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Posner's Program for the Antitrust Division: A Twenty-Five Year Perspective

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I. INTRODUCTION

IN 1971, Richard Posner, then a young professor at the University of Chicago Law School, published a short article proposing an enforcement program for the Justice Department's Antitrust Division.[1] Posner drew on the scholarship of the Chicago School and on his own early writings to construct a program that would, he argued, deploy the agency's scarce resources most efficiently. Economic efficiency was the original goal of the Sherman Act, according to Posner,[2] and provided a clear and operational basis for administrative discretion. The Antitrust Division thus should seek "to maximize the efficiency of antitrust enforcement by discovering and implementing those policies whose net so-

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1. Richard A. Posner, *A Program for the Antitrust Division*, 38 U. CHI. L. REV. 500 (1971) [hereinafter *A Program*].

2. *Id.* at 504-05. Posner followed the reading of legislative history in Robert H. Bork, *The Rule of Reason and the Per Se Concept: Price Fixing and Market Division*, 74 YALE L.J. 775 (1965).

cial product is largest."[3] His criterion for identifying inefficient practices was economic consensus: What practices do mainstream economists agree reduce the value of output?[4] Posner argued that "there is enough common ground among economists on the monopoly question to provide an ample as well as secure base for a program of antitrust enforcement."[5]

Applying the consensus/efficiency standard, Posner concluded that the Antitrust Division ("Division") should focus its efforts exclusively on cartels and practices ancillary to them; horizontal mergers that substantially increase market concentration; and regulatory reform.[6] He specifically excluded cases challenging exclusionary practices that do not involve agreements among competitors. He thus opposed devoting resources to "vertical and conglomerate mergers, arrangements subject to Section 3 of the Clayton Act (unless imposed by a conspiracy among competing firms), many single-firm monopolization cases such as the pending suit against IBM, and many resale price maintenance cases."[7] As Posner conceded, this application of the consensus standard obviously favored the Chicago School's more restrictive view of appropriate antitrust enforcement.

Posner's article attempted to use the economic and organizational theory of the time to frame a coherent administrative program. However, much has occurred in antitrust law and economics in the years since Posner's article was published. We propose here to reexamine the recommendations of Posner's article in light of the experience of the past quarter-century in enforcement, caselaw, and scholarship. Although we agree with Posner's efficiency standard, our criteria will differ from Posner's in several respects. When Posner wrote his article, the Division's range of choice in litigation policy was considerably broader than it is now. The Supreme Court was extraordinarily receptive to novel theories of liability;[8] in merger enforcement, as Justice Stewart famously observed, the government always won.[9] In such an environment, it made sense to consider only economic consensus in selecting from the range of available theories of liability. Now, however, the Supreme Court and the lower federal courts, in part because of the Chicago School's writings and in part because of Republican appointments, have become more critical of

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3. Posner, *supra* note 1, at 501.

4. *Id.* at 506-13. Posner noted that the economics profession is "deeply divided" on issues critical to reducing the goal of efficiency to a set of useable guidelines and that the Assistant Attorney General is not competent to resolve the academic debate. By consensus of professional opinion, Posner meant "a very substantial majority position (with mere numbers weighted by experience and distinction) . . . ." *Id.* at 507.

5. *Id.*

6. *Id.* at 507-08.

7. *Id.* at 508-09 (internal citations omitted).

8. *See generally* William H. Page, *Legal Realism and the Shaping of Modern Antitrust*, 44 EMORY L.J. 1 (1995).

9. "The sole consistency that I can find is that in litigation under § 7, the Government always wins." United States v. Von's Grocery Co., 384 U.S. 270, 301 (1966) (Stewart, J., dissenting).

assertions of antitrust liability.[10] Thus, in considering changes in the Division's enforcement policy, it is necessary to consider judicial consensus as well. Experience demonstrates that some areas of enforcement are unlikely to meet with success and thus do not warrant a commitment of resources.

The courts' skepticism toward antitrust charges flows to some extent from their endorsement of the Chicago School position that consumer welfare is the objective of the law.[11] Few would now argue that the law is designed to protect competitors. It is thus surprising that Assistant Attorney General Anne Bingaman, in her essay in this Symposium, emphasizes the benefits to competitors from the only two recent enforcement actions she discusses, those against the Bell System and Pilkington.[12]

One other factor should affect the Division's choice of cases. Posner wrote that the Division "should consider the ability and willingness of private plaintiffs to obtain adequate relief, now that private antitrust actions have become, to say the least, highly feasible."[13] When Posner made this observation, doctrines that limited private antitrust enforcement, such as antitrust injury and standing,[14] were not well developed. Public enforcement policy should now take account of these doctrines in evaluating whether private enforcement will be sufficient to deter inefficient practices.

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10. *See* William H. Page, *The Chicago School and the Evolution of Antitrust: Characterization, Antitrust Injury, and Evidentiary Sufficiency*, 75 VA. L. REV. 1221, 1300 (1989); *see generally* William E. Kovacic, *Reagan's Judicial Appointees and Antitrust in the 1990s*, 60 FORDHAM L. REV. 49 (1991).

11. *See* ROBERT H. BORK, THE ANTITRUST PARADOX 427 (rev. ed. 1993) (concluding that judges in the 1980s by and large adopted an efficiency model of antitrust); *see generally* John E. Lopatka, *Stephen Breyer and Modern Antitrust: A Snug Fit*, 40 ANTITRUST BULL. 1, 23-45 (1995) (discussing the evolution of antitrust analysis in the Supreme Court culminating in adoption of the efficiency standard).

12. She "underscore[s]" her "basic point" that the direct beneficiaries of the government's action against AT&T were the firm's competitors, and she explains that the action against the British glass manufacturer Pilkington opened up foreign markets to rival American firms. In 1990, Donald Dewey perhaps presciently predicted a swing in antitrust enforcement back toward an emphasis on the protection of small competitors. DONALD DEWEY, THE ANTITRUST EXPERIMENT IN AMERICA 39 (1990). Dewey observed that the Reagan administration moved "antitrust in the direction of contemporary blue-ribbon opinion in economics," what Posner termed consensus. *Id.* But he guessed that the Reagan course would not be maintained in future administrations, citing an abiding national suspicion of "big business" and the populist impulse in American politics. *Id.*

13. Posner, *supra* note 1, at 524.

14. The modern antitrust injury doctrine was formally recognized in Brunswick Corp. v. Pueblo Bowl-O-Mat, Inc., 429 U.S. 477 (1977) (holding lost profits of competitors of merging firms not compensable). The Court's most recent treatment of antitrust injury is Atlantic Richfield Co. v. USA Petroleum Co., 495 U.S. 328, 344 (1990) (stating "a plaintiff can recover only if the loss stems from a competition-reducing aspect or effect of the defendant's behavior"). *See generally* William H. Page, *The Scope of Liability for Antitrust Violations*, 37 STAN. L. REV. 1445 (1985); William H. Page, *Antitrust Damages and Economic Efficiency: An Approach to Antitrust Injury*, 47 U. CHI. L. REV. 467 (1980). For a discussion of earlier efforts to restrict private enforcement, see Milton Handler, *Changing Trends in Antitrust Doctrines: An Unprecedented Supreme Court Term—1977*, 77 COLUM. L. REV. 979, 989-1004 (1977).

We apply these criteria in the pages that follow to Posner's recommendations concerning express and tacit collusion, mergers, and single-firm exclusionary practices.[15] We find that enforcement policy in the past twenty-five years followed the broad outlines (and in some instances, the details) of Posner's suggested approach. The Chicago approach has influenced the enforcement programs of the Division and, to a lesser extent, the Federal Trade Commission.[16] Developments in legal doctrine and economic theory support no radical changes in course, particularly in the case of mergers and exclusionary practices. But, while the emphasis on cartels should continue, Posner's suggested enforcement policy toward express and tacit collusion must be revised in important ways.

II. CARTELS

Posner argued in *A Program* that the Division's primary concern should be cartels.[17] But he criticized the law's traditional approach to cartels, which focused almost exclusively on explicit communications between competitors to establish a conspiracy. Relying on his earlier, massive study of oligopoly,[18] Posner argued that "what the law is actually punishing is the attempt to fix prices"[19] rather than actual cartelization.

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15. We limit our discussion of regulatory reform to this footnote. Posner's article strongly endorsed the policy, instituted by Assistant Attorney General Donald Turner, of advocacy of competition before regulatory agencies. Posner, *supra* note 1, at 529-31. The Division still strongly supports this policy. *60 Minutes with Anne K. Bingaman, Assistant Attorney General, Antitrust Division, U.S. Department of Justice*, 63 ANTITRUST L.J. 323, 331-36 (1994) [hereinafter *Bingaman*]; 28 C.F.R. § 0.40(b) & (g) (1993); William E. Kovacic, *Built to Last? The Antitrust Legacy of the Reagan Administration*, 35 FED. B. NEWS & J. 244 (1988) (discussing competition advocacy during Reagan administration). On the FTC, see Arnold C. Celnicker, *The Federal Trade Commission's Competition and Consumer Advocacy Program*, 33 ST. LOUIS U. L.J. 379 (1989). The Division has recently promulgated Intellectual Property Guidelines. *1995 Antitrust Guidelines for the Licensing of Intellectual Property, reprinted in* 4 Trade Reg. Rep. (CCH) ¶ 13,132. Moreover, the Division continues to advocate competitive regulatory policies, particularly in the agriculture, transportation, and energy fields. Jade Alice Eaton, *Recent United States Department of Justice Actions in the Electric Utility Industry*, 9 CONN. J. INT'L L. 857 (1994) ("In general, in comments to regulatory commissions, the Department argues that wherever possible, the agency should adopt policies that rely on market mechanisms instead of legal mandate.").

One might argue that, after the deregulation of the Reagan years, there is less need for competitive advocacy because there is a greater awareness of the value of markets in the regulatory agencies. It is certainly not as obvious now as it was to Posner in 1971 that "[t]he most serious cartelization is found in the regulated industries." Posner, *supra* note 1, at 529. Nevertheless, there are politically sensitive areas, such as agriculture, international trade, and defense procurement, in which continuing advocacy of competition is needed. William B. Burnett & William E. Kovacic, *Reform of United States Weapons Acquisition Policy: Competition, Teaming Agreements, and Dual-Sourcing*, 6 YALE J. ON REG. 249, 308 (1989).

16. *See* Timothy Brennan, *Content, Controversy, and Control: Politics and the Evolution of Antitrust Enforcement*, 14 LAW & POL'Y 107, 109 (1992); William E. Kovacic, *Federal Antitrust Enforcement in the Reagan Administration: Two Cheers for the Disappearance of the Large Firm Defendant in Nonmerger Cases*, 12 RES. L. & ECON. 173, 178-82 (1989).

17. Posner, *supra* note 1, at 513, 529.

18. Richard A. Posner, *Oligopoly and the Antitrust Laws: A Suggested Approach*, 21 STAN. L. REV. 1562 (1969).

19. Posner, *supra* note 1, at 514.

Such an approach is only marginally related to a coherent policy aimed at wealth maximization: "Many attempts to fix price may have negligible consequences, while much serious price fixing may escape detection altogether because proof of overt communication is normally required to establish an attempt but such communication may not always be necessary to effectuate price fixing."[20] Consequently, the Division should examine economic evidence to determine which cases are most economically significant, even when evidence of communication is missing. Posner did not argue that the Division should abstain from bringing traditional price-fixing cases, only that it should supplement them with cases based on economic proof, "not only so that the Division can distinguish between the abortive attempt to fix prices and the successful, but also so that it can proceed against violations that cannot be detected or proved by the older methods alone."[21] In this Part, we consider the continuing vitality of Posner's proposals on collusion.

A. Tacit Collusion

In arguing for prosecution of tacit cartels, Posner necessarily rejected the interdependence theory of oligopoly in favor of George Stigler's tacit collusion theory.[22] Under the interdependence theory, oligopolists achieve the benefits of collusion by simply recognizing their mutual self-interest and unilaterally deciding to charge supracompetitive prices;[23] under the tacit collusion theory, noncompetitive prices can only be maintained, absent express agreement, by tacit coordination of price and production decisions.[24] The policy implications of the two theories differ radically: If noncompetitive behavior is simply the result of mutual recognition of self-interest, then imposing penalties or issuing injunctions against purported offenders is ineffectual; only deconcentration of the market will restore competition. If, on the other hand, at least tacit collusion is necessary to coordinate production and prices, then the individual practices that permit the collusion may be enjoined or deterred.

Posner recommended that the Division look for serious collusion using a two-step process. First, it should identify "those markets whose characteristics predispose them toward price fixing."[25] As Posner developed at greater length elsewhere,[26] those characteristics include: few sellers with high market shares; many buyers with low market shares; no good product substitutes; infrequent entry; a homogeneous and standardized product; and a history of collusion. Once such a market is identified, the Division should apply "certain tests in the suspect markets to determine

20. *Id.*
21. *Id.* at 523.
22. *Id.* at 509-10.
23. *See* Joe S. Bain, Industrial Organization 114 (2d ed. 1968).
24. *See* George J. Stigler, *A Theory of Oligopoly*, *in* The Organization of Industry 39 (1968).
25. Posner, *supra* note 1, at 515.
26. Posner, *supra* note 18, at 1569-75 & 1603-04.

whether output was likely to be restricted significantly."[27] In this step, the Division should look for market shares of leading firms that are declining in absolute terms, but stable relative to each other; price discrimination; industry-wide resale price maintenance; exchanges of price information; and some forms of price and output changes.

Posner cautioned that courts may initially have difficulty assimilating the sort of proof he identified. Nevertheless, if the Division adopted the program as a guide to enforcement, economic evidence "would play an increasingly important part in the trial as well as selection of antitrust cases."[28] Posner candidly admitted, however, that:

> I own to considerable doubt, shared by economists with whom I have discussed the matter, that either step is fully practicable in the present state of economic knowledge. But the alternative of continuing to rely exclusively on the attempt approach seems to me even more dismal, and I can see no harm in experimenting with a new approach.[29]

Posner's recommendation, and similar ones, have been given a fair test over the past twenty-five years. During the late 1970s, the Division, under Assistant Attorney General John Shenefield, pursued a number of shared monopoly investigations, based in part on section 2 of the Sherman Act.[30] These investigations, including one of watthour meters recommended by one of us (Page) while he was a trial attorney, drew heavily on Posner's recommendations concerning predisposing characteristics. None of the investigations led to the filing of a case, either civil or criminal.[31]

The FTC also suffered an early defeat.[32] In *Ethyl* the FTC found that the parallel, unilateral adoption of practices like delivered pricing and price protection clauses, in a market that exemplified Posner's predisposing characteristics, constituted an unfair method of competition under section 5 of the FTC Act.[33] The Second Circuit rejected the FTC's conclusion, holding that the FTC must ordinarily show something approach-

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27. Posner, *supra* note 1, at 515. *See also id.* at 516 n.50 (discussion of these factors superseded the discussion in Posner, *supra* note 18, at 1578-83).

28. *Id.* at 524.

29. *Id.* at 501.

30. Antitrust Division Memorandum on Identification and Challenge of Parallel Pricing Practices in Concentrated Industries, [July-Dec.] Antitrust & Trade Reg. Rep. (BNA) No. 874, at F-1 (May 26, 1978) (memorandum from John F. Shenefield, Assistant Attorney General, Antitrust Division); George A. Hay, *Oligopoly, Shared Monopoly, and Antitrust Law*, 67 CORNELL L. REV. 439 (1982).

31. Gregory J. Werden, *Price Fixing and Civil Damages: Setting the Record Straight*, 34 ANTITRUST BULL. 307, 334 n.84 (1989) (in Shenefield's project, all industries with 4-firm concentration of over 40% were identified and many investigated, but "the project just faded away").

32. Ethyl Corp., 101 F.T.C. 425 (1983). Posner and Easterbrook later observed that the industry remained competitive. *See* RICHARD A. POSNER & FRANK H. EASTERBROOK, ANTITRUST: CASES, ECONOMIC NOTES, AND OTHER MATERIALS 41-43 (1984-85 Supp. 1984).

33. *Id.*; *see generally* Donald S. Clark, *Price-Fixing Without Collusion: An Analysis of Facilitating Practices After* Ethyl Corp., 1983 WIS. L. REV. 887.

ing a violation of section 1 of the Sherman Act in order to establish a violation of section 5.[34] It had failed to do so, the court said, because each of the practices was independently beneficial, both to the respondents and to consumers.[35]

After *Ethyl* the idea of pursuing tacit collusion by the use of economic evidence fell into disfavor. More recently, however, the approach has shown some signs of life in more restricted contexts.[36] In 1990, in *Petroleum Products*, the Ninth Circuit found that parallel price signaling, parallel pricing, and direct contacts, in the absence of a valid business justification, could justify an inference of conspiracy.[37] The Division has since obtained a consent decree in a case challenging the exchange of price information through computerized reservation systems,[38] and the FTC has obtained settlements in cases alleging practices that facilitated collusive bidding in the infant formula market.[39] There has also been some renewed interest in challenging the use of price-protection clauses, which were found lawful in *Ethyl*.[40]

Although Posner expressed misgivings about the use of economic evidence in a broad-based challenge to tacit collusion in the American economy, he suggested that it "may be unduly pessimistic" to say that "we simply do not know enough about cartelization" to prosecute them by anything other than traditional conspiracy cases.[41] Experience has shown that Posner's misgivings were well-founded. Tacit collusion is nevertheless collusion and, regardless of the doctrinal label, requires proof of an agreement. Despite the courts' increased sophistication in the use of economic data, proof of an agreement from parallel behavior, without communication between the competitors, remains extraordinarily difficult.[42] The defendants' parallel use of facilitating practices will normally be in-

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34. E.I. du Pont de Nemours & Co. v. FTC, 729 F.2d 128 (2d Cir. 1984).

35. The FTC also issued a complaint under § 5 challenging oligopolistic behavior in the breakfast cereals market, and seeking structural relief, but later abandoned the case under Congressional pressure. *In re* Kellogg Co., 99 F.T.C. 8, 269 (1982) (denying appeal of dismissal and vacating initial decision). Though the FTC's action showed a willingness to challenge oligopoly in the absence of express collusion, Posner would probably not have endorsed the case.

36. *See* Joseph Kattan, *Beyond Facilitating Practices: Price Signaling and Price Protection Clauses in the New Antitrust Environment*, 63 ANTITRUST L.J. 133 (1994).

37. *In re* Coordinated Pretrial Proceedings in Petroleum Prods. Antitrust Litig., 906 F.2d 432, 446-47 (9th Cir. 1990), *cert. denied*, 500 U.S. 959 (1991).

38. United States v. Airline Tariff Publishing Co., 1993-2 Trade Cas. (CCH) ¶ 70, 410 (D.D.C.).

39. Susan S. DeSanti & Ernest A. Nagata, *Competitor Communications: Facilitating Practices or Invitations to Collude? An Application of Theories to Proposed Horizontal Agreements Submitted for Antitrust Review*, 63 ANTITRUST L.J. 93, 100-03 (1994).

40. *See* Kattan, *supra* note 36.

41. Posner, *supra* note 1, at 515.

42. Jonathan B. Baker, *Introduction to Symposium on Tacit Collusion*, 38 ANTITRUST BULL. 1, 2 (1993). On proving price fixing, see William E. Kovacic, *The Identification and Proof of Horizontal Agreements Under the Antitrust Laws*, 38 ANTITRUST BULL. 5 (1993); Randall David Marks, *Can Conspiracy Theory Solve the 'Oligopoly Problem'?*, 45 MD. L. REV. 387 (1986); Hays Gorey, Jr. & Henry A. Einhorn, *The Use and Misuse of Economic Evidence in Horizontal Price-Fixing Cases*, 12 J. CONTEMP. L. 1 (1986).

conclusive, because such practices typically have business justifications. Economic theory ordinarily does not resolve the ambiguity because economists differ about the effects of most facilitating practices.[43] Consequently, courts generally, and understandably, require some evidence of communication between competitors in order to find an illegal agreement.

This is not to say, of course, that Posner's recommendations concerning economic evidence have had no lasting value. As we will see in the following Parts, the recommendations affect the analysis of mergers and exclusionary practices because they help evaluate the probability that a practice will reduce competition. For the same reasons, they affect the interpretation of other horizontal restraints. In those cases in which there is communication, economic evidence can be useful in inferring an agreement on price.[44] In those cases in which there is undoubted joint action, economic evidence can assist in characterizing the agreement.[45] The price-signaling cases we mentioned earlier[46] offer an example of the usefulness of economic evidence in the characterization of horizontal restraints. Posner argued in *A Program* that the information exchange cases of the 1920s were wrongly decided largely because they ignored market characteristics.[47] The exchange program found unlawful in *American Column*[48] was probably benign because the firms involved were numerous and controlled only a small share of the market. The program upheld in *Maple Flooring*,[49] however, was more suspicious because the firms were far fewer, controlled seventy percent of the market, and had a history of explicit price fixing. Any information exchange case brought today would take account of the economic factors Posner identified.

B. Express Collusion and Invitations to Collude

The demise of tacit collusion led the Division to reemphasize traditional criminal price-fixing prosecutions.[50] During the Reagan adminis-

43. Keith J. Crocker & Thomas P. Lyon, *What Do "Facilitating Practices" Facilitate? An Empirical Investigation of Most-Favored-Nation Clauses in Natural Gas Contracts*, 37 J.L. & ECON. 297, 298 (1994); Steven C. Salop, *Practices That (Credibly) Facilitate Oligopoly Co-ordination*, *in* NEW DEVELOPMENTS IN THE ANALYSIS OF MARKET STRUCTURE 265 (Joseph Stiglitz & Frank Mathewson eds., 1986).

44. Constance K. Robinson, Deputy Director of Operations, U.S. Department of Justice, Antitrust Division, *Communications Among Competitors—When Does the Department of Justice Challenge*, Comments delivered at the ABA Antitrust Law Section, Advanced Antitrust Continuing Legal Education Inst. (Oct. 14-15, 1993), *reprinted in* 7 Trade Reg. Rep. (CCH) ¶ 50,119 at 48,949 (Oct. 26, 1993).

45. *See* HERBERT HOVENKAMP, FEDERAL ANTITRUST POLICY: THE LAW OF COMPETITION AND ITS PRACTICE 180 (1994) ("In all cases involving ambiguous practices—that is, practices that are plausibly either competitive or anticompetitive—it is wise to look first at structural evidence.").

46. *See supra* notes 37-40 and accompanying text.

47. Posner, *supra* note 1, at 518 n.58.

48. American Column & Lumber Co. v. United States, 257 U.S. 377 (1921).

49. Maple Flooring Mfrs. Ass'n v. United States, 268 U.S. 563 (1925).

50. Charles F. Rule, *Criminal Enforcement of the Antitrust Laws: Targeting Naked Cartel Restraints*, 57 ANTITRUST L.J. 257, 260-63 (1988); Judy Whalley, *Priorties and Prac-*

tration, the Division brought more cases with greater success than ever before. The Division brought 404 criminal cases between 1980 and 1984, up from 136 in 1975-79, and 92 in 1970-74.[51] Although the number of prosecutions dipped to 296 in 1985-89, it has continued at a high level during the late Bush and Clinton administrations.[52]

This renewed emphasis on criminal price-fixing cases raises another issue. After the experience of the past quarter-century, the Division should not expend substantial resources in the search for tacit collusion. But it does not follow that the Division should devote far greater resources to express price fixing. Posner criticized traditional price-fixing cases for focusing on attempts to fix prices rather than the completed practice. This criticism suggests that at least some express price fixing is unsuccessful and therefore harmless.

In the classic formulation of the per se rule against price fixing, "[i]t is the 'contract, combination . . . or conspiracy, in restraint of trade or commerce' which § 1 of the Act strikes down, whether the concerted activity be wholly nascent or abortive on the one hand, or successful on the other."[53] The justification for this focus lies in the particularly harmful nature of price fixing: "Whatever economic justification particular price-fixing agreements may be thought to have, the law does not permit an inquiry into their reasonableness. They are all banned because of their actual or potential threat to the central nervous system of the economy."[54] Posner argued, however, that firms may mistakenly try to engage in price fixing, even where it is unlikely to be successful, and "such mistakes, even if rare, could account for a large proportion of the small number of price-fixing cases that the enforcement agencies bring."[55] Moreover, the mistakes may not be so rare if the rewards are high enough and the risks of failure or apprehension are low.[56] Finally, bringing cases against unsuccessful price fixing diverts resources from truly harmful practices.[57]

If Posner is correct that attempted price fixing is often inconsequential, then pursuit of all such cases may be unproductive. Posner's argument rests on an empirical assumption about the size of the output restriction in criminal price-fixing cases brought under traditional methods of proof. If trivial cases represent a substantial proportion of the total, then merely increasing the number of indictments could be unjustified. One study

tices—The Antitrust Division's Criminal Enforcement Program and Case Selection, 57 ANTITRUST L.J. 569, 569-72 (1988).

51. *See* Joseph C. Gallo et al., *Criminal Penalties Under the Sherman Act: A Study of Law and Economics*, 16 RES. LAW & ECON. 25, 29 (1994).

52. *See Bingaman, supra* note 15, at 329-30 (84 cases filed in previous year).

53. United States v. Socony-Vacuum Oil Co., 310 U.S. 150, 224 n.59 (1940).

54. *Id.* (emphasis added).

55. Posner, *supra* note 1, at 514.

56. *Id.*

57. *Id.* at 515.

confirms Posner's analysis.[58] It found that almost one-half of the Justice Department's cases were not followed by civil suits for damages, even though the costs of private suits in such cases should be relatively low. The authors explain the low incidence of follow-on suits by suggesting that the Division challenges cartels that are unlikely to succeed in restricting output.

Others disagree that the available data suggest that a substantial percentage of price-fixing prosecutions penalize harmless conduct. Gregory Werden convincingly challenges the statistical basis for the earlier study and points out that follow-on suits may not occur for a host of reasons unrelated to the social harm associated with the offense.[59] He observes that proving price fixing, particularly beyond a reasonable doubt, is extraordinarily difficult, normally requiring the direct testimony of an immunized conspirator.[60] Moreover, although one may estimate the overall harm from price fixing,[61] it is difficult to tell before a case is filed, whether a particular conspiracy caused harm. Given that ineffective horizontal price fixing is a socially useless activity and the Division has the resources to prosecute every criminal price-fixing case that it can prove, it is pointless and harmful to add any further legal requirements to the government's case.[62]

The emphasis on hard-core price fixing under traditional standards seems justified. It is the most concealable of antitrust offenses—one recent study estimates that between thirteen percent and seventeen percent of cartels are detected.[63] If successful in reducing output, it is the most unequivocally harmful antitrust offense and, even if unsuccessful, it is unproductive. Thus, the reallocation of resources to prosecute other offenses is unlikely to increase social welfare. As we have seen, it is unlikely that the pursuit of tacit collusion will be successful; nor would enhanced merger enforcement, which is premised on reducing the mere probability of collusion, be more likely to prevent harmful collusion. It follows that greater deterrent penalties and greater resources devoted to detection of express cartels are appropriate.

58. Howard P. Marvel et al., *Price Fixing and Civil Damages: An Economic Analysis*, 40 STAN. L. REV. 561 (1988).

59. *See* Werden, *supra* note 31, at 314-25 & 325-31 (payments may have been made without litigation; defendants may have been judgment proof (and often are because such defendants are least likely to be deterred by the threat of penalties); the action may have been barred by limitations; suits may have been brought against co-conspirators prosecuted in separate criminal cases; suits may have been brought in state court under state antitrust law; or proof of damage may have been difficult because the defendants pleaded nolo, depriving private plaintiffs of prima facie evidence of harm).

60. *Id.* at 332 n.80. Inexperienced Division lawyers are also often badly outgunned. *See* William W. Horen, *GE Crushes the Trustbusters*, AM. LAW., Jan./Feb. 1995, at 57.

61. One recent study accepted a figure of 10% as the average markup in government price-fixing cases. Gallo et al., *supra* note 51, at 67 n.93.

62. Werden, *supra* note 31, at 334-35.

63. Peter G. Bryant & E. Woodrow Eckard, *Price Fixing: The Probability of Getting Caught*, 48 REV. ECON. & STAT. 531, 531-36 (1991).

If price-fixing agreements that are unsuccessful in raising prices should be prosecuted, what about efforts to fix prices that are unsuccessful even in reaching an agreement? The question is particularly pertinent in light of *American Airlines*,[64] in which the Reagan Antitrust Division successfully argued that a mere offer to fix prices by the president of a major airline was a violation of section 2 of the Sherman Act, where the market shares of the interlocutors were high and entry was difficult. In addition, the Division has obtained mail fraud convictions for the use of the mails in attempts to fix prices[65] and the FTC has challenged naked invitations to collude under section 5 of the FTC Act.[66]

Under one view of Posner's analysis, cases like these are inappropriate because they represent mere attempts to fix prices. Nevertheless, they may be justified under Posner's approach if market conditions suggest that actual collusion is likely. A naked invitation to collude is, after all, a particularly suspicious form of communication between rivals. It may be "a special type of facilitating practice involving signaling. In an oligopolistic market, a solicitation can facilitate tacit collusion by signaling the solicitor's intentions as well as [providing] a benchmark for future pricing or output behavior."[67] Assuming that the market meets sufficiently stringent standards of predisposing characteristics, such cases may be justified.[68]

C. Resale Price Maintenance

Resale price maintenance was illegal per se when Posner wrote *A Program* and still is.[69] Nevertheless, Posner classified the practice as a single-firm abuse,[70] unless it is adopted on an industry-wide basis.[71] In the lat-

64. United States v. American Airlines, 743 F.2d 1114 (5th Cir. 1984), *cert. dismissed*, 474 U.S. 1001 (1985).

65. *See* United States v. Ames Sintering Co., 927 F.2d 232 (6th Cir. 1990); United States v. Bruil, No. 3761A, *summarized in* 6 Trade Reg. Rep. (CCH) ¶ 45,091 (Jan. 17, 1991) (complaint) *and* 7 Trade Reg. Rep. (CCH) ¶ 70,290 (June 30, 1993) (sentencing).

66. DeSanti & Nagata, *supra* note 39, at 103-13; Thomas C. Wilcox, *Beyond the Pale of the Sherman and Clayton Acts: The Federal Trade Commission's "Invitation to Collude" Doctrine as a Deterrent to Violations of the Antitrust Laws*, 39 ANTITRUST BULL. 623 (1994).

67. DeSanti & Nagata, *supra* note 39, at 105. As Phillip Areeda has observed, "a solicitation to raise prices in concert may reduce [rivals'] uncertainty, either by setting a target price or by raising confidence that rivals will follow." 6 PHILLIP AREEDA, ANTITRUST LAW ¶ 1419d, at 117 (1986). *See also* David G. Friedman, *Impossibility, Subjective Probability, and Punishment for Attempts*, 20 J. LEG. STUD. 179 (1991) (arguing that attempts to commit offenses that cannot possibly be completed should be punished on deterrence grounds where the offender is subjectively uncertain whether the offense will succeed).

68. Proof of predisposing characteristics may be necessary on constitutional grounds as well. *See* Henry N. Butler & Larry E. Ribstein, *Corporate Governance Speech and the First Amendment*, 43 KAN. L. REV. 163 (1994).

69. *See, e.g.*, Business Elecs. Corp. v. Sharp Elecs. Corp., 485 U.S. 717, 720, 724 (1988); California Retail Liquor Dealers Ass'n v. Midcal Aluminum, Inc., 445 U.S. 97 (1980). For recent criticism of the current legal framework, see Glen O. Robinson, *Explaining Vertical Agreements: The Colgate Puzzle and Antitrust Method*, 80 VA. L. REV. 577 (1994).

70. Posner, *supra* note 1, at 508 n.17.

71. *Id.* at 520-21.

ter case, it is one of several factors that may suggest tacit horizontal collusion. Under Posner's analysis, then, the Division should ignore simple resale price maintenance, except in the context of collusion, even though the practice is illegal per se. The Division took this advice to heart in the Reagan and Bush administrations. In those years, it prosecuted no resale price maintenance cases and even argued for abandonment of the per se rule.[72] The Clinton administration has signaled a somewhat more activist approach, revoking the Vertical Restraints Guidelines[73] and obtaining at least one consent decree prohibiting the practice.[74]

Renewed enforcement efforts against resale price maintenance could be justified under the logic that "[v]ertical price-fixing is per se illegal. We're going to enforce the law."[75] But such efforts cannot be justified under the criterion that the Division should seek "to maximize the efficiency of antitrust enforcement by discovering and implementing those policies whose net social product is largest."[76] Certainly, economic consensus does not favor renewed enforcement. Although some economists believe that resale price maintenance may reduce welfare,[77] many, perhaps a majority, believe that it is procompetitive except in rare cases.[78] A recent empirical study found that collusion theories were incapable of explaining at least eighty-five percent of the cases of resale price maintenance in the sample and that efficiency-enhancing agency theories were "plausible explanations for virtually all cases."[79] In addition, the inadequacy of private enforcement does not suggest a need for enhanced government action. Although antitrust injury sets limits on the private right to sue for the practice, it does not foreclose suits in those circumstances in which the practice is inefficient.[80]

72. The FTC in the Bush administration did obtain two consent decrees in resale price maintenance cases. *In re* Kreepy Krauly, U.S.A., Inc., Dkt. No. C3354 (Dec. 20, 1991); *In re* Nintendo of Am., Inc., Dkt. No. C3350 (Oct. 14, 1991).

73. The revocation was explained on the grounds "that the Guidelines unduly elevate theory at the expense of factual analysis and reflect a continued resistance to case law that, at this point in our history, is inappropriate." Assistant Attorney General Anne K. Bingaman's Address to ABA Antitrust Section [July-Dec.] Antitrust & Trade Reg. Rep. (BNA) No. 1627, at 251 (Aug. 12, 1993).

74. United States v. Canstar Sports USA, Inc., No. 2-93CV77 (D. Vt. filed Mar. 17, 1993). The FTC has been slightly more active in this area during the Clinton administration. *See* Keds Corp., C-3490 (Apr. 1, 1994); Reebok Int'l Ltd., FTC File No. 921 0117 (May 4, 1995) (proposed consent order accepted and published for comment).

75. *60 Minutes with the Honorable Janet D. Steiger, Chairman, Federal Trade Commission*, 59 ANTITRUST L.J. 3, 20 (1990).

76. Posner, *supra* note 1, at 501.

77. *See, e.g.*, William S. Comanor, *Vertical Price Fixing, Vertical Market Restrictions, and the New Antitrust Policy*, 98 HARV. L. REV. 983 (1985).

78. For recent surveys, see Howard P. Marvel, *The Resale Price Maintenance Controversy: Beyond the Conventional Wisdom*, 63 ANTITRUST L.J. 59 (1994); Roger D. Blair & James M. Fesmire, *The Resale Price Maintenance Policy Dilemma*, 60 S. ECON. J. 1043 (1994).

79. Pauline M. Ippolito, *Resale Price Maintenance: Empirical Evidence from Litigation*, 34 J.L. & ECON. 263, 292 (1991).

80. Atlantic Richfield Co. v. USA Petroleum Co., 495 U.S. 328 (1990); Isaksen v. Vermont Castings, Inc., 825 F.2d 1158, 1165 (7th Cir. 1987), *cert. denied*, 486 U.S. 1005 (1988) ("[t]he prevention of free riding is not, as yet anyway, a defense to a charge of resale price

III. MERGERS

Posner argued in *A Program* that some form of prohibition on horizontal mergers was necessary to prevent firms from evading the prohibition on price fixing by simply combining into a single entity.[81] In his book on antitrust law, published five years later, he argued that such a goal would be the only reason for an antimerger policy, if antitrust law had developed an effective policy against collusion.[82] Given that it has not, however, he suggested that a merger policy could be justified to reduce the likelihood of collusion. Even then, however,

> [s]ince concentration is only one of the factors that predispose a market to collusion, one cannot specify a 'dangerous' level of concentration without knowing a good deal about a particular market; and even then, the theory of collusion is not so well developed that one can say at precisely what point a rising level of concentration will increase the danger of collusive price of a sort difficult to punish directly under the Sherman Act.[83]

He sharply criticized the existing merger doctrine as being preoccupied with levels of concentration that posed no risk of collusion. Nevertheless, he proposed that mergers that either raise four-firm concentration over sixty percent or substantially increase concentration in markets predisposed to collusion should be presumed illegal.[84] He criticized the law's concern with a trend toward concentration,[85] but also rejected an efficiency defense on grounds of practicality.[86] On the issue of market definition, he emphasized the role of elasticities of demand and supply facing the merging firms as the crucial indicia of market power. He rejected the law's concept of submarkets; argued in favor of considering supply-side substitution; and advocated the use of the Herfindahl-Hirshman index (HHI) of market concentration.[87]

Posner's approach has had remarkable success in the Justice Department, particularly in the successive revisions of the Merger Guidelines.[88] Although the Guidelines go beyond Posner's recommendations, it is no exaggeration to say that he could have written major parts of them. First, the Guidelines follow Posner in articulating an economic approach to de-

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maintenance; but neither is being prevented from taking a free ride on another dealer's efforts a form of antitrust injury compensable by a damage award.").

81. Posner, *supra* note 1, at 525.

82. RICHARD A. POSNER, ANTITRUST LAW: AN ECONOMIC PERSPECTIVE 96 (1976).

83. *Id.* at 96-97.

84. *Id.* at 112.

85. *Id.* at 101.

86. *Id.* at 112-13.

87. POSNER, *supra* note 82, at 55-56; Posner, *supra* note 18, at 1602-03.

88. Department of Justice and Federal Trade Commission, Horizontal Merger Guidelines (Apr. 2, 1992) [hereinafter cited as 1992 Guidelines], *reprinted in* 4 Trade Reg. Rep. (CCH) ¶ 13,104; Department of Justice, Merger Guidelines, (June 14, 1984), *reprinted in* 4 Trade Reg. Rep. (CCH) ¶ 13,103 [hereinafter cited as 1984 Guidelines]; Department of Justice, Merger Guidelines, (June 14, 1982), *reprinted in* 4 Trade Reg. Rep. (CCH) ¶ 13,102. *See generally Symposium on the New 1992 Merger Guidelines*, 38 ANTITRUST BULL. 473 (1993).

fining markets. The original 1968 Guidelines did not address this issue. Second, the Guidelines adopt Posner's criteria for evaluating the competitive effects of mergers. Under the Guidelines, a merger is anticompetitive if it increases the likelihood that the merged firm will restrict output either unilaterally or by collusion with other firms.[89] This standard clearly reflects an adoption of the tacit collusion theory of oligopoly and a rejection of the interdependence theory.

But the similarity to Posner's approach extends to the details. Not only do the Guidelines adopt the HHI as their measure of concentration, they largely adopt Posner's recommended thresholds for scrutiny of mergers. For example, they create a safe harbor for mergers in markets with HHI below 1000, as Posner suggested.[90] Moreover, their threshold for stricter scrutiny of mergers is virtually the same as the one proposed by Posner. Posner recommended challenging mergers that increased HHI by more than 40 in markets with an HHI of 2000; the 1992 Guidelines state that mergers that increase HHI by more than 50 in a market with HHI above 1800 "potentially raise significant competitive concerns."[91] The list of factors that the Guidelines proposes for identifying markets in which collusion is likely—stable market shares, standardized pricing, a history of collusion in the market, and so on—bears a strong resemblance to the list proposed by Posner. No where in the Guidelines do we find "submarkets" or a "trend toward concentration," concepts Posner criticized.[92] The Guidelines do, however, recognize an efficiencies defense,[93] which Posner would not have permitted.

Merger enforcement has generally followed the path recommended by Posner and endorsed by the Guidelines. Although the Supreme Court's populist decisions of the 1960s remain nominally good law, the lower courts have recognized that the economic reorientation of antitrust law in the Supreme Court also affected merger standards. Throughout the Reagan years, the Division's merger enforcement litigation efforts fell significantly, by any measure.[94] During the Bush years, the Division brought more cases, although they were decidedly unsuccessful in those that reached the litigation stage.[95] With the advent of the Clinton administra-

89. 1992 Guidelines, *supra* note 88, § 2.0.

90. Posner, *supra* note 18, at 1603; *see* Stephen Calkins, *The New Merger Guidelines and the Herfindahl-Hirschman Index*, 71 CAL. L. REV. 402, 429 (1983).

91. 1992 Guidelines, *supra* note 88, § 1.51(c). The quoted language liberalizes the earlier Guidelines' statement that the Division would likely challenge such mergers. 1984 Guidelines § 3.11(c), *supra* note 88.

92. Indeed, the Guidelines adopt the smallest market principle, thereby repudiating the concept of a relevant submarket. 1992 Guidelines, *supra* note 88, § 1.0.

93. *Id.* § 4. *See generally* Joseph Kattan, Comment, *Efficiencies and Merger Analysis*, 62 ANTITRUST L.J. 513 (1994).

94. *See* Robert Pitofsky, *Proposals for Revised United States Merger Enforcement in a Global Economy*, 81 GEO. L.J. 195, 196 n.4 (1992) (merger enforcement dropped by half in Reagan years); Thomas G. Krattenmaker & Robert Pitofsky, *Antitrust Merger Policy and the Reagan Administration*, 33 ANTITRUST BULL. 211, 213 (1988).

95. The Division lost 5 of 6 cases that went to trial in the three years of Assistant Attorney General James F. Rill's tenure; they did achieve successful settlements of 31

tion and the revision of the Merger Guidelines in 1992, merger enforcement has increased.[96] In the new Administration, a substantial share of the Division's resources will be devoted to mergers, not all of them horizontal.[97] Nevertheless, the basic focus of the Division's merger enforcement efforts on horizontal mergers of firms with high market share remains unchanged.

Enforcement under the revised Guidelines generally represents a sensible response to the ambiguities of the law and economics of mergers. Given the difficulty of challenging tacit collusion directly, it is appropriate to use the criteria of predisposing characteristics to identify mergers that may significantly increase the likelihood of tacit collusion. Moreover, the courts' antitrust injury decisions make it unlikely that private enforcement of section 7 will be sufficient.[98] There have been calls in recent years for still more aggressive merger enforcement, placing greater importance on somewhat lower market shares.[99] It cannot be said, however, that such an effort would be supported by economic consensus. The link between concentration and tacit collusion is no more clearly established now than it was when Posner wrote *A Program*.[100]

The path of enhanced enforcement faces a more substantial obstacle than the lack of a consensus: the federal courts.[101] Although most proposed mergers the Division chooses to challenge are dropped by the parties, the Division has had difficulty in winning the merger cases that have come to trial.[102] In one case, a panel that included two future members of the Supreme Court rejected the Division's case against a merger of

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other cases. *Rill Discusses Accomplishments, Disappointments of Division Tenure*, 63 Antitrust & Trade Reg. Rep. (BNA) 253 (Aug. 27, 1992).

96. In the first half of fiscal year 1994, the Division challenged 14 mergers, and obtained settlements in 13. Most recently, it obtained a settlement of its challenge of Microsoft's acquisition of Intuit, Inc. Lawrence M. Fisher, *Microsoft Scraps a Software Deal that U.S. Opposed*, N.Y. TIMES, May 21, 1995, at A1.

97. *Bingaman*, *supra* note 15, at 327 (Division will enforce 1992 Guidelines, but "our analysis does not stop there since nonhorizontal mergers may have potential anticompetitive effects.").

98. In general, competitors will not be permitted to challenge a merger, unless it poses a significant risk of predatory pricing. Cargill, Inc. v. Monfort of Colorado, Inc., 479 U.S. 104 (1986). Consumers may lack the incentive to sue for injunctive relief and would face significant obstacles to proof of damages.

99. *See, e.g.*, Pitofsky, *supra* note 94, at 200 ("Horizontal mergers ought to be presumptively unlawful where there is a combined market share of fifteen or sixteen percent.").

100. HERBERT HOVENKAMP, ECONOMICS AND FEDERAL ANTITRUST LAW § 11.3, at 301 (1985) (sensing "vague consensus" that 4-firm concentration over 75% promotes collusion). Posner, *supra* note 1, at n.2 (no consensus on level of concentration that facilitates collusion).

101. *See* Thomas M. Jorde and David J. Teece, *Innovation, Cooperation, and Antitrust: Striking the Right Balance*, 4 HIGH TECH. L.J. 1, 45 (1989) (courts "appear to be converging on a definition of safe harbor firms possessing less than a 20-25% market share in a relevant market.").

102. *See generally* Stephen Calkins, *Developments in Merger Litigation: The Government Doesn't Always Win*, 56 ANTITRUST L.J. 855 (1988).

firms with a combined market share exceeding sixty percent.[103] The 1992 revisions of the Guidelines seek to avoid what some perceive as the courts' too ready acceptance of ease-of-entry and power-buyer defenses in merger cases.[104] Beyond such issues, the likelihood that the present judiciary will accept more innovative theories of liability is remote.

IV. SINGLE-FIRM EXCLUSIONARY CONDUCT

Posner defined the category of single-firm abuses by defining their effects and by distinguishing them from cartels:

> An abuse, as used here, is a practice by which a single firm, without entering into any express or implied agreement with competitors, seeks to increase its power over price and output. The firm may enlist the aid of noncompeting firms, such as suppliers or customers, as in exclusive-dealing and tying arrangements, but there must be no combination of competitors.[105]

Posner found that "many economists, including some very distinguished ones, doubt that abuses can, except in very unusual circumstances," restrict output.[106] Clearly, Posner agreed with those economists. He argued that, at one time, monopolies could be created by merger, but that the Sherman Act, at least as interpreted by the Supreme Court after 1920, and section 7 of the Clayton Act cut off the merger route to monopoly.[107] A contemporary monopoly, then, could be the result either of internal growth or of mergers long ago.

According to Posner, only three explanations exist for any persistent monopoly unaided by recent merger: abuses, efficiency, and governmentally imposed entry barriers.[108] Posner believed that because abuses rarely can generate monopoly power, an enduring monopoly had to be the result of efficiency or governmental restrictions. Posner encouraged the Division to do what it could to lessen the anticompetitive effects of governmental restrictions, including those incident to the patent laws, but he recognized that the Division's legal power was limited.[109] "[G]overnmental protection against new entry is not involved," therefore, "the persistence of a monopoly for a long period of time is . . . prima facie the result of efficiency."[110] Posner reasoned that unless "economies

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103. United States v. Baker Hughes Inc., 908 F.2d 981, 984-85 (D.C. Cir. 1990) (Thomas, J., joined by Ginsburg, J.).

104. On the guidelines, see generally, *Symposium on the New 1992 Merger Guidelines*, 38 ANTITRUST BULL. 473 (1993). *See also* Mary Lou Steptoe, *The Power-Buyer Defense in Merger Cases*, 61 ANTITRUST L.J. 493 (1993).

105. Posner, *supra* note 1, at 507-08.

106. *Id.* at 508 (footnotes omitted). The qualification—"except in very unusual circumstances"—though often ignored in discussing Chicago theory, is important, as we discuss later.

107. *Id.* at 527. In 1920, the Court suggested in United States v. United States Steel Corp., 251 U.S. 417 (1920), that a merger creating monopoly power would run afoul of the Sherman Act. Posner, *supra* note 1, at 527 n.88.

108. *Id.* at 528.

109. *Id.* at 528, 529-31.

110. *Id.* at 528.

of scale dictate monopoly or the monopolist consistently and substantially outperforms all rivals," situations in which the monopoly is efficient, a monopoly price will attract new entry and the consequent contraction of market share.[111] The monopoly, therefore, will not persist.

The logic, he conceded, "assumes that the costs of a new entrant will not be markedly higher than the costs of the monopolist."[112] But he found that, given his hypothesis that government entry barriers are absent, the assumption is appropriate. It is a description of an entry barrier in the Stiglerian sense—"a condition that imposes on a new entrant higher long-term costs of operating in the market than are borne by firms already there"[113]—and he suggested that it is usually caused by government action.

Posner noted that an entry barrier in the broader, Bainian sense—"any condition that would delay the immediate entry by new competitors into a market in which firms were charging a price above cost"[114]—may be "an important factor in whether a serious limitation of output is possible."[115] The monopoly protected by such entry barriers would gradually erode, but one could argue that "the antitrust agencies should intervene to produce more quickly the result that would eventually flow from the natural workings of market forces."[116] Posner rejected the claim. The wisdom of the approach depends on "the relative speed of market and legal processes in reducing high concentration to a tolerable level; and empirical study suggests that legal processes do not work significantly faster. They are probably more costly too."[117] Posner remarked that the "use of cumbersome and expensive structural remedies against recently formed monopolies likely to fall of their weight seems especially dubious."[118] Finally, attacking practices that erect Bainian entry barriers is not justified by an economic consensus standard because economists disagree on the effect and importance of various supposed entry-retarding conditions, such as the use of advertising and the need to accumulate capital.[119]

111. *Id.*

112. Posner, *supra* note 1, at 528.

113. *Id.* at 510 (citing GEORGE J. STIGLER, THE ORGANIZATION OF INDUSTRY 67-70 (1968)).

114. Posner, *supra* note 1, at 510 (citing JOE S. BAIN, BARRIERS TO NEW COMPETITION ch. IV (1956)).

115. *Id.* at 510.

116. *Id.* at 528.

117. *Id.* at 528-29, 510-11 (footnotes omitted).

118. *Id.* at 529.

119. Posner, *supra* note 1, at 510-11. Posner discounted the significance of entry barriers in a third sense (attributed to Donald Turner) of "nonrecurring costs of entry," which favor the incumbent. *Id.* at 511-12. Posner found the argument "highly speculative." The most plausible example of a nonrecurring cost of entry is the premium a new entrant must pay to borrow money for a risky venture. But a new entrant would be able profitably to incur any such premium because the incumbent will be charging a monopoly price. A price above cost but below the monopoly level that can forestall entry indefinitely is only possible when the new entrant has permanently higher costs, a condition that Turner assumed away. *Id.* at 512-13.

Since Posner wrote his recommendations, the Division has dramatically reduced its prosecution of monopolization cases. The *IBM* case, which Posner specifically mentioned in *A Program*, eventually became "the Antitrust Division's Vietnam."[120] The case continued for another decade and consumed $17 million in resources before it was finally dropped in abject failure.[121] The FTC's structural case (even more costly than the *IBM* case) against the major petroleum refiners suffered an equally humiliating conclusion in 1979.[122] While the Division successfully obtained a consent decree in 1982 in its case against AT&T, that result and the simultaneous dismissal of *IBM* "seemed to draw the curtain on a century-long cause."[123] The Division's recent case against Microsoft, limited as it is to certain distributional restraints, does not alter this virtual abandonment of the big case.[124]

We survey below some of the major developments in economic analysis that could be used to argue for a renewed attack on exclusionary conduct. Our conclusion is that under the criteria we have specified, the new arguments fail to support a dramatic change in approach.

A. The "Accidental" Monopoly

The idea that enduring monopolies, unprotected by governmental entry barriers, are presumptively the result of efficiency has been a central tenet of Chicago dogma.[125] Soon after Posner published *A Program*, Oliver Williamson countered that a monopoly may result from "historic accident": "[T]he dominant firm may be thrust ahead of its competitors by an unusual sequence of fortuitous events."[126] Then Professor Stephen Breyer agreed, suggesting that a monopolist might "have profited from simple, blind, dumb luck."[127] Such a firm would be one kind of "honest monopolist," a monopolist "whose power rests neither upon legal licenses or natural efficiencies, on the one hand, nor upon predatory or exclusionary practices, on the other."[128]

120. Donald I. Baker, *Government Enforcement of Section Two*, 61 Notre Dame L. Rev. 898, 899 n.13 (1986) (quoting Robert Bork).

121. *See* William E. Kovacic, *Failed Expectations: The Troubled Past and Uncertain Future of the Sherman Act as a Tool for Deconcentration*, 74 Iowa L. Rev. 1105, 1109 n.20 (1989).

122. *Id.*

123. *Id.* at 1109.

124. *See* John E. Lopatka & William H. Page, *Microsoft, Monopolization, and Network Externalities: Some Uses and Abuses of Economic Theory in Antitrust Decisionmaking*, 40 Antitrust Bull. (forthcoming Summer 1995).

125. *See, e.g.*, Robert H. Bork, The Antitrust Paradox 171, 195 (rev. ed. 1993) (no entry barriers exist "that do not reflect superior efficiency and can be erected by firms to inhibit rivals"); Richard A. Posner, *The Chicago School of Antitrust Analysis*, 127 U. Pa. L. Rev. 925, 928 (1979) ("firms cannot in general obtain or enhance monopoly power by unilateral action").

126. Oliver E. Williamson, *Dominant Firms and the Monopoly Problem: Market Failure Considerations*, 85 Harv. L. Rev. 1512, 1518 (1972).

127. Stephen G. Breyer, *The Problem of the Honest Monopolist*, 44 Antitrust L.J. 194, 195 (1975).

128. *Id.* at 194.

Williamson also argued that the supply of business acumen may not be elastic.[129] If the monopolist's management talent is indivisible and superior to its actual and potential rivals, the monopolist should be immune from legal attack.[130] But Williamson believed that special management talent may often produce a significant "organizational innovation" early in a firm's development and that the "firm may then remain dominant despite the lack of any continuing superior acuity."[131] Moreover, management may be "superior" only in the sense that rivals are "uncommonly inept."[132] Williamson argued that monopolies resulting from historic accident and those resulting from prior business acumen or the ineptitude of rivals typically should be attacked. He believed that such a monopolist's market position will often be secure and unlikely to be undone expeditiously by the market and that efficacious remedies are possible. Though he recognized that the speed of legal remedies is a relative concept that depends upon the speed of market forces, he intimated that Posner exaggerated the corrective effect of the market and the likely length of enforcement proceedings.[133]

Although Breyer agreed that the honest monopolist whose power "rests upon luck or the inferior skills of competitors" offers little value to the economy, he did not believe that "courts . . . could ever make the distinction" suggested by Williamson between such a monopolist and one whose power rests upon superior abilities or products.[134] Instead, he suggested that government agencies alone be empowered to attack any persistent, honest monopolist, that only structural remedies be available, and that no action be allowed until the monopolist "has had a reasonable period of time—ten years? fifteen?—to enjoy his well-gotten gains."[135]

Whatever the theoretical possibility of persistent, accidental monopolies or enduring monopolies that owe their existence to ancient exercises of business acumen or to the abiding incompetence of rivals, surely no economic consensus would support Division efforts to eradicate them. Indeed, measuring the competence of a firm against some imagined, absolute standard is a meaningless exercise. Nor are the federal courts, as presently constituted, likely to accept such a theory. Accidental monopolies, even if they exist, would be virtually impossible to identify in litigation and the risk of costly error is high.

B. Raising Rivals' Costs

A more serious challenge to Posner's presumption relates to the category of monopolies that are maintained by abusive conduct, or exclusion-

129. Williamson, *supra* note 126, at 1516.
130. *Id.* at 1517-18.
131. *Id.* at 1517.
132. *Id.*
133. *Id.* at 1514 n.11.
134. Breyer, *supra* note 127, at 197.
135. *Id.* at 200.

ary practices in an economically meaningful sense.[136] This is the category that Chicago analysts acknowledged as a logical possibility but deemed insignificant in practice. During the 1980s, some economists suggested anticompetitive explanations for a host of practices that Chicago theorists had found efficient.[137] Much of this analysis has been expounded under the label "raising rivals' costs."[138] The fundamental idea behind the analysis is that a firm can transact with input suppliers in such a way that the input costs of actual or possible competitors is increased.[139] This can be accomplished either by directly foreclosing supply from rivals or by inducing collusion among the rivals' suppliers. The centerpiece of the methodology is the concept of "exclusionary rights."[140] According to the analysis, a firm can obtain anticompetitive exclusionary rights either by purchasing naked commitments from suppliers not to sell to the firm's competitors[141] or by procuring control over unneeded quantities of the

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136. Bork has complained that courts had used the term "exclusionary" in a tautological sense, to refer to any practices that result in the monopolist's dominance: "[W]hatever a firm does that gives it a market share excludes rivals from that share of the market." BORK, *supra* note 125, at 172. He suggested that exclusionary practices, in a sense relevant to antitrust, are "barriers that do not reflect superior efficiency and can be erected by firms to inhibit rivals." *Id.* at 195. Similarly, Breyer lamented the trend in the courts to expand the notion of exclusionary conduct, such that the concept was weakened and might be distorted to "produce seriously anticompetitive effects in a host of industries." Breyer, *supra* note 127, at 197, 199. He defined exclusionary conduct as "acts that impair the competitive opportunities of rivals without, at the same time, furthering those forms of competition that the antitrust laws encourage." *Id.* at 194. Bork's view, and implicitly Breyer's, was at least ostensibly endorsed by the Supreme Court in *Aspen*: Predatory, or exclusionary, conduct is conduct that tends to "exclude rivals on some basis other than efficiency." Aspen Skiing Co. v. Aspen Highlands Skiing Corp., 472 U.S. 585, 605 (1985) (citing ROBERT H. BORK, THE ANTITRUST PARADOX 138 (1978)).

137. Examples include Phillipe Aghion & Patrick Bolton, *Contracts as a Barrier to Entry*, 77 AM. ECON. REV. 388 (1987); Patrick Bolton & Michael D. Whinston, *The "Foreclosure" Effects of Vertical Mergers*, 147 J. INSTITUTIONAL & THEORETICAL ECON. 207 (1991); David M. Kreps & Robert Wilson, *Reputation and Imperfect Information*, 27 J. ECON. THEORY 253 (1982); Paul Milgrom & John Roberts, *Predation, Reputation, and Entry Deterrence*, 27 J. ECON. THEORY 280 (1982); Janusz A. Ordover et al., *Equilibrium Vertical Foreclosure*, 80 AM. ECON. REV. 127 (1990); Eric B. Rasmusen et al., *Naked Exclusion*, 81 AM. ECON. REV. 1137 (1991).

138. This phrase is commonly attributed to Steven Salop, David Scheffman, and Thomas Krattenmaker. The movement in the 1980s toward emphasizing the importance of cost-raising strategies can be traced to a paper by Salop and Scheffman. Steven C. Salop & David T. Scheffman, *Raising Rivals' Costs*, 73 AM. ECON. REV. 267 (1983). The analysis gained additional stature within the academic antitrust community with the publication of an article by Salop and Krattenmaker. Thomas G. Krattenmaker & Steven C. Salop, *Anticompetitive Exclusion: Raising Rivals' Costs to Achieve Power over Price*, 96 YALE L.J. 209 (1986) [hereinafter *Anticompetitive Exclusion*].

139. *Id.* A good, succinct summary of the analysis is Thomas G. Krattenmaker & Steven C. Salop, *Exclusion and Antitrust*, 11 REGULATION 29 (1987). Another useful summary is Roger Ware, *Understanding Raising Rivals' Costs: A Canadian Perspective*, CANADIAN COMPETITION RECORD 9 (Mar. 1994).

140. Krattenmaker & Salop, *Anticompetitive Exclusion*, *supra* note 138, at 227.

141. *Id.* at 227, 235. Although a naked exclusionary rights agreement is a conceptual possibility, none has been identified in an actual case. Krattenmaker and Salop cite United States v. Aluminum Co. of America, 148 F.2d 416 (2d Cir. 1945), as the only case not involving misuse of government process that mentions a naked exclusionary rights contract. Krattenmaker & Salop, *Anticompetitive Exclusion*, *supra* note 138, at 228. But *Alcoa* involved no such thing. *See* John E. Lopatka & Paul E. Godek, *Another Look at*

input and then denying those units to rivals, a tactic that may involve overbuying or a vertical merger.[142]

One kind of direct foreclosure is said to occur when a firm obtains exclusionary rights from all of the lowest-cost suppliers of an input, so that the firm's rivals are forced to resort to high-cost suppliers.[143] According to Krattenmaker and Salop, "antitrust literati know this as the 'bottleneck' or 'essential facilities' " strategy.[144] Alternatively, a predator engages in the "Real Foreclosure" prong of direct foreclosure when it "acquires an exclusionary right over a representative portion of the supply, withholding that portion from the rivals and thereby driving up the market price for the remainder of the input still available to rivals."[145] Raising rivals' costs by inducing collusion also takes one of two forms: "Cartel Ringmaster," in which the purchaser of the exclusionary right orchestrates cartel-like discriminatory input pricing by suppliers against its rivals;[146] or "Frankenstein Monster," in which the vertical restraint alters the input industry's structure, increasing the probability that the remaining unrestrained suppliers will successfully collude to raise the price charged to the predator's competitors.[147]

A strategy of raising rivals' costs generally injures consumers only if it results in higher prices in the output market.[148] Thus, the affected input must be a significant part of the production mix and its price must increase significantly.[149] The dominant firm may exclude rivals from the market altogether by increasing the price of the input enough so that their production would be unprofitable;[150] instead, rivals might continue to produce but with higher costs, so that the market price of the output, which is determined by the marginal producers, is higher than it would otherwise be.[151] In addition, the restraint must affect all existing and potential rivals.[152] Further, the strategy will only be rational if it is profita-

Alcoa: *Raising Rivals' Costs Does Not Improve the View*, 35 J.L. & ECON. 311, 318-19 (1992).

142. Krattenmaker & Salop, *Anticompetitive Exclusion*, *supra* note 138, at 228, 236-37. Overbuying involves purchasing more of an input from an independent supplier than the firm uses in production. Vertical integration involves the purchase of a supplier followed, perhaps, by a reduction in the amount of the input produced. One might also logically identify an "ancillary exclusionary right" in which the purchaser buys some units of an input from independent suppliers and a promise not to sell other units to the purchaser's competitors.

143. *Id.* at 234.

144. *Id.*

145. *Id.* at 236.

146. *Id.* at 238.

147. Krattenmaker & Salop, *Anticompetitive Exclusion*, *supra* note 138, at 240.

148. The "Cartel Ringmaster" variant of raising-rivals'-costs does not depend upon profits in the output market. Rather, it is essentially a horizontal model, in which input suppliers earn monopoly profits in the input market and share them with the vertically-related "ringmaster" for managing the cartel. *See id.* at 240.

149. *Id.* at 243.

150. *Id.* at 246; Ware, *supra* note 139, at 9.

151. Krattenmaker & Salop, *Anticompetitive Exclusion*, *supra* note 138, at 251; Ware, *supra* note 139, at 9.

152. Krattenmaker & Salop, *Anticompetitive Exclusion*, *supra* note 138, at 243-47.

ble, which requires that the predator's average costs increase less than its rivals' marginal costs increase.[153]

Even skeptical economists have acknowledged that abuses can restrict output "in very unusual circumstances."[154] Indeed, Posner referred to Aaron Director and Edward Levi's "classic formulation" of the Chicago School's skeptical position.[155] That article recognized the possibility of exclusionary conduct in terms strikingly similar to the language popularized by raising-rivals'-costs analysts nearly thirty years later. Thus, Director and Levi noted that a firm with monopoly power might profitably "decide to impose additional costs upon itself for the sake of a restriction" on suppliers or customers "if the effect of it would be to impose greater costs on possible competitors."[156] The major contribution of Salop, Scheffman, Krattenmaker, and other scholars who have pursued their line of reasoning has been to formalize the insight of Director and Levi and to investigate its implications.[157] In doing so, they have argued that what Director and Levi believed to be a "special case"[158] of limited significance is really a broad and expansive category encompassing all of the common vertical restraints.[159]

As raising-rivals'-costs methodology was refined and extended, a barrage of criticism was leveled against it. Some critics complain that, in application, the methodology produces no net gain in antitrust problem solving relative to traditional analysis.[160] Others contend that proponents

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153. Malcolm B. Coate & Andrew N. Kleit, *Exclusion, Collusion, or Confusion?: The Underpinnings of Raising Rivals' Costs*, 16 RES. L. & ECON. 73, 76 (1994). *See generally* Krattenmaker & Salop, *Anticompetitive Exclusion, supra* note 138, at 273 (discussing the profitability of a raising-rivals'-costs strategy).

154. Posner, *supra* note 1, at 508.

155. *Id.* at 508 n.17, *citing* Aaron Director & Edward H. Levi, *Law and the Future: Trade Regulation*, 51 NW. U. L. REV. 281 (1956).

156. Director & Levi, *supra* note 155, at 290.

157. *See* Coate & Kleit, *supra* note 153, at 74 (tracing the development of the idea from Director and Levi through Salop and Scheffman and subsequent authors extending the theory to special case applications). As an example of an implication that later authors discovered, Director and Levi seem to assume that the predator must possess at least some monopoly power in order to pursue a profitable cost-raising strategy. Director & Levi, *supra* note 155, at 290. Modern advocates of the methodology point out that, so long as there are barriers to entry and expansion in the output market, "a firm need not enjoy or acquire traditional market power to gain the ability to price above pre-exclusionary-rights competitive levels." Krattenmaker & Salop, *Anticompetitive Exclusion, supra* note 138, at 251. In theory, of course, the strategy is more likely to be profitable the greater the market share of the predator, for profitability depends in part on the increase in average costs incurred by the predator, and average cost will increase less the larger the output. *See generally id.* at 271, 275.

158. Director & Levi, *supra* note 155, at 290.

159. Krattenmaker and Salop claim that "virtually all antitrust issues not involving collaboration (or merger) among competitors are best analyzed by asking whether they unjustifiably confer on one party the power to raise price by raising rivals' costs." Krattenmaker & Salop, *Anticompetitive Exclusion, supra* note 138, at 231. They make clear that an application of their analysis to "exclusive dealing arrangements, tying contracts, boycotts, refusals to deal, and vertical mergers" can result in a finding that the practice is anticompetitive. *Id.* at 215.

160. *See, e.g.*, Timothy J. Brennan, *Understanding "Raising Rivals' Costs,"* 33 ANTITRUST BULL. 95, 96 (1988); Frank H. Easterbrook, *Allocating Antitrust Decisionmaking*

of the analysis understate the predator's costs of exclusion and hence exaggerate the likely profitability of the strategy.[161] Still others maintain that the proponents do not adequately take account of counterstrategies that rivals are likely to use to defeat the predator's attempt to gain an advantage.[162] Some argue that proponents ignore the potential strategic use of the methodology by firms as a basis for antitrust charges against their more efficient competitors.[163] Moreover, the analysis propounded does not endogenously take efficiencies into account, and its proponents have offered no workable test to distinguish the vertical practice that is on balance efficient from that which is not.[164] More generally, application of the paradigm in practice, as outlined by its advocates, requires quantitative assessments of competitive effects that are beyond the normal capabilities of courts and enforcement agencies.[165]

Another line of criticism has taken the form of detailed studies of antitrust cases. Proponents of raising-rivals'-costs purport to explain most of the prominent exclusion cases in the annals of antitrust in terms of the strategy. But the proffered anticompetitive explanations for the principal ones have been challenged. For example, *United States v. Terminal Railroad Ass'n*[166] involved a group of railroads' acquisition of exclusive access to bridges over the Mississippi River at St. Louis. Raising-rivals'-costs disciples claim that the action was taken to allow the railroads to charge their competitors a higher price for access than they themselves incurred;[167] critics counter that the railroads simply acquired a vertically-related monopoly and, as standard economic analysis would predict, charged rivals the same price they charged themselves.[168] *Klor's Inc. v. Broadway-Hale Stores, Inc.*[169] involved alleged agreements between a department store and several appliance manufacturers not to sell or to sell only at discriminatorily high prices to a nearby retailer. Proponents argue that the store was attempting to harm its rival either by directly foreclosing supply or by orchestrating a supplier's cartel;[170] critics respond

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Tasks, 76 GEO. L.J. 305, 314-16 (1987); Wesley J. Liebeler, *Exclusion and Efficiency*, 11 REGULATION 34, 34, 36-37 (1987).

161. *See, e.g.*, Coate & Kleit, *supra* note 153, at 82.

162. *See, e.g.*, Donald J. Boudreaux, *Turning Back the Antitrust Clock: Nonprice Predation in Theory and Practice*, 13 REGULATION 45, 49 (1990).

163. *See, e.g.*, Edward A. Snyder & Thomas E. Kauper, *Misuse of the Antitrust Laws: The Competitor Plaintiff*, 90 MICH. L. REV. 551 (1991); *Antitrust in New Zealand: The Case for Reform* 36 (New Zealand Business Roundtable, Sept. 1988).

164. *See* Liebeler, *supra* note 160, at 37.

165. *See* Stephen Calkins, *Comments on Presentation of Steven C. Salop*, 56 ANTITRUST L.J. 65, 68 (1987). For a sense of the quantitative complexity of the proposed application of the methodology, see Krattenmaker & Salop, *Anticompetitive Exclusion, supra* note 138, at 264-65, 281.

166. 224 U.S. 383 (1912).

167. Krattenmaker & Salop, *Anticompetitive Exclusion, supra* note 138, at 234.

168. David Reiffen & Andrew N. Kleit, Terminal Railroad *Revisited: Foreclosure of an Essential Facility or Simple Horizontal Monopoly?*, 33 J.L. & ECON. 419, 437 (1990).

169. 359 U.S. 207 (1959).

170. Krattenmaker & Salop, *Anticompetitive Exclusion, supra* note 138, at 241, 241 n.106.

that the arrangements were more likely used to prevent the rival from free riding on the store's promotional investments.[171] In *United States v. Aluminum Co. of America*[172] Alcoa procured sufficient electric power and bauxite to produce virtually all of the aluminum in the United States. Proponents contend that Alcoa excluded rivals by directly foreclosing them from the supply of the two necessary inputs and perhaps by inducing collusion among suppliers;[173] critics reply that Alcoa used all of the inputs it purchased and in any event did not control enough of the supplies to make foreclosure plausible.[174] In *United States v. United Shoe Machine Corp.*[175] the defendant supplied shoe machinery only under long-term leases. Proponents charge that the leasing policy was designed to deter entry into the industry;[176] critics respond that leasing assured quality and fostered the provision of services and information.[177] In *Lorain Journal Co. v. United States*[178] a newspaper refused to allow advertisers to advertise concurrently over the local radio station. Proponents call it a "classic case of monopolization by exclusion of competitors"[179] and contend that "no one offers any efficiency justification" for the newspaper's conduct;[180] critics now demonstrate that the newspaper may have been attempting to induce merchants to use the efficient mix of different kinds of advertising.[181]

As a foundation of a public enforcement policy, raising-rivals'-costs suffers from another defect. There ought to be no shortage in supply of private plaintiffs. Disadvantaged rivals would likely be the first to discover exclusionary tactics, and they would easily meet both antitrust standing and injury requirements. Excluded potential competitors could also sue, though they might have a difficult time proving that they would have entered the market but for the cost-raising tactics of the incumbent. The risk to sound antitrust policy from private suits based on raising-rivals'-costs analysis is that they will encompass challenges to practices that are really efficient, for the lure of treble damages is strong. Indeed, Edward Snyder and Thomas Kauper believe the risk is so great that they would abolish competitors' suits and replace them with a form of *parens patriae* action.[182] This view underestimates judicial skepticism of innovative economic theories and the willingness of courts to block, in part

171. Brennan, *supra* note 160, at 100 n.11; Coate & Kleit, *supra* note 153, at 87-88.
172. 148 F.2d 416 (2d Cir. 1945).
173. Krattenmaker & Salop, *Anticompetitive Exclusion*, *supra* note 138, at 236-37, 241 n.106.
174. Lopatka & Godek, *supra* note 141, at 315-24.
175. 110 F. Supp. 295 (D. Mass. 1953), *aff'd*, 347 U.S. 521 (1954).
176. *See* Krattenmaker & Salop, *Anticompetitive Exclusion*, *supra* note 138, at 218.
177. Scott E. Masten & Edward A. Snyder, United States versus United Shoe Machinery Corporation: *On the Merits*, 36 J.L. & ECON. 33, 35 (1993).
178. 342 U.S. 143 (1951).
179. Krattenmaker & Salop, *Anticompetitive Exclusion*, *supra* note 138, at 218.
180. Rasmusen et al., *supra* note 137, at 1137.
181. John E. Lopatka & Andrew N. Kleit, *The Mystery of* Lorain Journal *and the Quest for Foreclosure in Antitrust*, 73 TEX. L. REV. 1255 (1995).
182. Snyder & Kauper, *supra* note 163.

through application of the antitrust injury doctrine, spurious private competitor claims.[183] In any event, though, the chance that a victim will stoically endure a truly anticompetitive practice that can be couched in raising-rivals'-costs terminology is remote.

Advocates of raising-rivals'-costs methodology have not been oblivious to the criticisms of the analysis, and they have attempted to respond to some of them.[184] They have not replied to all, however, and their responses have not been wholly persuasive. A survey of the intellectual landscape discloses no consensus that raising-rivals'-costs methodology should be used by the Division to launch a wide-ranging campaign against exclusionary practices. Malcolm Coate and Andrew Kleit, for example, conclude tersely, "[I]t may well be welfare enhancing simply not to use raising rivals' costs as a general antitrust enforcement strategy."[185] Even a sympathetic critic, Roger Ware, observes, "[i]t is fair to say in summary that more study is needed on the overall efficiency effects of [raising-rivals'-costs] practices before a clear enforcement consensus emerges."[186] The academic controversy was not lost on former Division chief Charles Rule. He dismissed the analysis, commenting:

> In fact, this school of thought should be known as 'raising clients' costs.' It often describes nothing but discredited theories of vertical foreclosure that misdirect attention from the relevant horizontal effect of a practice. . . . [R]aising rivals' costs has nothing to add to existing antitrust doctrine. Certainly, the questionable theories cannot support heightened intervention in private market transactions to combat perceived predatory conduct.[187]

At most, a consensus of economic thinking could support an enforcement policy that attacked the special case, if it could be identified without the use of exorbitant resources, in which a private action is unlikely, the structural characteristics of the markets are conducive to successful predation, the conduct of the dominant firm has an obvious potential to injure rivals seriously, and no efficiency justifications are plausible.

Even if there were more scholarly support for the raising rivals'-costs-analysis, there would remain an insurmountable obstacle to basing an enforcement program on it: The federal courts have virtually ignored the theory for a decade while it has been hotly debated in the scholarly literature. The term "raising-rivals'-costs" appears in 186 separate publications in the Westlaw "Journals and Law Reviews" database, but it appears in

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183. *See* William H. Page & Roger D. Blair, *Controlling the Competitor Plaintiff in Antitrust Litigation*, 91 MICH. L. REV. 111, 121-23 (1992).

184. *See, e.g.*, Krattenmaker & Salop, *Anticompetitive Exclusion*, *supra* note 138, at 266-82.

185. Coate & Kleit, *supra* note 153, at 89.

186. Ware, *supra* note 139, at 13. Ware describes himself as "a contributor to the literature on strategic behaviour." *Id.* at 9.

187. Charles F. Rule, *Claims of Predation in a Competitive Marketplace: When Is an Antitrust Response Appropriate?*, Remarks by the Assistant Attorney General, Antitrust Division, United States Department of Justice, Before the 1988 Annual Meeting of the American Bar Ass'n (Aug. 9, 1988).

only four cases in the Westlaw "Allfeds" database, and in none of these four was it the basis for liability.[188] The four references include, of course, judicial citations to the most prominent article advocating the concept,[189] an article cited scores of times in the law review literature. Admittedly, courts normally resist new theories. Indeed, the federal courts were impervious to the Chicago theories for years after they were initially published. But the present judicial outlook counsels against a major change in enforcement policy.

C. Network Externalities

Another possible source of novel theories of exclusion is the burgeoning literature on network externalities, or the economics of systems.[190] This literature has gained prominence in the recent litigation surrounding the Division's consent decree in its monopolization suit against Microsoft Corporation.[191] All sides in that litigation agree that the relevant market is a classic illustration of network externalities and that this characteristic of the market has important antitrust implications.[192]

A network arises when "the utility that a user derives from consumption of [a] good increases with the number of other agents consuming the good."[193] The value of membership in a telecommunications network, for example, "is positively affected when another user joins and enlarges the network."[194] Such a network exhibits "direct" network externalities. "Indirect" network externalities arise "where complementary goods become more plentiful and lower in price as the number of users of the

188. *See* National Org. for Women, Inc. v. Scheidler, 968 F.2d 612 (7th Cir. 1992); Premier Elec. Constr. Co. v. National Elec. Contractors Ass'n, Inc., 814 F.2d 358 (7th Cir. 1987); Ball Memorial Hosp. v. Mutual Hosp. Ins., Inc., 784 F.2d 1325 (7th Cir. 1986); Viacom Int'l, Inc. v. Tele-Communications, Inc., No. 93 Civ. 6658 (LAP), 1994 U.S. Dist. LEXIS 14522 (S.D.N.Y. 1994).

189. Krattenmaker & Salop, *Anticompetitive Exclusion*, *supra* note 138.

190. Contributions to the literature include Stanley M. Besen & Leland L. Johnson, Compatibility Standards, Competition, and Innovation in the Broadcasting Industry (1986); Paul A. David, *Clio and the Economics of QWERTY*, 75 Am. Econ. Rev. 332 (May 1985); Nicholas Economides, *Desirability of Compatibility in the Absence of Network Externalities*, 79 Am. Econ. Rev. 1165 (Dec. 1988); Nicholas Economides & Steven Salop, *Competition and Integration Among Complements, and Network Market Structure*, 40 J. Indus. Econ. 105 (1992); Joseph Farrell & Garth Saloner, *Installed Base and Compatibility: Innovation, Product Preannouncements, and Predation*, 76 Am. Econ. Rev. 940 (Dec. 1986) [hereinafter *Installed Base*]; Joseph Farrell & Garth Saloner, *Standardization, Compatibility, and Innovation*, 16 Rand J. Econ. 70 (1985); Michael L. Katz & Carl Shapiro, *Network Externalities, Competition, and Compatibility*, 75 Am. Econ. Rev. 424 (June 1985) [hereinafter *Network Externalities*]; Michael L. Katz & Carl Shapiro, *Product Introduction with Network Externalities*, 40 J. Indus. Econ. 55 (1992); Michael L. Katz & Carl Shapiro, *Technology Adoption in the Presence of Network Externalities*, 94 J. Pol. Econ. 822 (1986).

191. United States v. Microsoft Corp., 159 F.R.D. 318 (D.D.C.), *rev'd*, 1995-1 Trade Cas. (CCH) ¶ 71,027 (D.C. Cir. 1995).

192. *See* Lopatka & Page, *supra* note 124.

193. Katz & Shapiro, *Network Externalities*, *supra* note 190.

194. Michael L. Katz & Carl Shapiro, *Systems Competition and Network Effects*, 8 J. Econ. Persp. 93, 94 (1994) [hereinafter *Systems Competition*].

good increases."[195] Thus, economies of scale exist in the production of the complementary goods.[196] In the "hardware/software" paradigm, for example, the prices of computer programs decline and the varieties increase as computer users proliferate. Of course, as software becomes cheaper or more plentiful, the demand for the hardware increases. The two are used together to perform some function, and as the effective price of one component drops, the price of the system drops.

Markets exhibiting network externalities can fail, in that the unregulated outcome produces less total surplus than is possible. Indeed, recognizing that "externality" is commonly understood to denote market failure. S.J. Liebowitz and Stephen Margolis define network *effect* as the "circumstance in which the net value of an action . . . is affected by the number of agents taking equivalent actions;" they limit network *externality* to the "specific kind of network effect in which the equilibrium exhibits unexploited gains from trade regarding network participation," a definition that implies market failure.[197] Their definitions have the advantage of emphasizing that markets involving complementary goods are ubiquitous in the economy, yet no one would argue that all these markets fail.

The market failure associated with true network externalities is related to the idea of user expectations. The decision to join a network, and implicitly the amount a user is willing to pay to join a network, is affected by his expectations about the eventual size of the network.[198] For example, a person is likely to pay more for a telephone the greater the number of other telephone users with whom he expects to be able to communicate; he may pay more for a computer the cheaper and more plentiful he expects software to be. Because expectations pertain to future events, and information about the future is imperfect, they almost always imply risk.

Expectations play the most obvious role in markets where networks compete. A consumer who is choosing between an Apple computer and an IBM-compatible computer, for example, may base her decision in part on her expectations about the future price and availability of software written for each. This may induce her to select the network she expects to be larger. She may also prefer the system that she anticipates will be more popular so that she can easily exchange files with the larger pool of users. When incompatible networks compete, the market may fail in various ways. Users, who have invested in system-specific complementary products and information, may stick with a network even when switching

195. S.J. Liebowitz & Stephen E. Margolis, *Network Externality: An Uncommon Tragedy*, 8 J. ECON. PERSP. 133, 135 (Spring 1994) [hereinafter *Network Externality*].

196. *See* Katz & Shapiro, *Systems Competition*, *supra* note 194, at 94.

197. S.J. Liebowitz & Stephen E. Margolis, *Network Externality*, *supra* note 195, at 135. Katz and Shapiro appear to recognize that not all network effects are properly characterized as network externalities, though they do not offer an explicit distinction between the two concepts. Katz & Shapiro, *Systems Competition*, *supra* note 194, at 95-100.

198. *See id.* at 93-94. Stanley M. Besen & Joseph Farrell, *Choosing How to Compete: Strategies and Tactics in Standardization*, 8 J. ECON. PERSP. 117, 118 (Spring 1994) [hereinafter *Choosing How*].

to a new and improved technology would increase total economic surplus. Such a market is said to exhibit "excess inertia."[199] On the other hand, when a new system is offered, users may hop on the "bandwagon" and adopt the new system in order to avoid being "stranded" in an obsolete technology with a dwindling flow of complementary products. If surplus would be maximized by retaining the old standard, the market is said to exhibit "excess momentum" or "insufficient friction."[200] In theory, a market may also fail when some but not all users switch to a new technology: where social welfare would have been maximized had no users switched, the market exhibits "inefficient adoption;" where social welfare would have been maximized had all users switched, it exhibits "inadequate compatibility."[201]

A feature commonly attributed to network markets is that they are prone to "tipping," or "the tendency of one system to pull away from its rivals in popularity once it has gained an initial edge."[202] The implication is that each network sponsor has a strong incentive to take actions that will give it that initial edge. Once a market is tipped, some models suggest that the winning technology will persist, even if it is inferior and is later challenged by better networks.[203]

Because it predicts that a single technology may defeat competing standards and come to dominate a market, network externalities theory is a fertile ground for claims of monopolization.[204] Critics, however, have identified a number of problems with the theory that impair its utility as an antitrust policy guide. For example, if a single network will survive because of economies of scale,[205] the market is a natural monopoly, a

199. Katz & Shapiro, *Systems Competition*, *supra* note 194, at 108.

200. *Id.*; Farrell & Saloner, *Installed Base*, *supra* note 190, at 942.

201. Stanley M. Besen & Leland L. Johnson, *Compatibility Standards, Competition, and Innovation in the Broadcasting Industry*, Rand Pub. No. R-3453-NSF 24-26 (1986). *See also* Michael G. Vita & Charissa P. Wellford, *Regulating the Electromagnetic Environment: Alternative Approaches to Policy*, *in* SCIENCE, TECHNOLOGY, AND THE ENVIRONMENT 235 (James R. Fleming & Henry A. Gemery eds., 1994).

202. Katz & Shapiro, *Systems Competition*, *supra* note 194, at 106; *see also* Besen & Farrell, *Choosing How*, *supra* note 198, at 118.

203. *See, e.g.*, Liebowitz & Margolis, *Network Externality*, *supra* note 195, at 145 (noting that a "clear implication of the network externalities literature is that often we cannot move from one technology to a superior one").

204. Network sponsors need not compete to become the sole surviving technology. They may, for example, choose instead to adopt a compatible standard. *See generally* Besen & Farrell, *Choosing How*, *supra* note 198, at 124-29; Katz & Shapiro, *Systems Competition*, *supra* note 194, at 109-112. An agreement among competitors to use a common standard raises issues of collusion under § 1 of the Sherman Act.

205. This is not to say that economies of scale will always be so large that a single network will inevitably result. Indeed, models that rest upon the assumption of inexhaustible scale economies have been criticized on the ground that when the product is differentiated—when different consumers value different attributes of networks—or when consumer demands are fully satisfied with a network consisting of only a subset of all potential users, more than one network may coexist. *See* S.J. Liebowitz & Stephen E. Margolis, *Are Network Externalities a New Source of Market Failure?*, RES. LAW & ECON. (forthcoming 1995) [hereinafter *Market Failure*]. *See also* Katz & Shapiro, *Systems Competition*, *supra* note 194, at 106 (noting that "[c]onsumer heterogeneity and product differentiation tend to limit tipping and sustain multiple networks"). Our point is simply that when

condition long recognized as a market failure. To present such a well-understood condition in language of network externalities as something new and unfamiliar risks confusion and policy mistakes.[206] In such a case, one network will inevitably prevail, and antitrust is ill-suited either to determine which system should win or to regulate the victor. A monopolization case, brought after a network has achieved market dominance on the ground that it is inferior to a vanquished system, would require an intractable inquiry into the relative merits of the competing networks. Network externalities theory thus cannot tell us whether a market outcome is efficient or inefficient.[207]

Network externalities theory also cannot identify specific "exclusionary" conduct by which a firm acquired or maintained monopoly power—a critical question in any monopolization case. According to some of the models, markets can be tipped by trivial events.[208] Many believe, for example, that Microsoft's MS-DOS operating system achieved its present dominance because IBM selected it long ago for the IBM PC.[209] If historic accident determines market outcomes, none of Microsoft's subsequent competitive acts contributed to its dominant position.

The importance of historic accident has rightly been questioned.[210] Yet even if inferior technologies do not regularly persist because of happenstance, many seemingly exclusionary practices that network sponsors adopt may be legitimate. Network sponsors may adopt these practices precisely to overcome the potential inefficiencies associated with networks. The literature suggests that firms engage in "penetration pricing" to overcome network externalities—charging a low initial price that is recouped over the life of the product by charges for related goods.[211] The firm engaging in the practice may earn no supra-competitive profits, for the quasi-rents earned in later periods may offset losses incurred in early periods.[212] But such a firm may attract a charge of predatory pricing. Other practices designed to internalize network externalities may simi-

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a market can support only one network, one network will emerge, and the resulting problem for antitrust policy is the familiar one of natural monopoly.

206. *See* Liebowitz & Margolis, *Market Failure*, *supra* note 205.

207. *See generally* Vita & Wellford, *supra* note 201, at 236-37.

208. W. Brian Arthur, *Competing Technologies, Increasing Returns, and Lock-In by Historical Events*, 99 ECON. J. 116 (1989); David, *supra* note 190. To be more precise, this assertion emerges from the literature of path dependency, in which the concept of network externality plays a major role. *See* Liebowitz and Margolis, *Market Failure*, *supra* note 205; S.J. Liebowitz & Stephen E. Margolis, *Path Dependence, Lock-In, and History*, 11 J.L. ECON. & ORGANIZATION 205 (1995) [hereinafter *Path Dependence*]. This idea that historic accident can lead to an enduring monopoly recalls Williamson's notion of accidental monopoly. *See supra*, Part IV.A. The path dependency literature formalizes the idea.

209. *See, e.g.*, Besen & Farrell, *Choosing How*, *supra* note 198, at 118.

210. *See, e.g.*, Liebowitz & Margolis, *Path Dependence*, *supra* note 208.

211. Michael Katz and Carl Shapiro explain that: By selling hardware below cost early on, the network sponsor is stimulating the demand for software, which may lead to a lower price of software if software is produced according to economies of scale or if the elasticity of demand for software is higher for marginal consumers than for the average hardware consumer. Katz & Shapiro, *Systems Competition*, *supra* note 194, at 104. *See also* Besen & Farrell, *Choosing How*, *supra* note 198, at 122.

212. *See* Katz & Shapiro, *Systems Competition*, *supra* note 194, at 107.

larly be attacked as exclusionary. For example, to allay consumers' concerns that a new network will not grow large enough to generate adequate software, a hardware manufacturer may vertically integrate into the production of software[213] or enter into exclusive contracts with software vendors.[214]

Some economists have condemned practices by which a network sponsor may attempt to tip a market in its favor and then rely upon excess inertia to earn supra-competitive profits. Thus, a firm may engage in "puffery"—claiming that its technology is superior to that of rivals and exaggerating the popularity of its products to convince consumers that its standard will ultimately prevail.[215] Historically, puffery has not been the stuff of antitrust law.[216] Or, a firm might truthfully announce that a new product will become available in order to discourage existing customers from switching to another supplier or to encourage those intending to buy soon to wait. Joseph Farrell and Garth Saloner claim that the preannouncement "can sometimes secure the success of a new technology that is socially not worth adopting, and that would not have been adopted absent the preannouncement."[217] Such conduct could be anticompetitive. Yet providing consumers with information they deem relevant obviously has the capacity to increase surplus, and no workable test has been offered to identify inefficient product preannouncements. For that reason, Janusz Ordover and Robert Willig conclude, "[A]ny timing of a product preannouncement should be presumed legal. The diversity of considerations that underlie the decision to predisclose the new product make it impossible to fashion an implementable test for anticompetitive product preannouncements."[218]

What all of this suggests is that the models of network externalities have not generated methods of identifying exclusionary conduct in practice. But beyond this, the very foundations of the literature have been challenged. We have already alluded to some of these criticisms. The literature confuses network externalities and network effects, thereby detecting market failures in arrangements that are ubiquitous in the economy; it purports to take a familiar problem like natural monopoly and present it as something new and different; and it often assumes that only one network can survive, when in fact several can co-exist. Other criticisms have been made. For example, what some proponents describe as

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213. *Id.* at 101-103, 107.

214. *Id.* at 107.

215. *See* Besen & Farrell, *Choosing How*, *supra* note 198, at 122; *Katz & Shapiro, Systems Competition*, *supra* note 194, at 107.

216. It is more appropriately a matter for tort or consumer protection law. *See* GEORGE J. ALEXANDER, COMMERCIAL TORTS 142-44 (2d ed. 1988).

217. Farrell & Saloner, *Installed Base*, *supra* note 190, at 942.

218. Janusz A. Ordover & Robert D. Willig, *An Economic Definition of Predation: Pricing and Product Innovation*, 91 YALE L.J. 8, 53 (1981). Ordover and Willig, however, argue that product innovation in the context of "systems rivalry" can be predatory, that predatory innovation can be identified in practice, and that it should be attacked. *Id.* at 9, 22-52. Needless to say, innovation typically benefits consumers and there is no consensus that predatory innovation can be isolated in court.

indirect network externalities are in fact pecuniary externalities, which tend to ensure that the price system produces efficient outcomes.[219]

Perhaps the most telling criticism has been empirical. Exponents of network externalities theory have pointed to several instances in which a supposedly inferior technology was adopted and survived because of network externalities. The standard typewriter keyboard, known as QWERTY,[220] the VHS videotaping format,[221] and monophonic AM broadcasting[222] all triumphed over purportedly superior alternatives. Critics have questioned all of these cases, showing that the prevailing technologies were not meaningfully inferior and offering efficiency-enhancing explanations for the market results.[223] Surveying the claimed empirical demonstrations of network externalities, Liebowitz and Margolis conclude, "[w]e are aware of *no* compelling examples of markets failing in the sense that the 'wrong' choice of network, among feasible alternatives, was made."[224] Of course, casual observation also tends to cast doubt on the claim that network externalities routinely thwart movement to better technologies, "from horses and buggies to automobiles, from typewriters to computers, from mail to fax."[225] Liebowitz and Margolis colorfully call the idea that superior technologies can seldom displace existing ones the "Chicken Little view of market transitions."[226] They caution, "[T]he fact that current economic models of transition indicate that worthwhile transitions may not occur is not sufficient reason to abandon the presumption that they usually do occur."[227]

Despite the conundrums of the literature, the Supreme Court gave some impetus to use of the network externalities concept in antitrust cases in *Eastman Kodak Co. v. Image Technical Services, Inc.*[228] The Court held that an equipment manufacturer, even though it had no monopoly power in that market, could be liable for both a tying violation and monopolization by requiring consumers to purchase repair services from it as a condition of obtaining distinctive replacement parts.[229] The Court did not use the language of network externalities, but one could easily describe the system of durable equipment, repair services, and

219. Liebowitz & Margolis, *Network Externality*, *supra* note 195, at 137.
220. David, *supra* note 190.
221. *See* W. Brian Arthur, *Positive Feedbacks in the Economy*, 262 SCI. AM. 92 (1990).
222. *See* Besen & Johnson, *supra* note 201.
223. *See, e.g.*, S.J. Liebowitz & Stephen E. Margolis, *The Fable of the Keys*, 33 J.L. & ECON. 1 (1990) (QWERTY keyboard comparable in functionality to Dvorak keyboard). On VHS and Beta, see Liebowitz & Margolis, *Path Dependence*, *supra* note 208; S.J. Liebowitz & Stephen Margolis, *Market Processes and the Selection of Standards* 4-5 (working paper) (Mar. 18, 1992); B.C. Klopfenstein, *The Diffusion of the VCR in the United States*, *in* THE VCR AGE 28 (Mark R. Levy ed., 1989). On AM stereo, see Vita & Wellford, *supra* note 201, at 238.
224. Liebowitz & Margolis, *Network Externality*, *supra* note 195, at 146 (emphasis in original).
225. *Id.*
226. *Id.* at 145.
227. *Id.* at 146.
228. 504 U.S. 451 (1992).
229. *Id.* at 477-79.

parts as an indirect network competing with alternative systems for market dominance.[230] The Court stressed that consumers were locked-in to a brand of equipment once they purchased a machine and that the costs of determining the prices of aftermarket services and products at the time of equipment purchase were high.[231] Of course, the idea that consumers cannot costlessly switch between networks and that they form crucial expectations about the future based on imperfect information are important features of network externalities theory.

The United States, in its amicus brief, argued that an equipment manufacturer in a competitive market could probably not extract monopoly profits in aftermarkets,[232] thereby suggesting a skepticism of the foundations of network externalities theory. The Division under the Clinton administration, however, has embraced network externalities theory in filing a complaint against Microsoft for monopolizing the market in personal computer operating systems, although it limited the scope of its complaint to restraints in the Microsoft's distribution contracts.[233] And it resisted modification of consent decrees that prohibited Kodak, a camera and film manufacturer, from making private label film and from selling film with photo processing costs included.[234] One could describe a system of camera and film and a system of film and processing as networks exhibiting externalities.

The ultimate question for purposes of the present inquiry is whether a consensus of economic thought supports the use of network externalities theory as a basis of antitrust enforcement. Manifestly, no such consensus exists. Katz and Shapiro, two of the most prominent contributors to the literature, observe, "since market outcomes may be inefficient, it is theoretically possible for government intervention to improve market performance. But there are several issues that must be addressed before concluding that government intervention is warranted in practice."[235] They conclude, "[w]e are far from having a general theory of when government intervention is preferable to the unregulated market out-

230. Katz and Shapiro specifically refer to "durable equipment and repair services" as an example of the hardware/software paradigm, or an indirect network. Katz & Shapiro, *Systems Competition*, *supra* note 194, at 94. Shapiro and Teece provide an explicit network analysis of *Kodak*, calling the case "the Court's most recent foray into the law and economics of *systems*. . . ." Carl Shapiro & David J. Teece, *Systems Competition and Aftermarkets: An Economic Analysis of* Kodak, 39 ANTITRUST BULL. 135, 136 (1994) (emphasis in original). *See also* Joseph Kattan, *Market Power in the Presence of an Installed Base*, 62 ANTITRUST L.J. 1 (1993).

231. *Kodak*, 112 S. Ct. at 472-74.

232. *See id.* at 470 n.16. In an amicus curiae brief, the government argued that any increase in the price of parts or service would have to be reflected in a decrease in the price of machines.

233. *See* Lopatka & Page, *supra* note 124. The D.C. Circuit recently reversed the district court and ordered that the proposed consent decree be approved. United States v. Microsoft Corp., 159 F.R.D. 318 (D.C.C.), *rev'd*, 1995-1 Trade Cas. (CCH) ¶ 71,027 (D.C. Cir. 1995).

234. *See* United States v. Eastman Kodak Co., 853 F. Supp. 1454 (W.D.N.Y. 1994).

235. Katz & Shapiro, *Systems Competition*, *supra* note 194, at 112.

come."[236] Nobel laureate Kenneth Arrow, in supporting a proposed consent agreement in *Microsoft,* largely agreed with a description of network externalities theory propounded by amici curiae, but disagreed with their conclusion that the theory compelled intrusive measures to wrest market share from Microsoft. Noting that the process by which a monopoly arises "is entirely natural in the market," he asked rhetorically, "[o]n what basis can a government intervene to insure a better outcome?"[237] Michael Vita and Charissa Wellford observe that, although the network externalities literature shows some possible inefficiencies, its importance as a guide to governmental policy "remains undemonstrated."[238]

In all, though the theory of network externalities is an intriguing object of scholarly research and has captured the imagination of prominent economists, it has not matured sufficiently to serve as the intellectual foundation of a governmental enforcement program. In *Microsoft* anonymous amici curiae, relying on the network externalities literature, have criticized the Justice Department for not pursuing far broader relief, including separation of Microsoft's operating systems and applications divisions.[239] It is certainly a defensible exercise of prosecutorial discretion to decline to do so. Again, there is no doctrinal obstacle preventing the amici (presumably Microsoft's competitors) or other injured firms from bringing their own suits. Their failure to do so suggests that their real goal is to hinder Microsoft to their own benefit at mimimal expense to themselves.

D. Predatory Pricing

Predatory pricing as an exclusionary tactic deserves special mention if only because it has generated its own extensive literature. Posner listed it as a specific abuse and hence a practice that many economists doubt can

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236. *Id.* at 113.

237. Declaration of Kenneth J. Arrow (Jan. 17, 1995), appended to Memorandum of the United States of America in Support of Motion to Enter Final Judgment and in Opposition to the Positions of IDE Corporation and Amici (Jan. 17, 1995), United States v. Microsoft Corp., 159 F.R.D. 318 (D.D.C.), *rev'd,* 1995-1 Trade Cas. (CCH) ¶ 71,027 (D.C. Cir. 1995).

238. Vita & Wellford, *supra* note 201, at 236. Liebowitz and Margolis conclude:

> After we economists have had our fun, thinking about network effects and considering how social interactions have a similarity to networks, we need to acknowledge that the *a priori* case for network externalities is treacherous and the empirical case is yet to be presented. Most constructs in economics find their way only very slowly into either public policy or established theory. The construct of network externalities should be one of them.

Liebowitz & Margolis, *Network Externality, supra* note 195, at 149 (emphasis in original). In another article, they conclude,

> It is a grand conceptual leap from observing a network effect to concluding the existence of a socially relevant externality. So long as we have only the vague impression that 'bigger is better' (or 'smaller is better'), we should be slow to conclude that there are externalities of the sort that suggest the need for social remedy.

Liebowitz & Margolis, *Market Failure, supra* note 205.

239. Anonymous Amici Curiae Brief, United States v. Microsoft Corp., 159 F.R.D. 318 (D.D.C. 1995) (No. 94-1564).

restrict output.[240] Certainly the Chicago position historically has been that predatory pricing is an unlikely means of exclusion because it requires the predator to bear larger losses than the victim and recoupment is improbable.[241] Posner himself concluded that predatory pricing is not inevitably an irrational practice, for a predator that operates in several markets may profit by expending considerable resources in destroying a competitor in one market, thereby creating a reputation for predatory pricing that will deter potential competitors from entering any of its markets.[242] Moreover, he argued that forcing the mistaken predator, who in fact could not succeed, to bear the costs of its attempt is efficient.[243] But he obviously viewed predatory pricing as a rare phenomenon that is hard to identify and recognized that enforcement mistakes, by deterring vigorous price competition, are socially costly.[244]

Posner's insight about the multi-market predator was, in modern terminology, a claim about strategic firm behavior, and during the 1980s economists began to use game-theoretic concepts to analyze strategic behavior and to construct formal models in which predatory pricing is rational.[245] The implication of this literature is that predatory pricing is more prevalent, and hence more important, than analysts, including Posner, had thought. The courts, including the Supreme Court, have been unimpressed.[246] The Court has embraced a model of predation in which the predator expects to lose money during the predatory campaign, drive the rival from the market, and more than recoup its losses thereafter. The Court has focused on the prospects for recoupment, the "back-end" of the scenario, and if the predator could not expect to profit, the prices will be assumed to be nonpredatory.[247] In its most recent case, the Court implicitly rejected a strategic theory, deeming a claim that a firm with a

240. Posner, *supra* note 1, at 508 n.17. As support for the proposition that economists doubt the efficacy of predatory pricing, Posner cites John S. McGee, *Predatory Price Cutting: The Standard Oil (N.J.) Case*, 1 J.L. & ECON. 137 (1958), and L.G. Telser, *Cutthroat Competition and the Long Purse*, 9 J.L. & ECON. 259 (1966).

241. *See, e.g.*, BORK, *supra* note 125, at 148-54.

242. POSNER, *supra* note 82, at 185-86.

243. *Id.* at 187-88.

244. *Id.* at 188-96.

245. *See, e.g.*, Paul Milgrom & John Roberts, *New Theories of Predatory Pricing*, *in* INDUSTRIAL STRUCTURE IN THE NEW INDUSTRIAL ECONOMICS 112-37 (Giacomo Bonanno & Dario Brandolini eds., 1990); Janusz Ordover & Garth Saloner, *Predation, Monopolization, and Antitrust*, *in* 1 HANDBOOK OF INDUSTRIAL ORGANIZATION 537-96 (Richard Schmalensee & Robert Willig eds., 1989). For a succinct summary, see Alvin K. Klevorick, *The Current State of the Law and Economics of Predatory Pricing*, 83 AM. ECON. REV., May 1993, at 162.

246. Indeed, Klevorick laments the fact that the insights of the new, game-theoretic literature have not made their way into the judiciary's elaboration of the law of predatory pricing. *Id.* at 165.

247. *See, e.g.*, Brooke Group Ltd. v. Brown & Williamson Tobacco Corp., 113 S. Ct. 2578 (1993); Matsushita Elec. Indus. Co. v. Zenith Radio Corp., 475 U.S. 574 (1986). For a description of the Court's approach, see A.A. Poultry Farms v. Rose Acre Farms, 881 F.2d 1396, 1400-01 (7th Cir. 1989), *cert. denied*, 494 U.S. 1019 (1990). *See also* Kenneth G. Elzinga & David E. Mills, *Trumping the Areeda-Turner Test: The Recoupment Standard in* Brooke Group, 62 ANTITRUST L.J. 559, 562-63 (1994).

small market share would engage in predatory pricing and rely upon tacit collusion to recoup losses so implausible as to warrant judgment for the defendant as a matter of law.[248]

Thus, neither a judicial nor an economic consensus would support devoting resources to a campaign against predatory pricing. Once again, the practical significance of the new models is in dispute. Many economists continue to adhere to the view that "predatory pricing schemes are rarely tried, and even more rarely successful."[249]

V. CONCLUSION

Posner's policy synthesis of twenty-five years ago was remarkably prescient and influential. Although his proposals on tacit collusion have not been as fruitful as he hoped, they have focused attention on predisposing characteristics in all cases involving horizontal restraints and exclusionary practices. His recommendations for a more economically oriented merger analysis have been largely accepted. And his skepticism about single-firm monopolization has been borne out by experience.

Since Posner's proposal, economists have done a great deal of creative work identifying potentially inefficient practices. Although this work may help resolve special cases and may even result in liability, it has not yet produced sufficiently strong generalizations about economic behavior to justify a radical change in enforcement policy. No economic consensus in the present literature supports governmental intervention, except in special cases. Further, the present federal judiciary does not seem receptive to the new theories of exclusion.

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248. *Brooke Group*, 113 S. Ct. 2578. For an argument that the Court did not consider strategic arguments in *Brooke Group* and therefore did not reject them, see Jonathan B. Baker, *Predatory Pricing After* Brooke Group*: An Economic Perspective*, 62 ANTITRUST L.J. 585 (1994).

249. *Matsushita*, 475 U.S. at 589. Recent commentary skeptical of the practical importance of predatory pricing includes Kenneth G. Elzinga & David E. Mills, *Testing for Predation: Is Recoupment Feasible?*, 34 ANTITRUST BULL. 869 (1989); *see also* Milgrom & Roberts, *supra* note 245, at 133-34; Donald J. Boudreaux et al., *The Supreme Court's Predation Odyssey: From Fruit Pies to Cigarettes*, 4 SUP. CT. ECON. REV. (forthcoming 1995). Older critiques include Frank H. Easterbrook, *Predatory Strategies and Counterstrategies*, 48 U. CHI. L. REV. 263 (1981); John S. McGee, *Predatory Pricing Revisited*, 23 J.L. & ECON. 289 (1980).