

Antitrust and the Dominant Firm: Where do we Stand?

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Introduction: The Harvard and Chicago Schools

The Chicago School has produced many significant contributions to the antitrust literature of the last half century. Thanks in part to Chicago School efforts today we have an antitrust policy that is more rigorously economic, less concerned with protecting noneconomic values that are impossible to identify and weigh, and more confident that markets will correct themselves without government intervention.² This Chicago School revolution came at the expense of the Harvard "structural" school, which flourished from the 1930s through the 1950s. That school rested on a fairly rigid theory of Cournot oligopoly, exaggerated notions about barriers and impediments to entry, and a belief that certain types of anticompetitive conduct were more-or-less inevitable given a particular market structure.³ As a result, the best course for antitrust was to go after the structure itself and the conduct would take care of itself. The chastised Harvard School that emerged in the late 1970s in the writings of Phillip E. Areeda and a converted Donald F. Turner were much less ambitious about the goals of antitrust, much more concerned with conduct as such, and significantly more skeptical about the benefits of aggressive judicial intervention.⁴

This story of a victorious Chicago School and a humbled and disciplined Harvard School is incomplete, however. The antitrust case law reveals something quite different. On most of the important issues this chastised Harvard School has captured antitrust decision making in the

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2. A few of the more important writings include Richard A. Posner, *Antitrust Law* (1976; 2d ed. 2001); Frank H. Easterbrook, Ignorance and Antitrust 119, in *Antitrust, Innovation, and Competitiveness* (T. Jorde & D. Teece, eds., 1992); Frank H. Easterbrook, The Limits of Antitrust, 63 *Texas L. Rev.* 1, 2 (1984); Richard A. Posner, The Chicago School of Antitrust Analysis, 127 *U.Pa.L.Rev.* 925 (1979); Robert H. Bork, *The Antitrust Paradox: a Policy at War with Itself* (1978).

3. On the Harvard School, see Herbert Hovenkamp, *The Antitrust Enterprise: Principle and Execution* 35-38 (2006). See also James W. Meehan, Jr. and Robert J. Lerner, "The Structural School, Its Critics, and its Progeny: An Assessment," in *Economics and Antitrust Policy* (Robert J. Lerner & James W. Meehan, Jr., eds. 1989), at 182.

4. See Hovenkamp, *Antitrust Enterprise*, note ___ at 37; Herbert Hovenkamp, The Rationalization of Antitrust, 116 *Harv.L.Rev.* 917 (2003).

courts, and largely in the enforcement agencies.⁵ For example, the Chicago position on predatory pricing is largely that predatory pricing is an irrational activity and those claiming it should be summarily dismissed.⁶ Somewhat more moderate Chicago School members, such as then Professor Richard A. Posner, argued that the test should be pricing below long run marginal cost with intent to harm a rival.⁷ By contrast, the Harvard literature, beginning with Areeda's and Turner's article in 1975, argued that the law of predatory pricing consists of two elements: first, proof that prices were below a given measure of cost, namely short run marginal cost or average variable cost; and second, that at the time of the predation decision the defendant faced a sufficient prospect of recoupment.⁸ In its important *Brooke Group* decision the Supreme Court cited Chicago School as well as Harvard School scholarship,⁹ but the test for predation that they adopted was completely

5. For somewhat similar observations, see William Kovacic, *The Intellectual DNA of Modern U.S. Competition Law for Dominant Firm Conduct: The Chicago/Harvard Double Helix*, 2007 *Col.Bus.L.Rev.* ___ (2007) (in press); and see William H. Page, *Areeda, Chicago, and Antitrust Injury: Economic Efficiency and Legal Process*, 41 *Antitrust Bull.* 909 (1996).

6. E.g., Frank H. Easterbrook, *Predatory Strategies and Counterstrategies*, 48 *Univ.Chi.L.Rev.* 263 (1981). Only a little less strident is Bork, *Antitrust Paradox*, note ___ 144-55.

7. See Richard A. Posner, *Antitrust Law* 189 (1976); and in the second edition, p. 215 (repeating the suggestion, but with qualifications). For critiques, see 3 Phillip E. Areeda & Herbert Hovenkamp, *Antitrust Law* ¶1741e2 (2d ed. 2002); Oliver E. Williamson, *Predatory Pricing: A Strategic and Welfare Analysis*, 87 *Yale L.J.* 284, 322 n.88 (1977). But see Richard Posner, *The Chicago School of Antitrust Analysis*, 127 *U. Pa. L. Rev.* 925, 941 (1979) (somewhat ambiguously modifying earlier position). Most recently, Posner has modified his position much more significantly, perhaps moving left of the Areeda-Turner test. See *Antitrust Law* (2d ed. 2001) at 217-223 (describing Areeda-Turner test as "toothless"); but *id.* at 215 (seeing value in a marginal cost test).

8. Phillip E. Areeda & Donald F. Turner, *Predatory Pricing and Related Practices Under Section 2 of the Sherman Act*, 88 *Harv.L.Rev.* 697, 698 (1975):

"... the classically-feared case of predation has been the deliberate sacrifice of present revenues for the purpose of driving rivals out of the market and then recouping the losses through higher profits earned in the absence of competition."

See also the first edition of the *Antitrust Law* treatise: 3 Phillip E. Areeda & Donald F. Turner, *Antitrust Law* ¶1711b at 151 (1978) (similar); and see 3 *Antitrust Law*, Ch. 7C-2 (structural issues and recoupment); 7C-3 (price-cost relationships).

9. See *Brooke Group*, note ___, 509 U.S. at 233 (citing Bork, *Paradox*, note ___); *id.* at 224 (citing Posner, *Antitrust Law*, note ___); *id.* at 233 (citing Easterbrook, *Limits of Antitrust*, note ___).

taken from a page of the Harvard School: in order to show unlawful predatory pricing a plaintiff had to show recoupment plus prices lower than some measure of cost.¹⁰ The Supreme Court's 2007 *Weyerhaeuser* decision reiterated these requirements.¹¹

Perhaps a lingering difference between the Chicago and Harvard approaches to predatory pricing lies in the Chicago preference to consider "recoupment" first and the Harvard preference to look at price-cost relationships. But the fact is that under the Harvard approach both are essential to a predatory pricing claim. Further, which one is more "fundamental," or best examined first, is heavily driven by facts. In cases of easy entry or numerous rivals who can expand output lack of recoupment is easy to measure and should lead to a quick dismissal.¹² But other cases, including *Brooke Group* itself, require fairly strong assumptions about oligopoly behavior in order to assess the likelihood of recoupment. That case refused to condemn prices significantly below cost in a market (cigarettes) with no recent entry and a long history of lockstep oligopoly pricing, after observing that even a relatively well disciplined oligopoly has occasional relapses.

The same thing is true about price-cost relations. In some cases measuring them is extraordinarily difficult, particularly if the defendant produces multiple products with common costs. In other cases measurement is easy, as when prices are clearly above any measure of cost, or when they are below even the direct cost of inputs. In sum, whether recoupment or price-cost relationships is the "bedrock" doctrine in a predatory pricing case depends entirely on the circumstances.

The same thing has largely been true in unilateral refusal to deal cases, where the Chicago School generally argued for per se legality and the Harvard School took a more nuanced approach looking at the nature of the facility or input for which dealing is claimed and the impact of the refusal on

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10. Passim (citing either original or then current version of *Antitrust Law* 13 times).

11. *Weyerhaeuser Co. v. Ross-Simmons Hardwood Lumber Co., Inc.*, ___ S.Ct. ___, 2007 WL 505794 (Feb. 20, 2007). See also Kovacic, note ___ at ___.

12. E.g., *A.A. Poultry Farms v. Rose Acre Farms*, 881 F.2d 1396, 1401 (7th Cir.1989), cert. denied, 494 U.S. 1019 (1990) (looking first at recoupment in competitively structured market with low entry barriers).

competition. In its *Aspen* decision the Supreme Court adopted a standard for unilateral refusals to deal that was more hostile than either the Chicago or Harvard Schools advocated.¹³ In *Trinko*, however, the Supreme Court completely ignored the Chicago School literature but relied numerous times on Harvard School literature in placing stringent limitations on refusal to deal doctrine.¹⁴

In antitrust policy toward vertical restraints, the strong Chicago position was that they should be lawful per se.¹⁵ Today it seems fairly clear that these stronger views jumped too quickly from the Chicago theory that free riding was an important explanation for vertical restraints¹⁶ to the conclusion that it was virtually the only explanation. The Harvard position has been more nuanced, finding at least some risk that powerful local dealers could use RPM to create a price umbrella for themselves.¹⁷ In *State Oil* the Supreme Court adopted the rule of reason rather than per se legality. At this writing we are still awaiting the Supreme Court's decision in *PSKS*, which most people anticipate will overrule *Dr. Miles*, which had proclaimed per se illegality for resale price maintenance.¹⁸ So whether the Supreme

13. *Aspen Skiing Co. v. Aspen Highlands Skiing Corp.*, 472 U.S. 585 (1985); see 3A Antitrust Law ¶1772 (2d ed. 2002).

14. *Verizon Communications, Inc. v. Law Offices of Curtis V. Trinko, LLP*, 540 U.S. 398, 411, 415 (2004). See also Spencer Weber Waller, *Microsoft and Trinko: A Tale of Two Courts*, 2006 UTAH L. REV. 901, 915-16 (emphasizing role of Harvard School in *Trinko* decision); Kovacic, *Intellectual DNA*, note ____ at ____ (arguing, inter alia, that then Judge Breyer's distinctly Harvard School approach in *Town of Concord v. Boston Edison Co.*, 915 F.2d 17 (1st Cir. 1990), is the guiding force behind *Trinko*).

15. Richard A. Posner, *The Next Step in the Antitrust Treatment of Restricted Distribution: Per Se Legality*, 48 U.Chi.L.Rev. 6, 9 (1981); Robert H Bork, *The Rule of Reason and the Per Se Concept: Price Fixing and Market Division (part 2)*, 75 Yale L.J. 373 (1966); Frank H. Easterbrook, *Vertical Arrangements and the Rule of Reason*, 53 Antitrust L.J. 135 (1984) (recognizing only vertical arrangements used to facilitate horizontal collusion as worthy of condemnation).

16. E.g., Lester Telser, *Why Should Manufacturers Want Fair Trade?* 3 J.L. & Econ. 86 (1960); Robert H. Bork, *The Rule of Reason and the Per Se Concept: Price Fixing and Market Division (part 2)*, 75 Yale L.J. 373 (1966); Richard A. Posner, *The Rule of Reason and the Economic Approach: Reflections on The Sylvania Decision*, 45 U.Chi.L.Rev. 1 (1977).

17. See 8 Phillip E. Areeda & Herbert Hovenkamp ¶1604 (2d ed. 2004).

18. *PSKS, Inc. v. Leegin Creative Leather Prods., Inc.*, 171 Fed.Appx. 464, 2006 WL

Court adopts a Harvard School rule of reason or a Chicago School rule of per se legality remains to be seen.

In tying and exclusive dealing law the scope of liability has narrowed considerably over the last twenty years. The Chicago School became famous for its critique of tying law exploding the "leverage" theory and finding little basis for condemning either tying or exclusive dealing.¹⁹ The Harvard School has been more reserved, seeing potential for harm if the market structure is monopolistic or conducive to monopoly.²⁰ One completely justified development, driven entirely by Harvard School ideology, is the increased use of §2 of the Sherman Act for exclusionary contracting, sanctioned in both *Microsoft* and *Dentsply*.²¹ Anticompetitive tying and exclusive dealing are always best analyzed as "unilateral" practices, because the downstream party is either unwilling or else is agreeing to exclusivity only in exchange for something else.²² Further, the market share requirements for anticompetitive exclusive dealing or tying are generally significant and make the practices more suitable for evaluation under §2. Recent case law in tying and exclusive dealing has been driven mainly by Harvard approaches.²³

690946 (5th Cir. March 20, 2006), cert. granted 127 S.Ct. 763 (2006). The per se illegality of resale price maintenance was first established in *Dr. Miles Medical Co. v. John D. Park & Sons Co.*, 220 U.S. 373 (1911). See 8 Phillip E. Areeda & Herbert Hovenkamp, *Antitrust Law* ¶1620 (2d ed. 2004).

19. E.g., Bork, *Antitrust Paradox*, note ___ at 299-309 (exclusive dealing); 365-381 (tying).

20. See 9 Phillip E. Areeda & Herbert Hovenkamp, *Antitrust Law* ¶¶ 1704, 1705, 1709, 1710 (2d ed. 2004)

21. See *United States v. Microsoft Corp.*, 253 F.3d 34, 66-67 (D.C. Cir. 2001), cert. denied, 534 U.S. 952 (2001) (condemning Microsoft's "commingling" of platform and browser code under §2 as a form of tying); *United States v. Dentsply Int'l., Inc.*, 399 F.3d 181, 191 (3d Cir. 2005), cert. denied, 126 S.Ct. 1023 (2006) (condemning exclusive dealing under §2).

22. Of course many procompetitive uses of tying and exclusive dealing are bilateral, in that both parties stand to gain from the exclusivity itself. See, e.g., *Jefferson Parish Hosp. Dist. No. 2 v. Hyde*, 466 U.S. 2, 6 & n. 3 (1984), in which the defendant hospital and the Roux firm with which it had an exclusive dealing contract promised exclusivity to each other.

23. E.g., *Illinois Tool Works, Inc. v. Independent Ink, Inc.*, 547 U.S. 28 (2006) (abolishing presumption of market power for patented tying products and calling per se rule into question); *Jefferson Parish*, note ___ (refusing to reject per se rule but imposing serious market power requirement); *Dentsply* (condemning exclusive dealing by dominant firm under §2; citing only *Antitrust Law* treatise); *Microsoft*, note ___ (condemning "commingling" of platform and browser code under §2 but remanding §1 tying claim).

In sum, notwithstanding Chicago School efforts to write "foreclosure" out of the list of worthwhile antitrust concerns, the case law continues to recognize a concept of market foreclosure that has been a mainstay of Harvard School antitrust policy since Joe Bain's writings on entry barriers in the 1950s, although it has been considerably disciplined in subsequent years.

On remedies, at least some members of the Chicago School have advocated severe limitations on antitrust enforcement, including the virtual elimination of competitor suits,²⁴ and significant changes in the way that antitrust measures damages, including measuring of damages in accordance with optimal deterrence rather than plaintiffs' losses, and the at least selective abolition of treble damages.²⁵ By contrast, the Harvard position has tried to develop a more coherent and economically defensible model for private remedies that preserves more of the traditional doctrine and is more faithful to the statutory language. Thus the Harvard School developed the concept of "antitrust injury" to ensure that the rationale for private remedies corresponds with the rationale for applying the antitrust laws in the first place.²⁶ Along with this it developed much more severe rules for plaintiff standing. By and large the courts have followed the Harvard School approach, refusing to abolish competitor lawsuits but placing more stringent limitations on them.

One significant place where the Supreme Court has adopted Chicago rather than Harvard reasoning is the indirect purchaser rule, which awards the full trebled overcharge to direct purchasers and no damages at all to indirect purchasers. The Supreme Court's opinion in *Illinois Brick* largely followed the Landes-Posner approach.²⁷ The Harvard approach, which is

24. E.g., Easterbrook, *Predatory Strategies*, note ___; Frank H. Easterbrook, *Treble What?*, 55 *Antitrust L.J.* 95, 101 (1986).

25. E.g., William M. Landes, *Optimal Sanctions for Antitrust Violations*, 50 *U.Chi.L.Rev.* 652 (1983).

26. See Phillip E. Areeda, *Comment, Antitrust Violations Without Damage Recoveries*, 89 *Harv. L. Rev.* 1127 (1976). The doctrine was adopted by the Supreme Court in *Brunswick Corp. v. Pueblo Bowl-O-Mat, Inc.*, 429 U.S. 477 (1977). See Kovacic, *Intellectual DNA*, note ___ at ___ (TAN 198-200) (describing influence of Areeda article on Supreme Court).

27. *Illinois Brick v. Illinois*, 431 U.S. 720 (1977). See William Landes & Richard A. Posner, *Should Indirect Purchasers Have Standing to Sue Under the Antitrust Laws? An Economic Analysis of the Rule of Illinois Brick*, 46 *U. Chi. L. Rev.* 602 (1979); William Landes & Richard A. Posner, *The Economics of Passing On: A Reply to Harris and Sullivan*, 128 *U.*

more consistent with both standard rules of damages measurement and the language of §4 of the Clayton Act, is that direct purchasing intermediaries should recover lost profits, while end users should recover the overcharge.²⁸

For direct purchasing intermediaries who pass the monopolized product on down the distribution chain the overcharge is not even a rough approximation of the injury they sustain.²⁹ Rather, their injury comes mainly from lost volume. Indeed, the indirect purchaser rule often assigns the full damage action to actors who are not injured by the monopoly price at all, or who would simply be unable to prove any injury if relegated to traditional principles of damages measurement.

In sum, antitrust law as produced by the courts today comes much closer to representing the ideas of a somewhat chastised Harvard School than of any traditional version of the Chicago School. Of course, at least some members of the Chicago School have moved to the left just as Harvard has moved to the right.³⁰ But the question for today is whether the law

Pa. L. Rev. 1274, 1275-1276 (1980). The opinion cited Richard A. Posner, *Antitrust Cases, Economic Notes, and Other Materials* 147-149 (1974).

28. See 3 Phillip E. Areeda & Herbert Hovenkamp, *Antitrust Law* ¶1346k (3d ed. 2007). Areeda's and Turner's original position is stated at 3 *Antitrust Law* ¶1337e, pp. 191-194 (1978).

Justice Brennan's dissent (joined by Justices Marshall and Blackmun) relied on Areeda. See 431 U.S. at 761:

But if the broad language of §4 means anything, surely it must render the defendant liable to those within the defendant's chain of distribution. It would indeed be "paradoxical to deny recovery to the ultimate consumer while permitting the middlemen a windfall recovery."

(quoting Phillip E. Areeda, *Antitrust Analysis: Problems, Text, Cases* 75 (2d ed. 1974). The Antitrust Modernization Commission includes among its recommendations one that the indirect purchaser rule be abolished and that state law and federal antitrust cases be consolidated for the allocation of damages.

29. See 2A Phillip E. Areeda, Herbert Hovenkamp, Roger D. Blair, & Christine Plette, *Antitrust Law* ¶1395 (3d ed. 2007) (in press).

30. E.g., see Judge Posner's position on the law of predatory pricing, discussed in note ___. See also Spencer Weber Waller, *Book Review of The Antitrust Enterprise 2* (2006), http://www.luc.edu/law/academics/special/center/antitrust/antitrust__enterprise.pdf. (book review, complaining that position reflected is too close to the Chicago School position); Randal C. Picker, *Review of Hovenkamp, The Antitrust Enterprise: Principle and Execution, 2 Competition Policy Int'l* 183 (2006) (similar).

making of §2 has moved far enough. Perhaps this Harvard School influence is nothing more than a stop along the way to a much more hard core set of Chicago positions in which the courts conclude that practices such as predatory pricing, unilateral refusals-to-deal, or vertical restraints are simply not worth the expense of litigating them and should be dismissed summarily. If that is the case, then it could be said that §2 law continues to produce too many false positives and needs even further discipline from its high point in the 1940s and 1950s, when the courts condemned such things as the construction of bigger plants³¹ or a lessor's price discrimination³² as monopolistic.

I believe the Supreme Court and the circuit courts are generally about where they should be in defining §2 standards. This statement needs to be qualified in two ways. First, there are a few areas, elaborated below, where the decisions seem to be systematically overdeterrent or underdeterrent.

Secondly, courts continue to make errors, and they always will. But an error is not necessarily a sign of something fundamentally wrong with antitrust doctrine. For example, the Ninth Circuit's test in the *Kodak v. Image Tech.* case for unilateral refusals to deal, including refusal to license patents and copyrights, is almost certainly wrong, largely because the court either misread or ignored existing law.³³ Likewise, the Sixth Circuit's *Conwood* decision improperly confused tort law with antitrust and improperly admitted a damages study that should never have seen the light of day.³⁴ And the Third Circuit *LePage's* decision condemned package discounts on a woefully inadequate analysis of cost-price relationships or power to exclude an equally efficient rival.³⁵

But none of these decisions tells us very much about the state of §2

31. E.g., *United States v. Aluminum Co. of America*, 148 F.2d 416, 431 (2d Cir.1945).

32. E.g., *United States v. United Shoe Machinery Corp.*, 110 F.Supp. 295, 340, 341 (D.Mass.1953), affirmed per curiam, 347 U.S. 521 (1954).

33. *Eastman Kodak Co. v. Image Technical Services, Inc.*, 125 F.3d 1195 (9th Cir. 1997), cert. denied, 523 U.S. 1094 (1998).

34. *Conwood Co. v. United States Tobacco Co.*, 290 F.3d 768 (6th Cir. 2002), cert. denied, 537 U.S. 1148 (2003); see Hovenkamp, *Antitrust Enterprise*, note ___ at 175-180.

35. *LePage's Inc. v. 3M*, 324 F.3d 141 (3d Cir. 2003) (en banc), cert. denied, 542 U.S. 953 (2004).

law. The Federal Circuit promptly took issue with the Ninth Circuit's *Kodak* decision and the great weight of scholarly authority rests with the Federal Circuit.³⁶ Indeed, the Ninth Circuit's 1997 *Kodak* decision is about the only victory that plaintiffs can claim in the wake of the Supreme Courts 1992 decision denying summary judgment in the same case.³⁷ *Conwood* is probably best described as a case where the court was overwhelmed with the record of tortious conduct, so much that they neglected to require proof that the conduct made any kind of contribution at all to monopoly power and failed to follow *Daubert* standards for expert testimony with sufficient rigor. *LePage's* almost certainly overreached with respect to a practice (package discounts) that was poorly understood and for which more rigorous tests were inadequately developed.³⁸

Power and Conduct: Is there a General Theory of Monopolization?

Power

The law of §2 consists of two parts, the identification of monopoly power and proof of unlawful exclusionary practices. A brief word about power seems appropriate. The concern for both false positives and false negatives also relates to improperly identified monopoly power.

Here the bleakest spot in the Rehnquist Court is undoubtedly its 1992 *Kodak* decision, which permitted courts to define product markets narrowly for buyers who were "locked in" to aftermarket purchases by virtue of their previous purchase of some piece of complex durable equipment.³⁹ But as noted above, *Kodak* has acquired very little traction in the lower courts.

On the other side, the so-called "*Cellophane* Fallacy" is still with us, and continues to produce false negatives in analysis of single-firm market

36. *ISO Antitrust Litigation*, 203 F.3d 1322, 1325-1326 (Fed. Cir. 2000), cert. denied, 531 U.S. 1143 (2001).

37. Herbert Hovenkamp, Post-Chicago Antitrust: A Review and Critique, 2001 Colum. Bus. L. Rev. 257.

38. On this point, see Areeda & Hovenkamp, *Antitrust Law* ¶1749 (2007 Supp.).

39. *Eastman Kodak Co. v. Image Technical Servs.*, 504 U.S. 451 (1992); see 10 Phillip E. Areeda & Herbert Hovenkamp, *Antitrust Law* ¶1740 (2d ed. 2004).

power.⁴⁰ Briefly, assessing single-firm power by observing cross-elasticity of demand at current market prices overlooks the fact that the firm may already be charging monopoly prices. This means that conventional market delineation techniques may systematically understate the market power of dominant firms.⁴¹

Exclusionary Conduct: the Problematic Quest for a Single Test

The recent literature on §2 has been preoccupied to the point of obsession with the formulation of a single test for exclusionary conduct. Some have advocated a "sacrifice" test -- namely, that anticompetitive exclusion consists in a willingness to sacrifice short run revenues for the future benefits of high prices in a market from which rivals have been excluded. Others have advocated a "no economic sense" test that condemns conduct under §2 only if the conduct makes no economic sense unless it is understood as a mechanism for excluding rivals in order to earn monopoly profits down the road. Still others believe conduct should be condemned under §2 only if it is capable of excluding an equally efficient rival. Yet others would condemn conduct that unreasonably raises rivals' costs. Finally, some believe that no single test captures the entire range of

40. For some fairly pessimistic conclusions by a prominent economist temporarily employed by the Antitrust Division, see Dennis W. Carlton, *Market Definition: Use and Abuse*, ___ *Competition Policy Int'l.* (2007) (forthcoming).

41. A recent possible example is *HDC Medical, Inc. v. Minntech Corp.*, 474 F.3d 543 (8th Cir. 2007) (single-use and multiple-use dialyzers, which cost more, were in same relevant market because they performed the same function, at least where the plaintiff offered no evidence other than the price difference itself for placing them in separate markets; case can be read narrowly for proposition that plaintiff simply did not carry its burden of showing that the degree of substitutability was insufficient to hold the alleged monopolist's product to cost). See also *Cable Holdings of Ga. v. Home Video, Inc.*, 825 F.2d 1559, 1563 (11th Cir. 1987); *United States v. Syufy Enters.*, 712 F. Supp. 1386 (N.D. Cal. 1989), *aff'd*, 903 F.2d 659, 665 & n.9 (9th Cir. 1990) (all movies: theatrical first- or subsequent-run, video rentals, and cable television); *America Online, Inc. v. GreatDeals.Net*, 49 F.Supp.2d 851 (E.D.Va. 1999) (suggesting that relevant market is not limited to advertising on e-mail, but includes the "World Wide Web, direct mail, billboards, television, newspapers, radio, and leaflets, to name a few").

On the problem, see 2B Phillip E. Areeda & Herbert Hovenkamp, *Antitrust Law* ¶1539 (3d ed. 2007) (in press); Lawrence J. White, *Market Definition in Monopolization Cases: A Paradigm is Missing* (2005), in *Issues in Competition Law and Policy* (Wayne D. Collins, ed., 2006) (forthcoming); Gregory J. Werden, *Market Delineation under the Merger Guidelines: Monopoly Cases and Alternative Approaches*, 16 *Rev. Ind.Org.* 211 (2000) See also Thomas G. Krattenmaker, Robert H. Lande, & Steven Salop, *Monopoly Power and Market Power in Antitrust Law*, 76 *Geo.L.Rev.* 241 (1987).

practices that we might wish to condemn as unlawfully exclusionary.

"*Sacrifice*" and "*No economic sense.*" Together, the "sacrifice" and "no economic sense" tests for unlawful exclusionary behavior offer the narrowest grounds for condemning conduct as monopolistic. Taken literally, they avoid balancing because *any* reasonable prospect of net gain to the monopolist that does not come from injury to competition exonerates the defendant. Thus these tests avoid the definitional and measurement complexities that can serve to make tests based on net welfare unworkable, at least in close cases.

The *Aspen* decision condemned conduct when the defendant "was not motivated by efficiency concerns and ... was willing to sacrifice short-run benefits and consumer goodwill in exchange for a perceived long-run impact on its smaller rival."⁴² So-called "sacrifice" tests for exclusionary conduct look at the defendant's willingness to sacrifice short-term revenues or profits in exchange for larger revenues anticipated to materialize later when a monopoly has been created or the dominant firm's position strengthened. The rationale of the sacrifice test is that conduct that seems rational (profit maximizing or loss minimizing) without regard to the creation or preservation of monopoly have a fully legitimate explanation. Since no firm should be regarded as a trustee for either its rivals' or consumers' welfare, such conduct cannot be condemned without running a severe risk of chilling competitive behavior.

The best example of such a test in the case law is the recoupment test for predatory pricing given in the *Brooke Group* case, although it appeared in lower court opinions and the academic literature much earlier.⁴³

42. *Aspen Skiing Co. v. Aspen Highlands Skiing Corp.*, 472 U.S. 585, 610-611 (1985).

43. *Brooke Group v. Brown & Williamson Tobacco Corp.*, 509 U.S. 209 (1993); *A. A. Poultry Farms v. Rose Acre Farms*, 881 F.2d 1396, 1400-1401 (7th Cir. 1989), cert. denied, 494 U.S. 1019 (1990) (advocating recoupment test).

See also Phillip E. Areeda & Donald F. Turner, *Predatory Pricing and Related Practices Under Section 2 of the Sherman Act*, 88 Harv.L.Rev. 697, 698 (1975):

"... the classically-feared case of predation has been the *deliberate sacrifice of present revenues* for the purpose of driving rivals out of the market and then recouping the losses through higher profits earned in the absence of competition." (emphasis added).

See also the first edition of *Antitrust Law*, ¶1711b at 151 (1978) (similar); Richard A. Posner, *Antitrust Law: An Economic Perspective* 184 (1976) (similar).

The sacrifice test is also useful in unilateral refusal to deal cases to the extent that, if we are to have law condemning refusals to deal at all, we must have a mechanism for identifying the very small subset of refusals that should be condemned. In *Trinko* the government relied on a sacrifice theory in arguing that the alleged refusal to deal did not satisfy any Sherman Act standard of illegality.⁴⁴

One particular problem with sacrifice tests is that most substantial investments involve a short term "sacrifice" of dollars in anticipation of increased revenue at some future point. The automobile manufacturer who constructs a new plant is certainly in such a position. It spends money on the plant during a lengthy period of planning and construction, hoping to realize higher profits several years down the road after the plant goes into production. To be sure, the profitability of the new plant need not "depend on" harmful effects on a rival, but in a concentrated market it is certainly likely to have such effects. Further, the new plant might not succeed unless rivals are forced to reduce their own output. Nevertheless, building a new plant under such circumstances is almost always procompetitive.

Likewise, product innovations are always costly to the defendant, and their success may very well depend on their ability to exclude rivals from the market, but neither of these factors is or should be decisive in subsequent antitrust litigation. All innovation is costly, and many successful innovations succeed only because consumers substitute away from rivals' older versions and toward the innovator's version. In sum, the sacrifice test does not adequately distinguish anticompetitive "sacrifice" from procompetitive "investment."

The sacrifice test seems to work poorly in areas of §2 law unrelated to predatory pricing or refusal to deal. Some exclusionary practices, such as exclusive dealing or tying, exclude immediately and are likely to be profitable to the dominant firm from the onset of the practice, so neither short term sacrifice nor subsequent recoupment is necessary to make the practice profitable. Other practices, such as improper infringement suits, are often costly to the defendant in the short-run whether or not they are anticompetitive. Indeed, the improper patent infringement suit is likely to be

44. See Brief for the United States and the Federal Trade Commission as Amici Curiae Supporting Petitioner, 2003 WL 21269559, at *16-17, *Verizon Communications, Inc. v. Law Offices of Curtis V. Trinko*, 540 U.S. 398 (2004) ("conduct is exclusionary where it involves a sacrifice of short-term profits or goodwill that makes sense only insofar as it helps the defendant maintain or obtain monopoly power"); and *id.* at *19-20 ("If such a refusal involves a sacrifice of profits or business advantage that makes economic sense only because it eliminates or lessens competition, it is exclusionary and potentially unlawful.").

most costly to the dominant firm when the infringement defendant has the resources to defend it; and may not be particularly costly when the infringement defendants are nascent firms who are easily excluded from the market.

The "no economic sense" test, which is similar to the sacrifice test in some respects, would refuse to condemn exclusionary single firm conduct "unless it would make no economic sense for the defendant but for its tendency to eliminate or lessen competition."⁴⁵ The "no economic sense" test offers a good deal of insight into the question of when aggressive actions by a single firm go too far, but it can lead to erroneous results unless complicating qualifications are added.

Not all monopolizing conduct that we might wish to condemn is "irrational" in the sense that the only explanation that makes it seem profitable is destruction or discipline of rivals. Indeed, monopolizing conduct is not necessarily extremely costly to the defendant. For example, supplying false information or failing to disclose important information to a government official or standard setting organization need not cost any more than supplying truthful information, but can create monopoly under appropriate circumstances.⁴⁶ Indeed, the provision of false information may be less costly than provision of truthful information, for false information is easier and cheaper to manufacture. Further, the provision of such information to a government official might be profitable (i.e., "make sense") whether it destroys a rival or merely if it results in increased output to the defendant. For example, the firm that acquires a patent by making false statements to the patent examiner and then brings infringement actions against rivals might be dominant and bent on protecting that position.⁴⁷ But it might also be one

45. Brief for the United States and Federal Trade Commission as Amici Curiae Supporting Petitioner at 15, *Verizon Communications, Inc. v. Law Offices of Curtis V. Trinko, LLP*, 540 U.S. 398 (2004). See Gregory Werden, The "No Economic Sense" Test for Exclusionary Conduct, 31 J.Corp.L. 293 (2006); A Douglas Melamed, Exclusive Dealing Agreements and Other Exclusionary Conduct -- are There Unifying Principles, 73 Antitrust L.J. 375 (2006).

46. E.g., *Walker Process Equipment, Inc. v. Food Mach. & Chem. Corp.*, 382 U.S. 172 (1965) (maintaining infringement suit on patent obtained by fraud); *Rambus, Inc.*, 2006 WL 2330117 (FTC, Aug. 2, 2006) (allegedly providing false information to private standard setting organization with the result that organization unknowingly adopts standards protected by defendant's IP rights). See also *Netflix, Inc. v. Blockbuster, Inc.*, 2006 WL 2458717 (slip copy) (N.D.Cal. Aug 22, 2006) (NO. C06-02361 WHA) (refusing to dismiss *Walker Process* style counterclaim against Netflix on business method patent, based on Netflix's alleged failure to disclose prior art in patent application).

47. E.g., *Walker Process*, id.

of many firms in a product differentiated market, seeking to do no more than protect its sales from a close substitute.

Conduct capable of excluding equally efficient rival. Judge Posner's proposed definition of exclusionary conduct would require the plaintiff to show:

that the defendant has monopoly power and ... that the challenged practice is likely in the circumstances to exclude from the defendant's market an equally or more efficient competitor. The defendant can rebut by proving that although it is a monopolist and the challenged practice exclusionary, the practice is, on balance, efficient.⁴⁸

This definition has enjoyed some recognition in the case law. For example, in condemning the targeted package discounts at issue in *LePage's*, the Third Circuit observed that "even an equally efficient rival may find it impossible to compensate for lost discounts on products that it does not produce."⁴⁹ The "equally efficient rival" test has also found acceptance in predatory pricing cases, particularly in discussions of how to identify a price as predatory. The reasoning is that a firm should not be penalized for having lower costs than its rivals and pricing accordingly. As a result, a price is predatory only if it is reasonably calculated to exclude a rival who is at least as efficient as the defendant.⁵⁰ Judge Posner's own examples in defense of his definition of exclusionary conduct pertain to pricing. He writes that it:

would be absurd to require the firm to hold a price umbrella over less efficient entrants.... [P]ractices that will exclude only less efficient

48. Richard A. Posner, *Antitrust Law* 194-195 (2d ed. 2001).

49. *LePage's, Inc. v. 3M*, 324 F.3d 141, 155 (3d Cir. 2003) (en banc), cert. denied, 542 U.S. 953 (2004).

50. See, e.g., *Barry Wright Corp. v. ITT Grinnell Corp.*, 724 F.2d 227, 232 (1st Cir. 1983) (noting that an "avoidable" or "incremental" cost test for predatory pricing is irrational because it would be less costly for the defendant to halt production; and moreover, "equally efficient competitors cannot permanently match this low price and stay in business."). See also *MCI Communic. Corp. v. AT&T*, 708 F.2d 1081, 1113 (7th Cir.), cert. denied, 464 U.S. 891 (1983) (similar, predatory pricing); *Borden, Inc. v. FTC*, 674 F.2d 498, 515 (6th Cir. 1982), vacated on other grds., 461 U.S. 940 (1983) (same, predatory pricing); *Ortho Diagnostic Systems, Inc. v. Abbott Laboratories*, 920 F.Supp. 455, 466-467 (S.D.N.Y. 1996) ("below-cost pricing, unlike pricing at or above that level, carries with it the threat that the party so engaged will drive equally efficient competitors out of business, thus setting the stage for recoupment at the expense of consumers").

firms, such as the monopolist's dropping his price nearer to (but now below) his cost, are not actionable, because we want to encourage efficiency.⁵¹

Clearly we do not want low cost firms to hold their prices above their costs merely to suffer a rival to become established in the market.

The equally efficient rival definition of exclusionary conduct can be underdeterrent in situations where the rival that is most likely to emerge is less efficient than the dominant firm. Consider the filing of fraudulent or otherwise improper IP infringement claims.⁵² The value of infringement actions as entry deterrence devices is greatest when the parties have an unequal ability to bear litigation costs. This will typically be before or soon after the new entrant has begun production. The filing of a fraudulent patent infringement suit, unlike setting one's price at or a little above marginal cost, is a socially useless practice. But the strategy might very well not be effective against an equally efficient rival, who could presumably defend and win the infringement claim. In this case Judge Posner's definition of exclusionary conduct seems unreasonably lenient and even perverse. It exonerates the defendant in precisely those circumstances when the conduct is most likely to be unreasonably exclusionary.

Raising Rivals' Costs (RRC). Several anticompetitive actions by dominant firms are best explained as efforts to deny rivals market access by increasing their costs. Such strategies may succeed in situations where more aggressive ones involving the complete destruction of rivals might not. Once rivals' costs have been increased the dominant firm can raise its own price or increase its market share at their expense.⁵³

51. Posner, *Antitrust Law*, note ___ at 196.

52. See 3 *Antitrust Law* ¶1706 (2d ed. 2002).

53. See Thomas Krattenmaker & Steven Salop, *Anticompetitive Exclusion: Raising Rivals' Costs to Achieve Power Over Price*, 96 *Yale L.J.* 209 (1986); Steven C. Salop & David T. Scheffman, *Raising Rivals' Costs*, 73 *Am.Econ.Rev.* 267 (1983). See also Herbert Hovenkamp, *Post-Chicago Antitrust: A Review and Critique*, 2001 *Col. Bus. L. Rev.* 257.

A particularly interventionist RRC test is proposed in Einer Elhauge, *Defining Better Monopolization Standards*, 56 *Stan. L. Rev.* 253 (2003), which queries "whether the alleged exclusionary conduct succeeds in furthering monopoly power (1) only if the monopolist has improved its own efficiency or (2) by impairing rival efficiency whether or not it enhances monopolist efficiency." The second part of this test would condemn a firm for using practices that lowered its own costs if, in the process, they denied scale economies to a rival. See, e.g., Elhauge, *id.* 324 (arguing that even if economies of scale are very substantial, above a 50% market share, the firm cannot use exclusive contracts to increase

The real value of RRC theories is not to create a new set of unlawful exclusionary practices, but rather to show that certain practices that have traditionally been subjected to antitrust scrutiny can be anticompetitive even though they do not literally involve the destruction of rivals. Situations in which rivals stay in the market but their costs increase may be more likely to occur and exist in a wider variety than those in which rivals are destroyed. Further, cost raising strategies might be less detectable and less likely to invite prosecution. Indeed, a strategy of raising rivals' costs need not injure a rival severely at all if the dominant firm increases its own prices to permit smaller firms a price hike that compensates them for their cost increase. As a result, RRC operates as a kind of substitute for the older antitrust theories of anticompetitive exclusion that required the complete foreclosure or destruction of rivals, and accordingly provoked competitive responses. Many cases brought under both §§1 and 2 of the Sherman Act have acknowledged the theory.⁵⁴

its output but must simply set its price). The Elhauge test would also condemn a firm who used a practice that increased its sales beyond the point that its scale economies topped out, if in so doing it denied scale economies to a rival. See *id.* at 324 (illustration of firm whose tie, exclusive deal, or other agreement requires customers to purchase 70% of the market from it, even though its economies of scale top out at 40%). Even assuming such tests were desirable, they seem to make unrealistic demands on tribunals to measure relevant scale economies. See 2B Antitrust Law ¶408 (3d ed. 2007) (in press).

54. E.g., *Microsoft*, note ___, 253 F.3d at 70 (defendant's exclusionary contracts relegated rival Netscape to higher cost distribution channels); *United States v. Dentsply Int'l., Inc.*, 399 F.3d 181, 191 (3d Cir. 2005), cert. denied, 126 S.Ct. 1023 (2006) (similar; defendant's exclusive dealing arrangements relegated rivals to inferior distribution alternatives); *JTC Petroleum Co. v. Piasa Motor Fuels, Inc.*, 190 F.3d 775, 778-779 (7th Cir.1999) (members of cartel may have paid off suppliers to charge cartel rivals significantly higher prices, thus creating a price umbrella under which the cartel could operate); *Brand Name Prescription Drugs Antitrust Litigation*, 123 F.3d 599, 614 (7th Cir. 1997), cert. denied, 522 U.S. 1123 (1998) (similar); *Forsyth v. Humana, Inc.*, 114 F.3d 1467, 1478 (9th Cir. 1997), aff'd on nonantitrust grounds, 525 U.S. 299 (1999) (health care provider's policy of shifting indigent patients to rivals could have effect of raising their costs); *Multistate Legal Studies, Inc. v. Harcourt Brace Jovanovich Legal and Professional Publications, Inc.*, 63 F.3d 1540, 1553 (10th Cir.1995) (dominant firm's practice of scheduling its own full slate of classes so as to conflict with rivals' specialized classes could have had effect of raising the rival's cost of distributing its own product); *Premier Elec. Const. Co. v. National Elec. Contractors Ass'n, Inc.*, 814 F.2d 358 (7th 1987) (alleged agreement between union and contractors' association under which union would obtain fee from all employers without whom it had collective bargaining agreements, whether or not they were association members, to be paid to the association, probably intended to raise the costs of non-member contractors). Cf. *Ball Memorial Hosp., Inc. v. Mutual Hosp. Ins., Inc.*, 784 F.2d 1325, 1340 (7th Cir. 1986) (rejecting RRC claim that Blue Cross forced hospitals to submit lower bids for taking care of BC patients, with result that it had to impose higher charges on non-BC patients).

Of course, the law has never required complete market exclusion as a prerequisite to suit. Indeed, some successful §2 plaintiffs have both grown their market shares and earned high profits even through the period that the exclusionary practices were occurring.⁵⁵

In sum, RRC is a useful but also incomplete definition of exclusionary practices. Further, many practices that raise rivals' cost, such as innovation that either deprives rivals or revenue or forces them to innovate in return, are also welfare enhancing. As a result, "raising rivals' costs" can never operate as a *complete* test for exclusionary conduct.⁵⁶ One must always add an adverb such as "unreasonably," but that invariably requires some kind of balancing or trade off.

No Single Test. Each of the previously discussed tests is useful for assessing some types of exclusionary conduct but much less so for others. Given the current state of the law my own preference is the "test" proposed in the *Antitrust Law* Treatise that monopolistic conduct consists of acts that:

- (1) are reasonably capable of creating, enlarging or prolonging monopoly power by impairing the opportunities of rivals; and
- (2) that either (2a) do not benefit consumers at all, or (2b) are unnecessary for the particular consumer benefits that the acts produce, or (2c) produce harms disproportionate to the resulting benefits.⁵⁷

To this should be added that the practice must be reasonably susceptible to judicial control, which means that the court must be able to identify the conduct as anticompetitive and either fashion a penalty producing the correct amount of deterrence or an equitable remedy likely to improve competition.

55. E.g., *Conwood Co. v. United States Tobacco Co.*, 290 F.3d 768, 784 (6th Cir. 2002), cert. denied, 537 U.S. 1148 (2003). The plaintiff claimed that its market share would have grown even faster and that it would have earned even more profits but for the exclusionary conduct.

56. This is apparently the source of Judge Posner's objection. See Posner, *Antitrust Law* note ___ at 196, referring to RRC as "not a happy formula" because one way of raising rivals' costs is to be more efficient than the rival, thus denying it scale economies.

57. See 3 *Antitrust Law* ¶1651 (2d ed. 2002).

This formulation is not so much a test as a series of premises. Clause (1) of the test ensures that the conduct is both exclusionary and "substantial," in the sense that it is reasonably capable of creating or prolonging monopoly. Clause (2a) deals with the easiest case for identifying anticompetitive exclusion; namely where no consumer benefit whatsoever can be shown. Clause (2b) deals with situations where a less restrictive alternative might produce equivalent benefits, and (2c) deals with the small number of situations thought to require some kind of balancing of harms and gains. Beyond this formulation, courts must still develop specific tests for specific types of conduct, such as the recoupment/price-cost test for predatory pricing, or the "no economic sense" test for unilateral refusals to deal.

Conclusion: Problem Areas

Monopolization law's conceptual and administrative problems will probably never be solved, given the open-ended nature of §2's "monopolizing" language. A few problem areas seem worth noting.

One area of widespread agreement is that misuse of government process can create monopolies. Patent and other IP exclusions have been particularly problematic and arguably have produced a fair amount of *underdeterrence*. For example, ever since the Supreme Court's *Walker Process* decision in 1965 the use of improper or overly broad patent claims to maintain or create monopoly has been a significant source of antitrust litigation.⁵⁸ *Walker Process* itself spoke very generally of infringement actions based on patents that were obtained by "fraud." Today the law has become much more technical and stylized. Many claims continue to involve enforcement actions based on patents that were acquired by inequitable conduct before the Patent and Trademark Office (PTO). Not every instance of inequitable conduct renders a patent unenforceable. Federal Circuit law on the question considers enforceability by addressing two issues. One is the nature of the misconduct and the intent behind it; the other is "materiality," or the likelihood that the patent examiner would have disapproved the patent (or a patent claim) had the misconduct not occurred. In general, the more aggressive the misconduct the smaller the showing of materiality need be to make a patent unenforceable, and vice versa.

Another set of cases involve IP rights where there is not necessarily a

58. *Walker Process Equipment v. Food Machinery & Chemical Corp.*, 382 U.S. 172 (1965). See 3 Phillip E. Areeda & Herbert Hovenkamp, *Antitrust Law* ¶706 (2d ed. 2002).

claim of misconduct in the acquisition of the right, but rather where the infringement action itself was improperly brought. In a patent case this could be because the patentee had good reason to know that the infringement defendant's technology was not infringing (not covered by a particular patent claim) or that it had a valid license; or where the patent was unenforceable for some other post-application reason.⁵⁹ The Supreme Court addressed one variation of this issue in its *Professional Real Estate* case where the IP claim was under the copyright laws rather than a patent, and the infringement defendant's claim was that the plaintiff had filed its action based on an improper interpretation of a question of law.⁶⁰

Walker Process actions in the Federal Circuit have been frustrated by that court's reluctance to adopt a more objective test for the type of inequitable conduct needed to trigger *Walker Process* liability. For example, in the *Dippin' Dots* case the infringement plaintiff's patent was rendered unenforceable by some 800 retail sales that occurred more than a year before the initial patent application was filed.⁶¹ The Patent Act's on sale bar prevents patenting of a product that was sold more than a year prior to the filing of the initial patent application.⁶² In this case the patentee neglected to disclose this information in its application, and the patentee's declaration contained a sworn statement that no such sales had occurred. Further, the information, if disclosed, would certainly have barred patentability.

However, the court also held that the degree of inequitable conduct necessary to invalidate the patent was not as great as the degree needed to support an antitrust claim. In this case the only evidence of the patentee's

59. E.g., *United States v. Besser Mfg. Co.*, 96 F.Supp. 304, 312 (E.D.Mich. 1951), aff'd 343 U.S. 444 (1952) (infringement action where patentee had no basis for believing that defendant's technology infringed the patent); *Moore USA, Inc. v. Standard Register Co.*, 139 F. Supp. 2d 348 W.D.N.Y. 2001) (refusing to dismiss Sherman §2 counterclaim allegation that patentee filed infringement claim while knowing that counterclaimant's product did not infringe because it did not incorporate an essential ingredient); *International Technologies Consultants v. Pilkington PLC*, 137 F.3d 1382 (9th Cir. 1998) (infringement suit based on expired patents a possible antitrust violation).

60. *Professional Real Estate Investors v. Columbia Pictures Indus.*, 508 U.S. 49 (1993) (purely legal question whether charging money to play a movie video in a hotel room constituted a "performance," and thus an infringement of the copyright, where Circuit Courts had split on the issue; no antitrust violation).

61. *Dippin'Dots, Inc. v. Mosey*, 476 F.3d 1337 (Fed. Cir. 2007).

62. 35 U.S.C. § 102(b).

anticompetitive intent was the fact that it had made the 800 sales over a one week period and then later swore to the PTO that the sales had not occurred. Of course, it subsequently also filed a patent infringement suit against those offending one or more of the claims made in the patent. The Federal Circuit held that while this omission clearly qualified as inequitable conduct, it fell short of fraud in the *Walker Process* sense, which requires a stronger showing of both intent and materiality.⁶³ In order to support a *Walker Process* antitrust case "there must be evidence of intent separable from the simple fact of the omission."⁶⁴ The court observed:

It might be argued that because the omitted reference was so important to patentability, DDI [the patentee] must have known of its importance and must have made a conscious decision not to disclose it. That argument has some force, but to take it too far would be to allow the high materiality of the omission to be balanced against a lesser showing of deceptive intent by the patentee. Weighing intent and materiality together is appropriate when assessing whether the patentee's prosecution conduct was inequitable. However, when *Walker Process* claimants wield that conduct as a "sword" to obtain antitrust damages rather than as a mere "shield" against enforcement of the patent, they must prove deceptive intent independently.⁶⁵

This approach re-creates some of the same horrors of pre-*Matsushita* antitrust litigation under standards reluctant to grant summary judgment, except in reverse. It requires a discovery trip through the patentee's documents for evidence of anticompetitive "intent" other than that manifested

63. Id. at ___, relying on *Nobelpharma AB v. Implant Innovations, Inc.*, 141 F.3d 1059, 1068-1069 (Fed.Cir.1998).

64. Id. at ___ ("The difference in breadth between inequitable conduct and *Walker Process* fraud admits the possibility of a close case whose facts reach the level of inequitable conduct, but not of fraud before the PTO. This is such a case.").

65. Id. at ___ (internal citations omitted). The Federal Circuit was following dicta from the Supreme Court suggesting that an inquiry into actual subjective intent is necessary. See *Professional Real Estate Investors, Inc. v. Columbia Pictures Indus., Inc.*, 508 U.S. 49, 60 (1993):

Only if challenged litigation is objectively meritless may a court examine the litigant's subjective motivation. Under this second part of our definition of sham, the court should focus on whether the baseless lawsuit conceals "an attempt to interfere directly with the business relationships of a competitor.... (citations omitted).

in the patent application itself. Further, it makes the infringement defendant's antitrust counterclaim dependent on the vagaries of the patentee's document retention policy or other efforts to suppress incriminating information, often attending pre-application activities that occurred many years prior to the litigation. For example, in *Dippin Dots* the sales found to invalidate the patent occurred in 1987. The subsequent patent infringement suit was filed in April of 2000, some thirteen years later.⁶⁶

Another problem area is the law of strategic pricing, including various sorts of discounting policies. Both the "recoupment" test and the AVC test for predatory pricing are imperfect and underdeterrent. The "recoupment" test as developed in *Brooke Group* denigrated the value of disciplinary actions within oligopoly. The degree of competitiveness in concentrated industries varies widely and in some the value of disciplinary pricing can be quite high to market leaders and harmful to consumers. Cigarettes, with a long history of lock-step pricing, is very likely such an industry.

The AVC test basically identifies short-run marginal cost as the proper baseline for measuring predation, and the Areeda-Turner variation recognizes prices above average variable cost as a virtual safe harbor for predation claims. It is generally acknowledged that the AVC test can be underdeterrent, particularly in circumstances where fixed costs are high, which is most often the case in markets that are structurally susceptible to monopolization.⁶⁷

Discounting practices have been particularly problematic in recent years. The law seems to be in roughly the same position that the law of predatory pricing was in the seventies and eighties. The early formulations focused heavily on intent, and cost tests played a secondary role, to the point that some decisions were willing to condemn predation on prices above any measure of cost.

Single-product and "aggregated" multi-product discounts can pose different issues.⁶⁸ Some single-product discount challenges have been to

66. See *In re Dippin' Dots Patent Litigation*, 249 F.Supp.2d 1346 (N.D.Ga.,2003) (docket entry).

67. See 3 Antitrust Law note ___ at ¶¶735-737.

68. This discussion largely ignores defenses, which are significant and almost certainly explain the great majority of situations in which discounting occurs. See 11 Herbert Hovenkamp, Antitrust Law ¶¶1810-1814 (2d ed. 2005).

so-called "market share" discounts, which reward purchasers for purchasing a specified percentage of their needs from the defendant. These discounts differ from and are less harmful to competition than exclusive dealing in several respects. First, because the specified percentage is less than 100%, they foreclose less than exclusive dealing imposed by a seller with the same market share. Second, and most significantly, the penalty for falling below the minimum percentage is loss of the discount, which means that the buyer can evade the contract at any time simply by paying the seller the higher price. Third, and most significantly, an equally efficient firm can match a fully discounted price that is above the defendant's costs.⁶⁹

The most common argument for condemning above cost market share discounts is that they may serve to raise rivals' costs by depriving them of sufficient sales to attain economies of scale equivalent to those enjoyed by the defendant. Here, the same set of considerations would appear to apply as the courts have applied in predatory pricing cases such as *Brooke Group*. First, one might be able to envision circumstances in which above cost single-product discounts can be used to reduce rivals' scale economies, and welfare might be reduced in the process. But second, one doubts that the courts can administer §2 claims under such a theory without creating an intolerable risk of chilling procompetitive behavior, a result that could be far more socially costly.⁷⁰ Manifestly, the law of predatory pricing does not rest on the premise that anticompetitive, above cost pricing strategies are implausible. In fact, such theories are quite numerous and varied.⁷¹ Rather,

69. See, e.g., *Concord Boat Corp. v. Brunswick Corp.*, 207 F.3d 1039 (8th Cir.), cert. denied, 531 U.S. 979 (2000) (refusing to condemn above cost market share discounts by dominant firm because equally efficient rival could steal the sales at any time).

70. See *Brooke Group*, 509 U.S. at 223:

As a general rule, the exclusionary effect of prices above a relevant measure of cost either reflects the lower cost structure of the alleged predator, and so represents competition on the merits, or is beyond the practical ability of a judicial tribunal to control without courting intolerable risks of chilling legitimate price-cutting.... "To hold that the antitrust laws protect competitors from the loss of profits due to such price competition would, in effect, render illegal any decision by a firm to cut prices in order to increase market share. The antitrust laws require no such perverse result."

quoting *Cargill, Inc. v. Monfort of Colorado, Inc.*, 479 U.S. 104, 116 (1986).

71. For examples, see Jean Tirole, *The Theory of Industrial Organization* 367-374 (1992); Frederic M. Scherer & David Ross, *Industrial Market Structure and Economic Performance* 356-366, 405-406 (3d ed. 1990); Joe S. Bain, *Industrial Organization* 269-76 (2d ed. 1968).

the law rests on the observation that Article III courts and, in particular, juries are not able to distinguish such strategies with sufficient clarity to avoid condemning procompetitive behavior.

The situation of aggregated multi-product discounts is somewhat more complex because an equally efficient firm making only one product or a subset of products in a bundle may not be able to match an aggregated discount. Assume that the defendant is the only firm in the market making products A and B. Rivals make one but not the other. If the defendant ties a discount to combined purchases of A and B an equally efficient rival making only B might be able to match the discounted B price, but not the foregone discount on A that results from the buyers' failure to take the requisite amount of both A and B.

Whether such discounting practices should be condemned at above cost prices and, if so, when raises a number of interesting questions that have been explored quite thoroughly in the literature although much less so in the case law. *First*, if at least one significant rival also make both A and B then the strategy should not be condemned simply because the plaintiff, who makes only one of the products, cannot match the discount. *Second*, the discount will not exclude an equally efficient single product rival unless when the full discount is attributed to the product upon which exclusion is claimed the price of that product falls below cost.⁷² Or to state this differently: one needs to ask whether the incremental price of the two products when they are bundled is enough to cover the incremental cost of producing the bundle.

72. At this writing the Ninth Circuit has a pending appeal in a case in which the district court entered judgment for the plaintiff on a jury verdict challenging the defendant's single-product and bundled discount claims. See *McKenzie-Willamette Hosp. v. PeaceHealth*, 2004 WL 3168282 (D.Or. Oct. 13, 2004). The decision differs from *LePage's* in that there was apparently some evidence of pricing below both average total cost and average variable cost. See *id.* at *4. At this writing the Ninth Circuit has issued a general request for amicus briefs on this issue:

Whether a plaintiff who seeks to establish the predatory or anticompetitive conduct element of an attempted monopolization claim under section 2 of the Sherman Act by showing that the defendant offered bundled discounts to the defendant's customers must prove that the defendant's prices were below an appropriate measure of the defendant's costs. If so, what is the appropriate measure of costs and how should the trial court instruct the jury on the matter of costs? If not, what standard should the trial court instruct the jury to use to determine whether the bundled discounts are predatory or anticompetitive?

Cascade Health Solutions v. PeaceHealth, Nos. 05-35627, 05-35640, 05-36153 & 05-36202 (9th Cir. Mar. 20, 2007).

Third, even bundling that does not satisfy this incremental cost test is usually procompetitive; indeed, it may be an important avenue by which oligopolies are destabilized. For example, the truck dealer in a concentrated market may be reluctant to cut the nominal price for fear of retaliation; however, it may throw in air conditions which costs \$1000 for an incremental price of \$300. A firm that sells only truck air conditioners but not the trucks themselves may be excluded by such a practice, but if the price of the truck-plus-air-conditioner exceeds its costs it is hard to justify a rule that protects the air conditioner firm by limiting competition in the truck market.

Finally, a very brief note on remedies. The efficacy of §2 law depends on the success of remedies in making the market more competitive. Decades of aggressiveness in use of structural remedies⁷³ has given way to a preference for conduct remedies. Which remedy has the comparative advantage depends on the circumstances. In a case such as *Dentsply*, where the defendant preserved its dominant position by means of a set of exclusive dealing practices, an injunction against the variants of such practices may be all that is needed. But too often nonstructural remedies amount to little more than price regulation, which rarely satisfies the goals of antitrust.⁷⁴ By contrast, in a case such as *Microsoft* where the behavior is multi-faceted and the defendant has repeatedly been condemned⁷⁵ a carefully tailored structural remedy is probably necessary, including but perhaps not limited to forced sharing of IP rights. The time seems ripe to become more aggressive about structural remedies once again, particularly for repeat offenders.

73. E.g., *Standard Oil Co. v. United States*, 221 U.S. 1 (1911) (ordering dissolution of Standard Oil into 34 companies). See also *United States v. United Shoe Machinery Corp.*, 110 F. Supp. 295 (D. Mass. 1953), aff'd per curiam, 347 U.S. 521 (1954); and the eventual dissolution decree in 391 U.S. 244 (1968). These decisions as well as some others are discussed in William E. Kovacic, *Designing Antitrust Remedies for Dominant Firm Misconduct*, 31 Conn.L.Rev. 1285 (1999).

74. E.g., *Eastman Kodak Co. v. Image Technical Services*, 125 F.3d 1195 (9th Cir. 1997), cert. denied, 523 U.S. 1094 (1998). Cf. *In re Rambus, Inc.*, #9302, 2007 WL 431524 (FTC, Feb. 5, 2007) (ordering licensing at specified RAND royalty).

75. *United States v. Microsoft Corp.*, 253 F.3d 34, 66-67 (D.C. Cir. 2001), cert. denied, 534 U.S. 952 (2001) (condemning Microsoft's numerous practices directed mainly at Netscape and Sun Microsystems); Proposed Final Judgment and Competitive Impact Statement; *United States of America v. Microsoft Corp.*, 59 Fed. Reg. 42,845 (Dep't Justice Aug. 19, 1994) (consent decree in earlier litigation challenging "per processor" licensing practice directed mainly at IBM's OS/2 operating system); and see *United States v. Microsoft Corp.*, 56 F.3d 1448 (D.C. Cir. 1995) (upholding decree).