) ("Supreme Court cases, as well as cases from this court, suggest that absent special circumstances, a defendant must have a market share of at least fifty percent before he can be guilty of monopolization."); Lynch Bus. Machs., Inc. v. A.B. Dick Co., 594 F. Supp. 59, 67 (N.D. Ohio 1984) (finding that a defendant's market share of thirty five percent was "far below the 50 percent required in order to find monopoly power."); Blue Cross & Blue Shield v. Marshfield Clinic, 65 F.3d 1406, 1411 (7th Cir. 1995), *cert. denied*, 516 U.S. 1184 (1996) ("Fifty percent is below any accepted benchmark for inferring monopoly power from market share").

gal.[200] Nevertheless, the below-cost pricing could be viewed as predatory and this creates a distinct danger of a false positive being drawn.[201]

The ex ante approach precludes this iniquitous result. As the rival alleges illegal monopolization on account of predatory pricing, such pricing will necessarily be linked to the successful firm's entrance into the market. As a result, the defendant's ex ante monopoly power is effectively non-existent. Thus, section 2 oversight for actual monopolization will not apply.

An astute plaintiff could attempt to defeat the ex ante constraint by alleging a violation of section 2 only after the defendant had acquired in excess of fifty percent market share but maintained its below-cost pricing regardless. This would not be a controversial position, given that it is commonly accepted that the same behavior can be legal for a single firm, yet illegal if conducted by a monopolist.[202] Were the courts to accept this argument, even an ex ante reading of monopoly power would yield sufficient potence to facilitate full section 2 scrutiny.

Should a plaintiff be able to frame her complaint in this way? The economic theory explored above provides at least some ground for suggesting that the answer is yes. After all, once an entrant has obtained fifty percent market share, the network effects enjoyed by the entrant will equal those of the incumbent. In such a situation, the entrant's superior product would capture the rest of the market even without low prices or other inducive strategies. Nevertheless, ex ante assessment of market power should *not* be conducted in this way. The reasons for this are two-fold. First, enabling the purveyor of a superior standard to induce faster adoption of its technology will reduce the cost of the change-over and hasten consumer gains. Second, as a matter of economics, a new competitor is apt to continue its entry strategy so long as it proves profitable. Price theory suggests that a company will increase price in tan-

200. *See supra* Part II.C.

201. *See* LIEBOWITZ & MARGOLIS, *supra* note 14, at 110.

202. *See, e.g.*, Case 322/81, NV Nederlandsche Banden-Industrie Michelin v. Commission, 1983 E.C.R. 3461, para. 112 (referring to the "special responsibility" of dominant firms in their actions in the market).

dem with its increasing market share in a network market.[203] If prices nevertheless remain low or below-cost beyond fifty percent market share, it will surely be because greater social value will flow from rapid and complete displacement of the former technology.[204]

It therefore follows that the ex ante market power inquiry should be tied to a continuous and uninterrupted practice. As it will be rational for a successful entrant to raise prices once it has monopolized the market, it will not perpetuate below-cost prices once it has obtained its dominant position. In the future, should its technology be outdated by the subsequent developments of a rival, the company may rationally reduce price or otherwise seek to "lock-in" consumers to prevent adoption of the new standard. As stressed above, this is a serious danger in the new economy and one that the actual monopolization provisions of section 2 are perfectly primed to perform.[205] An ex ante approach poses no threat to section 2 oversight for the maintenance—as opposed to acquisition—of monopoly, however, because the re-initiation of a previously discarded practice (such as reduced prices or product tying) will not create a link between that conduct and an earlier non-monopolistic position.

2. *The Case of Contemporaneous Entry with Tipping Effects*

The case of immediate and successful entry on the basis of a superior standard that enjoys heightened consumer demand makes for easy application of an ex ante rule. Sometimes, however, ferocious competition will persist between rival standards for some time before successful monopolization by one will follow. This will most typically occur in the event of contemporaneous entry by companies marketing technology of comparable technological quality. The obvious contemporary example involves the standards-war between HD-DVD and Blu-ray, which raged for some time before the latter essentially pre-

203. *See* LIEBOWITZ & MARGOLIS, *supra* note 14, at 139.

204. This flows from the threshold proposition that the solution to path dependence lies in the purveyor of a superior technology's rational decision to internalize the social value of the invention. *See id.*

205. *See supra* Part II.A.

vailed overnight.[206] The cause? Wal-Mart's decision exclusively to stock Blu-ray players.[207] "Monopolization" by the Blu-ray standard followed immediately thereafter.

Such cases pose modestly enhanced challenges, but only because the conduct at-issue will likely be linked to a moment of enhanced market share. The losing party will likely be unable to allege predatory behavior at the moment of entry because it will likely have met low price with low price and exclusive contracts with exclusive contracts of its own. More likely, the failed company may challenge a specific act that caused the market to tip in its rival's failure. Network markets in which two or more rivals possess relatively equal market share are highly unstable.[208] In fact, the HD-DVD/Blu-ray contest presents an excellent example of the broader matter at issue in standards wars generally—namely, the potence of tipping effects and the speed with which monopolization can follow from a single event.[209] The simple event of one retailer choosing one standard over another sufficed to grant instant victory on one party and failure on the other. In this case, Toshiba (the inventor and purveyor of the HD-DVD standard) would likely struggle to find an anticompetitive act by its rival to induce such acceptance. Imagine, though, an otherwise analogous scenario in which the successful competitor entered into a suspect arrangement to cause such an outcome. Here, a claim of a violation of section 2 would involve ex ante market share being linked to a significant share of the market—perhaps half or slightly more. Although this would complicate the question of whether section 2 would apply somewhat, the ultimate effect would not be of tremendous concern. U.S. law typically requires market share in excess of fifty percent for a firm to be considered guilty of actual monopolization; thus, the ex

206. *See e.g.*, Erica Ogg, *Blu-ray vs. HD DVD: War Without End*, CNET NEWS, Oct. 10, 2007, http://www.news.com/Blu-ray-vs.-HD-DVD-War-without-end/2100-1041_3-6212782.html; Matt Richtel & Eric Taub, *Taps for HD DVD as Wal-Mart Backs Blu-Ray* (Feb. 16, 2008), N.Y. TIMES, Feb. 16, 2008, at C1.

207. RICHTEL & TAUB, *supra* note 206.

208. *See* LIEBOWITZ & MARGOLIS, *supra* note 14, at 62.

209. *See id.*

ante approach should grant considerable protection in this environment as well.[210]

3. *The Protracted Case of Multiple Strategies and Progressive Monopolization*

The third, and most difficult, case involves a situation where a company enters and slowly monopolizes a market, employing an eclectic range of traditionally suspect practices at different times following entry. In such a situation, it may be difficult to draw a satisfactory connection between conduct plausibly capable of having caused monopoly to the fact of monopoly itself. More problematic still would be the difficulty of determining the time at which the allegedly improper conduct began. The attentive reader will note that the greater the temporal duration between entry and monopolization, the more challenging and potentially attenuated is the connection between challenged business practices entered into as an entry strategy and subsequent dominance.

As a practical matter, there are likely to be complicating elements in most cases. In particular, competitive marketplaces require rivals to adopt a plethora of strategic practices in response to their competitors' actions. An entrant's rise to the top is likely to involve myriad tactical decisions and business behaviors, any of which may conceivably be challenged ex post by a displaced competitor. Moreover, there may be more than a single explanatory practice that plausibly gave rise to the ensuing monopoly.

Where a broad range of offending conduct is alleged and the court is incapable of establishing merely one practice as the plausible cause of the monopoly, the solution is to look to the moment the last business practice was initiated and to judge the relevant market power as being what it was at that time. Of course, it may be the case that this will lead to an adequate finding of monopoly power. This, however, does not

210. The reader may worry that the ex ante approach would perversely shield a competitor from liability for private arrangements designed to artificially bring about the adoption of its standard on a basis other than technological superiority. However, there would be no need for such concern. Were a competitor to enter into such an anticompetitive agreement, it would be quite properly dealt with under section 1 as an illegal concerted practice.

undermine the purpose of the ex ante rule. If a company implements an exclusionary strategy from a position of dominance, full section 2 oversight should follow.

The conclusion to draw from the foregoing analysis is that companies will have to be cautious in their unilateral behavior as they move from a position of relative weakness to dominance. Those practices that existed in the former position may be continued into the latter, but any pause and later re-introduction of such behavior will potentially give rise to a showing of adequate monopoly power.

CONCLUSION

While many attempts to delineate an optimal monopolization rule have floundered, an exasperatingly simple solution may in fact exist. The antitrust world of unilateral behavior is a complex one, which proves inconducive to the effective application of a single standard. Rules articulated for one setting prove inefficacious in others. The courts have operated in this context for some time, led only by the nebulous and indeterminate precedent of *Grinnell* and its progeny. Realizing that a literal reading of the various enunciated rules may lead to a satisfactory outcome—or not—depending on the situation at hand, courts have attempted to reach a desirable result on a case-by-case basis. Although commendable, such efforts have ultimately created a legally uncertain environment that now threatens to undermine the operation of the new economy.

A desirable solution exists to this quagmire. By embracing the economic lesson that speedy acquisition of monopoly power by a fringe competitor is possible only on account of superiority, courts can employ the concept of that power as an error-reducing heuristic. More specifically, judges called on to construe the legality of unilateral behavior should assess the requisite level of market power from an ex ante perspective. When a plaintiff alleges actual monopolization on account of a supposedly nefarious practice, the relevant market power is that which existed at the time the practice was employed. Such an ex ante approach would streamline the rules governing attempted and actual monopolization and would remove desirable behavior from the stochastic oversight of section 2. This solution would also guard against the mistaken immunization of undesirable conduct by a monopolist. As a profit-maximiz-

ing entity would be unlikely to perpetuate an inefficient or loss-making practice, such as below-cost pricing, once dominance is achieved such conduct would be terminated. A monopolist that later re-initiated below-cost or other exclusionary strategies to deter entry would have its market power assessed as of the moment of re-initiation, thus giving rise to full section 2 scrutiny.

Arguments against an ex ante approach focus on the practical difficulty of tying market share to conduct when a variety of practices may have accompanied a company's rise to the top of the market. Moreover, different "exclusionary" tactics may be initiated at different times, yet each plays a credible, explanatory role in the acquisition or maintenance of the ensuing dominant position. Nevertheless, such concerns are not prohibitive. If an eclectic range of behavior leads a firm to monopoly, and if no one practice bears disproportionate explanatory power, then the power for section 2 purposes should be what existed at the moment the last challenged practice was initiated. In the worst-case scenario, this will be equivalent to ex post power and, so, the distinction between the two forms of inquiry will collapse. This, however, is no ground for preferring ex post assessments of power in actual monopolization cases. The administrative cost to a judge of deciding whether a determinative ex ante point can be established is limited—a fact made clear by the courts' common practice of assessing market power ex ante in attempted monopolization cases. Against this small cost must be weighed the potential boon in protecting highly desirable competitive behavior from mistaken interference on the part of monopolization law. Given the increasing importance of information markets prone to Schumpeterian waves of creative destruction and ephemeral, yet efficient, monopoly, the gains to be acquired from an ex ante approach are apt to be significant.