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The New Sophistication in Antitrust

Michael S. Jacobs*

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INTRODUCTION

Modern antitrust jurisprudence has rested on the assumption that all firms are rational and that rational firms seek to maximize profit.¹ This assumption does not command unanimous assent among academics, but its explanatory power and practical advantages have enabled it to survive generations of debate about the proper focus of competition policy and to embed itself deep within antitrust doctrine.² By coherently explaining a wide variety of business behavior, from pricing decisions to vertical integration and mergers, the rationality assumption has unified antitrust theory and enabled triers of fact to avoid making individualized assessments of corporate motives and abilities that would cripple antitrust administration.

Over the past few years, federal courts have mounted an indirect attack on the rationality assumption. A growing number of these courts have acknowledged the existence of "sophisticated" firms and concluded that these super-rational companies can control market dynamics more profoundly than their merely rational counterparts. Several courts have held that the presence of large, sophisticated buyers in post-merger markets can legitimize otherwise unlawful seller-side mergers.³ The United States Court of Appeals for the Ninth Circuit has declared that sophisticated suppliers can deter their powerful buyers from overcharging consumers.⁴ Most significantly, in *Eastman Kodak Co. v. Image Technical Services, Inc.*,⁵ the United States Supreme Court recently suggested that sophisticated firms can neutralize market power, the main focus of antitrust concern.⁶

These cases introduce a doctrine that divides the corporate world in two. On one side are firms of average rationality that, even when they are large and wealthy, possess relatively limited power to affect competition. On the other side are sophisticated firms, whose tactical expertise, knowledgeability, or intelligence

1. See *infra* notes 10-13 and accompanying text (discussing the rationality assumption).

2. See *infra* notes 14-19 and accompanying text (discussing the rationality assumption's relation to antitrust).

3. See *infra* note 38 and accompanying text (noting cases).

4. *United States v. Syufy Enters.*, 903 F.2d 659, 669-70 (9th Cir. 1990).

5. 112 S. Ct. 2072 (1992).

6. Although the Supreme Court rejected the argument that sophisticated buyers deprived Kodak of market power, it accepted the principle that in certain markets sophisticated buyers can counteract the market power of dominant sellers. *Id.* at 2080-88; see also *infra* text accompanying notes 42-63 (discussing *Kodak*). For a more complete discussion of market power, see discussion *infra* accompanying notes 43-44, 83-88.

enable them to combat their competitors' market power more effectively than their merely rational counterparts.

Sophistication does not, however, define itself. Courts must distinguish sophisticated firms from rational firms by describing those characteristics that set the former group apart. By requiring courts to differentiate firms on the basis of sophistication, and thus requiring courts to define and identify this trait, sophistication doctrine sacrifices the rationality assumption in favor of an empirical, improvisational approach to corporate behavior.

Surprisingly, the emergence of sophistication doctrine has attracted neither judicial dissent nor academic criticism.⁷ Without questioning its transformative implications, courts and commentators have blithely accepted the premise that courts can intelligently classify firms as "sophisticated" or "rational," identify the special qualities of sophisticates, and incorporate these qualities into coherent and practicable legal principles. Sophistication analysis deserves closer examination. In a short time it has reshaped merger law and contains the potential ultimately to alter the basic premises of antitrust doctrine.

This Article critically examines the new sophistication. It first describes how the assumption of uniform rationality organizes antitrust, analyzes the destabilizing implications of a firm-specific approach to rationality, and discusses how, by eroding the uniform rationality assumption, sophistication doctrine undercuts the economic philosophy of antitrust. After discussing the intractable problems of defining sophistication, as well as its methodological and administrative consequences, the Article attempts to explain why, in spite of its serious problems, sophistication doctrine has risen so rapidly to doctrinal prominence.

The Article suggests that courts have overlooked the

7. Scholarly discussion has confined itself to reproving merger courts for underestimating strategic options available to sophisticated buyers. Using the Coase theorem to postulate post-merger strategies available to presumably sophisticated buyers, Professor Hovenkamp has criticized recent courts for ignoring the possibility that sophisticated buyers might maximize profits not by competing with dominant sellers, but by colluding with them to charge consumers monopoly prices and dividing the spoils. See Herbert Hovenkamp, *Rationality in Law & Economics*, 60 GEO. WASH. L. REV. 293, 315-16 (1992); Herbert Hovenkamp, *Mergers and Buyers*, 77 VA. L. REV. 1369, 1374-76 (1991). Similarly, in the 1993 Supplement to their treatise, Professors Areeda and Hovenkamp mention the sophisticated buyer defense, but make no claim that it poses problems either for merger analysis or antitrust generally. See PHILLIP E. AREEDA & HERBERT HOVENKAMP, *ANTITRUST LAW* ¶ 918 (Supp. 1993).

problems of sophistication because sophistication doctrine fits the times. Superficially, the concept of corporate sophistication resembles strategic models of firm behavior proposed by post-Chicago economists, an emerging school whose game-theoretic approach has found favor in many areas of law.⁸ Sophistication doctrine also mirrors the hyper-complex tests announced in recent antitrust opinions of the Supreme Court.⁹ These developments, the Article argues, may explain the emergence of sophistication but fail to justify it.

After criticizing the impracticability of the post-Chicago models and the Court's new tests, the Article concludes that sophistication fails. The doctrine fails in part because of its complexity. Moreover, by embarking on a futile quest for the meaning of corporate intelligence, sophistication doctrine destroys the rationality assumption. The loss of this assumption deprives antitrust of its philosophical framework and condemns it to sift without purpose or direction through an enormous array of facts. The main failure of sophistication doctrine thus lies in its rejection of theoretical guidance, a rejection that ultimately underscores the jurisprudential virtues of elegant, organizing assumptions.

I. THE RATIONALITY ASSUMPTION AND THE CHALLENGE OF CORPORATE SOPHISTICATION

For the past twenty years, since it began explicitly incorporating tenets of price theory,¹⁰ antitrust law has assumed that firms seek to maximize profits. Although this assumption lacks empirical validation¹¹ and runs counter to other theories of firm behavior,¹² it nevertheless has proven extremely useful. Known generally as the rationality assumption, the hypothesis of profit-

8. See *infra* notes 149-166 and accompanying text (discussing the post-Chicago school).

9. See *infra* part V.B.1 (discussing cases).

10. For the classic formulation of price theory, see generally GEORGE J. STIGLER, *THE THEORY OF PRICE* (1966).

11. See Herbert Hovenkamp, *Positivism in Law & Economics*, 78 CAL. L. REV. 815, 830 (1990).

12. Some have theorized that the limits of human knowledge and the natural temptation to follow proven patterns of behavior impel firms to act less than optimally, "satisficing" instead of maximizing. See ADOLF A. BERLE & GARDINER C. MEANS, *THE MODERN CORPORATION AND PRIVATE PROPERTY* 113-16, 303-08 (1967); HERBERT SIMON, *ADMINISTRATIVE BEHAVIOR* 61-78 (1945); Robert G. Harris & Thomas M. Jorde, *Antitrust Market Definition: An Integrated Approach*, 72 CAL. L. REV. 3, 28-29 (1984); Herbert Simon, *Rational Decision Making in Business Organizations*, 69 AM. ECON. REV. 493, 503 (1979).

maximization presumes that people are both rational and self-interested. As managers of firms, rational, self-interested people pursue profit.¹³

The rationality assumption does not purport to describe how individual corporations actually behave.¹⁴ Rather, it seeks to predict commercial behavior from generalizations that incorporate real-world observations about the workings of firms and markets.¹⁵ By furnishing a theoretical basis for predicting business behavior, the rationality assumption organizes antitrust. Among other things, it accounts for pricing decisions of competitive and monopolistic firms,¹⁶ vertical integration,¹⁷ and the inclination of firms to enter contestable markets.¹⁸ The rationality assumption's explanatory scope is so broad that one antitrust commentator has referred to the assumption as "ubiquitously normative."¹⁹

The rationality assumption has an implicit corollary. This corollary posits that firms are *equally* rational, that no firm pursues profit more intently or maximizes profit more effectively than any other. Although this supposition is obviously counterfactual, until recently antitrust courts had tacitly accepted it. They may have recognized intuitively that rejecting the equality corollary would undermine the entire theory of rationality, be-

13. See Hovenkamp, *supra* note 11, at 827-31 (stating that although the profit-maximization hypothesis is difficult to test empirically, it is a normative convention generally accepted by economists without empirical proof). The integrity of the rationality assumption does not depend on universal profit-maximizing; it requires only that a few firms profit-maximize. These firms will grow at the expense of others, eventually persuading the others either to maximize profits or leave the market. See RICHARD A. POSNER & FRANK EASTERBROOK, *ANTITRUST: CASES, ECONOMIC NOTES AND OTHER MATERIALS* 855-57 (2d ed. 1981). The rationality assumption has also been called the "theory of the firm." See, e.g., Ernest Gellhorn, *An Introduction to Antitrust Economics*, 1975 DUKE L.J. 1, 6 (discussing the "theory of the firm").

14. See RICHARD A. POSNER, *ECONOMIC ANALYSIS OF LAW* 16 (4th ed. 1992); Milton Friedman, *The Methodology of Positive Economics*, in *ESSAYS IN POSITIVE ECONOMICS* 3 (1953).

15. See Friedman, *supra* note 14, at 4; Hovenkamp, *supra* note 11, at 817-18.

16. Hovenkamp, *supra* note 11, at 827-28.

17. Ronald H. Coase, *The Nature of the Firm*, 4 *ECONOMICA* 386, 390-98 (1937).

18. WILLIAM J. BAUMOL ET AL., *CONTESTABLE MARKETS AND THE THEORY OF INDUSTRY STRUCTURE* 5 (1982). Economists define a perfectly contestable market as one (a) that is accessible to potential entrants, (b) that permits potential entrants, without restriction, to meet the same market demands and use the same production techniques as incumbent firms, and (c) whose post-entry profitability is evaluated by potential entrants at pre-entry prices. *Id.*

19. Hovenkamp, *supra* note 11, at 831.

cause differing abilities to maximize profits imply the need for legal rules responsive to such differences. A theory of differential rationality would complicate methodology, requiring courts to measure corporate profitability, discount profitability for risk, weigh the meaning and import of short-term unprofitability, and invest all of this data with coherent, legal significance. Discarding the equality principle, therefore, would destroy the explanatory power of the rationality assumption, fragmenting antitrust philosophy and eliminating the methodological benefits of a more theoretical approach.²⁰

Sophistication doctrine repudiates this fundamental principle of equal rationality, as recent merger law demonstrates. The equality principle led pre-sophistication courts to view all firms as equally inclined to perceive and pursue profitable opportunities in areas other than their own, and thus to enter markets made uncompetitive by merger.²¹ Merger courts, however, have

20. The United States Supreme Court has repeatedly stressed the importance of administrative efficiency in antitrust litigation. See, e.g., *FTC v. Superior Court Trial Lawyers Ass'n*, 493 U.S. 411, 430 (1990) ("The administrative efficiency interests in antitrust regulation are unusually compelling."); *Northern Pac. Ry. Co. v. United States*, 356 U.S. 1, 5 (1958) (stating that courts deem certain practices per se unreasonable and so avoid "the necessity for an incredibly complicated and prolonged economic investigation").

In other areas of federal law, courts have developed rules embodying concepts of corporate sophistication. The limited scope afforded those rules, however, has minimized their impact. More significantly, by defining sophistication broadly and applying the "sophisticated" label to entire classes of firms, courts in other areas have averted the methodological problems that accompany the firm-specific inquiries for which antitrust courts have opted. For example, under the Lanham Act, 15 U.S.C. § 1125(a) (Supp. V 1993) (protecting unregistered trademarks and trade dresses from infringement), courts have considered sophistication as one factor among many bearing on the likelihood of buyer confusion. See, e.g., *Polaroid Corp. v. Polarad Elecs. Corp.*, 287 F.2d 492, 495 (2d Cir.) (listing factors affecting the successful marketing of a product, including buyer sophistication), *cert. denied*, 368 U.S. 820 (1961). Courts have also defined sophistication tautologically as the quality of not being confused. See, e.g., *Homeowners Group, Inc. v. Home Mktg. Specialists, Inc.*, 931 F.2d 1100, 1111 (6th Cir. 1991) (observing that there is less likelihood of buyer confusion in a sale of services to a sophisticated buyer, than to a typical buyer). Finally, courts have applied the term categorically to all buyers of the product in question. See, e.g., *Astra Pharmaceutical Prods., Inc. v. Beckman Instruments, Inc.*, 718 F.2d 1201, 1206 (1st Cir. 1983) (addressing the sophistication of the class of prospective buyers of the subject medical equipment).

21. See *United States v. Penn-Olin Chem. Co.*, 378 U.S. 158, 174 (1964) ("The existence of an aggressive, well equipped and well financed corporation engaged in the same or other related lines of commerce waiting anxiously to enter an oligopolistic market would be a substantial incentive to competition which cannot be underestimated."); see also *FTC v. Elders Grain, Inc.*, 868 F.2d 901, 905 (7th Cir. 1989) (suggesting that, although entry into the industrial drug corn industry is slow, new entrants would enter to secure profit opportuni-

lately rejected the notion of uniform rationality; the newly announced sophisticated-buyer defense deems average rationality insufficient to prompt new entry and considers only large, sophisticated firms capable of entering certain markets.²²

Sophistication doctrine also changes the courts' analysis of market power. Courts have long regarded corporate size and market share as the essential preconditions of market power,²³ tempered only by structural considerations such as entry barriers.²⁴ Because courts presumed that all firms were equally rational, actual rationality had no bearing on the market power issue. Now, actual rationality matters. The Supreme Court recently imputed to large, sophisticated buyers the unique ability to use their sophistication to neutralize their sellers' market power.²⁵ The Court thereby implied, for the first time, that some firms are more rational than others and invested super-rationality with analytical significance.

Together, these developments effectively describe sophistication as a new form of market power, but a form impossible to

ties even if that market were cartelized); *Hospital Corp. of Am. v. FTC*, 807 F.2d 1381, 1391 (7th Cir. 1986) (discussing non-proprietary hospitals' fears of market entry by proprietary hospitals), *cert. denied*, 481 U.S. 1038 (1987). Commentators skeptical about the strength of the rationality assumption take a contrary position, arguing that because new entry entails the risk of failure, and because corporate managers dread failure, firms enter new markets reluctantly, if at all. See, e.g., Harry S. Gerla, *A Micro-Microeconomic Approach to Antitrust Law: Games Managers Play*, 86 MICH. L. REV. 892, 903-08 (1988) (discussing firm behavior).

22. See *United States v. Country Lake Foods, Inc.*, 754 F. Supp. 669, 679-80 (D. Minn. 1990); see also *infra* note 38 (citing additional cases).

23. Until 1992, the Supreme Court had defined market power exclusively by reference to market share. *Jefferson Parish Hosp. Dist. No. 2 v. Hyde*, 466 U.S. 2, 17 (1984); *Fortner Enters., Inc. v. United States Steel Corp.*, 394 U.S. 495, 501-04 (1969); *United States v. Grinnell Corp.*, 384 U.S. 563, 571 (1966); *Times-Picayune Publishing Co. v. United States*, 345 U.S. 594, 608-09 (1953); *International Salt Co. v. United States*, 332 U.S. 392, 396-97 (1947); see also *infra* notes 43-44, 83-88 (discussing market power).

24. Unlike the Supreme Court, some lower courts have considered factors other than market share as indicative of market power. See, e.g., *Ball Memorial Hosp. Ins., Inc. v. Mutual Hosp. Ins., Inc.*, 784 F.2d 1325, 1335 (7th Cir. 1986) (stating that the ease of entry into relevant market diminishes the power normally inferable from high market share). Pervasive governmental regulation has also been held to modify the ostensible power suggested by high market share. See, e.g., *Ocean State Physicians Health Plan, Inc. v. Blue Cross & Blue Shield*, 692 F. Supp. 52, 69 (D.R.I. 1988) ("In a regulated industry, such as health care insurance, a heavy reliance on market share statistics probably would be an inaccurate or misleading indication of monopoly power."), *aff'd*, 883 F.2d 1101 (1st Cir. 1989), *cert. denied*, 494 U.S. 1072 (1990).

25. *Eastman Kodak Co. v. Image Technical Servs., Inc.*, 112 S. Ct. 2072, 2086-87 (1992).

define. By positing superior corporate intelligence as a source of commercial strength, sophistication doctrine explodes the useful fiction of equal rationality and replaces it with complex investigations into the elusive facts of actual corporate intelligence. These quixotic searches will confound antitrust, subverting its logic and breeding numerous sub-inquiries, each inevitably inconclusive and all ultimately destructive of methodological simplicity and administrative efficiency.

II. THE RAPID EMERGENCE OF SOPHISTICATED DOCTRINE

A. THE SOPHISTICATED BUYER DEFENSE IN MERGER LAW

Section 7 of the Clayton Act prohibits mergers whose effect "may be substantially to lessen competition, or to tend to create a monopoly."²⁶ By eliminating a previously independent firm, every merger reduces the number of competitors. Because a market with fewer competitors, however, does not necessarily lack competitive vitality—post-merger markets may retain enough companies to remain highly competitive—antitrust enforcement agencies challenge only those mergers threatening undue concentration.²⁷ Nevertheless, highly concentrated markets permit leading firms to collude more easily on price and output without committing a detectable violation of the rules against price-fixing.²⁸ Proof that a proposed merger will result

26. 15 U.S.C. § 18 (1988).

27. Merger courts have used either of two tests to measure market concentration. In the 1960s and '70s, the "Four Firm Concentration Ratio" (CR4) was the predominant test. CR4 calculates market concentration by adding the shares of the four largest firms. A "vague consensus" exists that a CR4 greater than 75% promotes collusion. HERBERT HOVENKAMP, *ECONOMICS AND FEDERAL ANTITRUST LAW* § 11.3, at 301 (1985). The 1984 Department of Justice Merger Guidelines employ a different measure, the Herfindahl-Hirschman Index (HHI), which squares the market share of each firm and then sums the squares. *Id.* at 302. Unlike the CR4, the HHI computes concentration by considering all firms in the market and by assigning greater weight (through the squaring process) to larger firms. *Id.* The Justice Department's most recent merger guidelines, promulgated in 1992, regard markets with post-merger HHIs below 1000 as unconcentrated; those with HHIs between 1000 and 1800 as moderately concentrated; and those over 1800 as highly concentrated. UNITED STATES DEP'T OF JUSTICE MERGER GUIDELINES § 1.51 (1992), reprinted in 4 Trade Reg. Rep. (CCH) ¶ 13,104, at 20,569, 20,573-5 (Apr. 7, 1992).

28. *FTC v. Elders Grain, Inc.*, 868 F.2d 901, 905 (7th Cir. 1989). Section 1 of the Sherman Act, 15 U.S.C. § 1 (1988 & Supp. V 1993), and § 5 of the Federal Trade Commission Act, 15 U.S.C. § 45 (1988), both forbid price-fixing. Since the publication of George Stigler's theory of oligopolistic collusion, see GEORGE J. STIGLER, *A Theory of Oligopoly*, in *THE ORGANIZATION OF INDUSTRY* 39 (1968), merger challenges have focused on the prospect of post-merger collusion in the

in a highly concentrated market thus establishes a rebuttable presumption that the merger will substantially lessen competition.²⁹

Defendants can rebut this presumption by showing that increased concentration will not unduly reduce the market's competitiveness.³⁰ A defendant may, for instance, argue that likely entry by companies outside the market would guarantee continued post-merger competitiveness.³¹ When post-merger entry is (or is perceived to be) sufficiently easy, courts have reasoned that dominant, post-merger firms will refrain from organizing price-fixing cartels, because such firms will fear that high prices may attract new entry; prices will therefore stay closer to competitive levels.³² Thus, the federal government's most recent

defendants' market. By contrast, in the 1950s and 1960s, merger courts and enforcement agencies feared the impact of mergers on small business and the possibility that even small mergers would produce large and powerful monopolists. *See, e.g.,* *United States v. Von's Grocery Co.*, 384 U.S. 270, 277 (1966) ("Thus, where concentration is gaining momentum in a market, we must be alert to carry out Congress' intent to protect competition against ever-increasing concentrations through mergers."); *Brown Shoe Co. v. United States*, 370 U.S. 294, 344 (1962) ("We cannot fail to recognize Congress' desire to promote competition through the protection of viable, small, locally owned businesses.").

29. *See* *United States v. Citizens & S. Nat'l Bank*, 422 U.S. 86, 120-22 (1975); *United States v. Philadelphia Nat'l Bank*, 374 U.S. 321, 363 (1963); *see also* *United States v. Baker Hughes, Inc.*, 908 F.2d 981, 982-83 (D.C. Cir. 1990) (stating that once the government shows the transaction will result in undue concentration, the burden of production shifts to the defendant).

30. *See* *United States v. Marine Bancorporation, Inc.*, 418 U.S. 602, 631 (1974); *United States v. General Dynamics Corp.*, 415 U.S. 486, 494-504 (1974); *Philadelphia Nat'l Bank*, 374 U.S. at 363; *FTC v. University Health, Inc.*, 938 F.2d 1206, 1218 (11th Cir. 1991); *United States v. Country Lake Foods, Inc.*, 754 F. Supp. 669, 678 (D. Minn. 1990).

31. *See* *Citizens & S. Nat'l Bank*, 422 U.S. at 120-22; *General Dynamics Corp.*, 415 U.S. at 503-04; *Philadelphia Nat'l Bank*, 374 U.S. at 363-67; *see also* *Baker Hughes, Inc.*, 908 F.2d at 982 (accepting the district court's finding that the defendants had rebutted the prima facie case).

"[T]hat a variety of factors other than ease of entry can rebut a prima facie case has become hornbook law." *Baker Hughes, Inc.* 908 F.2d at 985. Among those factors are the prospect of efficiencies from the merger, excess capacity, degree of product homogeneity, marketing and sales methods, industry structure, weakness of data underlying the prima facie case, high elasticity of industry demand, and high cross-elasticity of supply and demand. *Id.* (citing AREEDA & HOVENKAMP, *supra* note 7, ¶¶ 919, 920.1, 921, 925, 934-35, 939, at 813-23); HOVENKAMP, *supra* note 27, § 11.6, at 307-11; LAWRENCE A. SULLIVAN, *HANDBOOK OF THE LAW OF ANTITRUST* § 204, at 622-25 (1977).

32. *See* *United States v. Falstaff Brewing Corp.*, 410 U.S. 526, 532-33 (1973) (discussing a potential entrant's beneficial effect on the New England beer market); *United States v. Penn-Olin Chem. Co.*, 378 U.S. 158, 174 (1964) ("[P]otential competition . . . as a substitute for . . . [actual competition] may restrain producers from overcharging those to whom they sell or underpaying

Merger Guidelines recognize that where entry is easy, a proposed merger "raises no antitrust concern and ordinarily requires no further analysis."³³

Until recently, courts employed a standard methodology for analyzing the likelihood of post-merger entry. They examined barriers to entering the market³⁴ and, if these barriers were not prohibitively high, asked whether potential entrants had sufficient resources to compete effectively in the post-merger market.³⁵ The courts assumed that, absent significant entry barriers, powerful, interested firms would either enter markets that supra-competitive prices have distorted, or, as potential entrants, dissuade incumbents from initiating post-merger price increases that could jeopardize their dominance.³⁶ The opportunity for profit, courts reasoned, would entice at least some large firms to enter contestable markets.³⁷

those from whom they buy.") (citation and internal quotations omitted); *Brown Shoe Co.*, 370 U.S. at 321-22 (noting ease of entry as factor in gauging Clayton Act violation). See generally PHILIP AREEDA & LOUIS KAPLOW, *ANTITRUST ANALYSIS* ¶¶ 530-531, at 881-85 (4th ed. 1988) (discussing conglomerate mergers and the elimination of potential competition). Commentators specify two kinds of potential competition, "perceived potential competition" and "actual potential competition." *Id.* ¶ 531, at 882-83. The former describes firms that do not sell in a particular market but would do so if the market price were higher; the latter describes firms that will enter the market in the future even if the market price does not rise. POSNER, *supra* note 14, at 303.

33. UNITED STATES DEPT OF JUSTICE MERGER GUIDELINES, *supra* note 27, § 3.0, at 20,573-10.

34. Economists define entry barriers generally as differentials in the long-term costs of production between incumbent firms and would-be entrants. See STIGLER, *supra* note 28, at 67-70; Harold Demsetz, *Barriers to Entry*, 72 AM. ECON. REV. 47, 47 (1982). In particular, they regard entry-barriers as factors that either foreclose new entry entirely or make the cost of doing business higher for new entrants than for existing firms. 4 PHILLIP AREEDA & DONALD F. TURNER, *ANTITRUST LAW* ¶ 917, at 85 (1980); HOVENKAMP, *supra* note 27, § 11.6, at 305. Entry barriers include government regulations restricting entry, control by incumbents of patents required for manufacture, higher costs of capital for new entrants, and limited access to scarce, non-duplicable resources. 4 AREEDA & TURNER, *supra*, ¶ 917, at 85; HOVENKAMP, *supra* note 27, § 11.6, at 306; see also *Los Angeles Land Co. v. Brunswick Corp.*, 6 F.3d 1422, 1427-28 (9th Cir. 1993) (holding that anticompetitive conduct by one firm against another is not a barrier to entry and defining barriers to entry), *cert. denied*, 114 S. Ct. 1307 (1994).

35. See *FTC v. Coca-Cola Co.*, 641 F. Supp. 1128, 1137 (D.D.C. 1986); see also *United States v. Marine Bancorporation, Inc.*, 418 U.S. 602, 633 (1974) (describing NBC's interest as a potential entrant into, and effect on, the Spokane commercial banking market); *Falstaff Brewing Corp.*, 410 U.S. at 527, 533-36 (describing Falstaff's interest as a potential entrant into, and effect on, the highly-concentrated New England beer market).

36. See *supra* note 32 and accompanying text (discussing cases).

37. In contexts other than entry analysis, merger courts have observed

Beginning in 1990, several courts recast the traditional assumptions about post-merger entry. Declaring that the presence of powerful and "sophisticated" buyers could legitimize otherwise unlawful seller-side mergers,³⁸ they analyzed the likelihood of entry not only in terms of corporate power, but in terms of "sophistication." Some suggested that only powerful, sophisticated buyers would enter their sellers' markets if post-merger price collusion raised sellers' prices to monopolistic levels.³⁹ Others found that the unique tactical expertise of

that powerful buyers force dominant sellers to price competitively, even in highly concentrated post-merger markets. See, e.g., *FTC v. University Health, Inc.*, 938 F.2d 1206, 1213 n.13 (11th Cir. 1991) ("[C]oncentration on the buying side of a market does inhibit collusion."); *Hospital Corp. of Am. v. FTC*, 807 F.2d 1381, 1391 (7th Cir. 1986) (stating that "the bigger a buyer is, the more easily and lucratively a member of the [seller's] cartel can cheat on his fellows"), *cert. denied*, 481 U.S. 1038 (1987). The easier it is to cheat on a cartel, courts have observed, the more likely it is that cheating will occur, through secret price reductions, for example. The more secret the price reductions, the weaker the cartel and the more competitive the market. See *University Health, Inc.*, 938 F.2d at 1213 n.13; *Hospital Corp. of Am.*, 807 F.2d at 1391; see also STIGLER, *supra* note 28, at 39, 43-44 (outlining the difficulties in maintaining secret price reductions). These observations have led courts to conclude that the presence of powerful buyers in post-merger markets should permit sellers to merge to higher concentrations than would otherwise be permissible. See *Hospital Corp. of Am.*, 807 F.2d at 1391; *Owens-Illinois, Inc.*, [1987-1993 Complaints & Orders Transfer Binder] Trade Reg. Rep. (CCH) ¶ 23,162, at 22,810, 22,823-24 (Feb. 26, 1992).

38. See *United States v. Baker Hughes, Inc.*, 908 F.2d 981, 982 (D.C. Cir. 1990), *aff'g* 731 F. Supp. 3, 8-11 (D.D.C. 1990); *United States v. Archer-Daniels-Midland Co.*, 781 F. Supp. 1400, 1422-23 (S.D. Iowa 1991); *FTC v. R.R. Donnelley & Sons Co.*, 1990-2 Trade Cas. (CCH) ¶ 69,239, at 64,852, 64,855 (D.D.C. Aug. 27, 1990); *United States v. Country Lake Foods, Inc.*, 754 F. Supp. 669, 679-80 (D. Minn. 1990); *cf. FTC v. University Health, Inc.*, 938 F.2d at 1213 n.13 (recognizing the sophisticated buyer defense, but rejecting its applicability to the facts); *United States v. United Tote, Inc.*, 768 F. Supp. 1064, 1085 (D. Del. 1991) (recognizing the sophisticated buyer defense, but rejecting its applicability to the facts; stating that the presence of sophisticated buyers is "not sufficient" to offset "anti-competitive effects" of a merger).

39. See *Country Lake Foods*, 754 F. Supp. at 669-81. In *Country Lake Foods*, the government unsuccessfully challenged an attempt by a large processor of fluid milk to acquire a competitor. *Id.* at 675-81. Defendant's buyers, large wholesale food distributors, were even more concentrated than the milk processors, controlling 90% of the wholesale milk market. *Id.* at 679. Defendant argued that its buyers "monitor milk prices closely and are generally very sophisticated" and would therefore immediately protest price increases by defendant "not related to normal market conditions" and, if necessary, could integrate vertically into the fluid milk processing market. *Id.* at 674. Although the court declared the possibility of such integration "[in]sufficient of itself" to rebut the presumption of diminished competition, it found the argument and evidence about vertical integration to be "credible," and was persuaded by this, and other evidence, to permit the merger. *Id.* at 680.

large, sophisticated buyers could forestall monopoly pricing in highly concentrated post-merger markets and thus maintain their competitive vitality.⁴⁰

Some courts rejected the new sophisticated-buyer defense, but strictly on factual grounds.⁴¹ None questioned the principle that sophisticated buyers possess distinctive talents for maintaining competition. None doubted that buyer sophistication warranted special antitrust treatment. None expressed any reservations about the judiciary's ability to define and apply sophistication doctrine.

B. SOPHISTICATION AND MARKET POWER

In *Eastman Kodak Co. v. Image Technical Services Inc.*,⁴² the Supreme Court redefined the test of market power

40. See *Baker Hughes, Inc.*, 908 F.2d at 986 (finding that sophisticated buyers can forestall monopoly pricing in highly concentrated post-merger markets by "closely examin[ing] available options and . . . insist[ing] on receiving multiple, confidential bids for each order"); *Archer-Daniels-Midland Co.*, 781 F. Supp. at 1422. In *Archer-Daniels-Midland Co.* the court stated:

Buyers have successfully used a variety of tactics to obtain low prices from . . . suppliers, including playing off suppliers against one another, swinging volume back and forth among suppliers, disciplining sellers by cutting them off entirely, successfully insisting on year long or multi-year . . . agreements and holding out the threat of inducing a new entrant [to compete against the suppliers].

781 F. Supp. at 1422.

41. See, e.g., *University Health, Inc.*, 938 F.2d at 1213 n.13 (stating that certain health insurance companies were not "truly large buyers" and were therefore insufficiently powerful, despite their sophistication, to prevent defendant hospital from conspiring post-merger to fix price); *United Tote, Inc.*, 768 F. Supp. at 1085 (stating that the market contained sophisticated buyers, but not enough "to offset the anti-competitive effects of the merger").

42. 112 S. Ct. 2072 (1992). Plaintiffs in *Kodak*, independent service organizations (ISOs) that repaired and maintained Kodak copying and micrographic equipment, complained that Kodak violated sections 1 and 2 of the Sherman Act by unlawfully tying the sale of service to the sale of replacement parts and by monopolizing and attempting to monopolize the service market for Kodak machinery. *Id.* at 2076. According to the ISOs, after obtaining nearly complete control over Kodak replacement parts, Kodak refused to sell those parts to Kodak owners that hired ISOs, a decision that effectively forced Kodak owners to cease dealing with ISOs. *Id.* at 2077. The District Court granted Kodak summary judgment on both counts of the complaint. *Image Technical Servs., Inc. v. Eastman Kodak Co.*, 1989-1 Trade Cas. (CCH), ¶ 68,402, at 60,210, 60,211-14 (N.D. Cal. Apr. 18, 1988), *rev'd*, 903 F.2d 612 (9th Cir. 1990), *aff'd*, 112 S. Ct. 2072 (1992). The Court of Appeals for the Ninth Circuit reversed, holding that despite Kodak's conceded lack of power in the primary equipment markets, the possibility of "market imperfections" raised a factual question about whether Kodak possessed enough power in replacement parts to force some customers to purchase its own service. *Image Technical Servs., Inc. v. Eastman Kodak Co.*, 903 F.2d 612, 616-18 (9th Cir. 1990), *aff'd*, 112 S. Ct. 2072 (1992).

er.⁴³ Discarding its long-standing reliance on market share as a proxy for power,⁴⁴ the Court held that competitors' information gaps regarding one firm's product could supply that firm with market power, no matter how small its market share.⁴⁵ In the process, the Court observed that powerful, "sophisticated" purchasers could neutralize this new source of market power.⁴⁶

43. The Supreme Court has repeatedly defined market power as the ability of a firm or group of firms to raise price or exclude competition. *See, e.g.*, *Matsushita Elec. Indus. Co v. Zenith Radio Corp.*, 475 U.S. 574, 590 (1986) (defining market power as the "power to set higher than competitive prices" and to sustain such prices "long enough to earn in excess profits what they earlier gave up in below-cost prices"); *National Collegiate Athletic Ass'n v. Board of Regents*, 468 U.S. 85, 109 n.38 (1984) (defining market power as "the ability to raise prices above those that would be charged in a competitive market"). Because antitrust strives to protect against the misuse or wrongful acquisition of such power, "the concept of market power is at the core of antitrust." George A. Hay, *Market Power in Antitrust*, 60 ANTITRUST L.J. 807, 807 (1992). The standard method of proving market share is fairly simple. It involves "first defining a relevant [product and geographic] market in which to compute the defendant's market share, next computing that share, and then deciding whether it is large enough to support an inference of the required degree of market power." William M. Landes & Richard A. Posner, *Market Power in Antitrust Cases*, 94 HARV. L. REV. 937, 938 (1981).

44. Market share has long served as a surrogate for market power. *See, e.g.*, *United States v. Aluminum Co. of Am.*, 148 F.2d 416, 424 (2d Cir. 1945) (holding that a 90% market share constitutes monopoly power, a 33% share does not, and a 60-64% share is "doubtful"). Although the Supreme Court has never expressly endorsed the market share proxy, before *Kodak* it consistently regarded market share as the exclusive determinant of market power. *See supra* note 23 (citing cases). In the past 15 years, some lower courts have widened the market power inquiry to include other factors, such as the strength of consumer demand, the absence of effective entry barriers, and the apparent vigor of interbrand competition. *See, e.g.*, *Ball Memorial Hosp., Inc. v. Mutual Hosp. Ins., Inc.*, 784 F.2d 1325, 1335 (7th Cir. 1986) (discounting large market share when entry barriers are low); *Forro Precision, Inc. v. International Bus. Machs. Corp.*, 673 F.2d 1045, 1058-59 (9th Cir. 1982) (granting defendant's motion for summary judgment because the plaintiff failed to produce any evidence other than market share to prove monopolization); *Broadway Delivery Corp. v. United Parcel Serv., Inc.*, 651 F.2d 122, 127-30 (2d Cir.) (firm with low market share may nevertheless possess monopoly power), *cert. denied*, 454 U.S. 968 (1981). Some economists have developed statistical models for measuring market power directly. *See, e.g.*, Jonathan B. Baker & Timothy F. Bresnahan, *Empirical Methods for Identifying and Measuring Market Power*, 61 ANTITRUST L.J. 3, 3-13 (1992) (discussing econometric techniques to measure market power). But, until *Kodak*, the Court had clung steadfastly and exclusively to the market share proxy.

45. *Eastman Kodak Co.*, 112 S. Ct. at 2085.

46. *Id.* at 2086 ("As Kodak notes, there likely will be some large-volume, sophisticated purchasers who will undertake the comparative studies and insist, in return for their patronage, that Kodak charge them competitive life cycle prices. Kodak contends that these knowledgeable customers will hold down the package price for all other customers."). Although the Court doubts that

Presumably, if sophistication can counteract one source of market power, it can counteract them all.⁴⁷ *Kodak* thus suggests that sophistication could influence every antitrust dispute.

In particular, the Court noted that, even in ostensibly competitive markets for complex, durable goods, "difficult and costly" information gaps about a firm's life cycle prices can enhance a firm's market power, regardless of its market share.⁴⁸ The Court observed that many buyers cannot determine the life cycle prices of complex, durable equipment⁴⁹ because the necessary information is hard to acquire, subject to change during the product's life, and often customer-specific.⁵⁰ Furthermore, even if buyers could overcome these barriers, they might choose not to do so to avoid the difficulty and cost of acquiring the relevant information.⁵¹ *Kodak* argued that "sophisticated purchasers" in its markets would overcome information gaps that could otherwise increase *Kodak's* market power.⁵² These sophisticated purchasers would undertake the costly studies necessary to learn life cycle prices and would successfully insist on competitive, fixed, lifetime prices for parts and service.⁵³ By negotiating such prices for themselves, *Kodak* claimed, these "knowledgeable" buyers would indirectly secure them for all *Kodak* customers, preventing *Kodak* from abusing any power that might otherwise

Kodak's contention will always be correct, revealed through its description of circumstances when sophisticates will be unable to assist other customers, it suggests by negative implication that *Kodak's* theory is sometimes correct.

47. *Kodak* could conceivably be read to stand for the proposition that two types of market power exist—the "normal" kind based upon market share and the special variant conferred by information gaps—and that sophistication can diminish the latter type only. But, by creating different categories of market power and subjecting those categories to different legal standards, that reading would confuse antitrust doctrine even more than one that viewed sophistication as affecting all forms of market power equally.

48. 112 S. Ct. at 2085.

49. *Id.* According to the Court, life cycle price is the total cost of owning equipment over its useful life. *Id.* To ascertain the life cycle price of complex equipment, buyers need "data on price, quality and availability of products needed to operate, upgrade or enhance the initial equipment, as well as service and repair costs, including estimates of breakdown frequency, nature of repairs, price of service and parts, length of 'down time' and losses incurred from down time." *Id.* In addition, buyers need information about the residual value. *Id.* at 2085 n.20.

50. *Id.* at 2086.

51. *Id.*

52. *Id.* at 2086-87. *Kodak's* buyers included "federal, state, and local government agencies, banks, insurance companies, industrial enterprises, and providers of specialized copy and microfilming services." *Id.* at 2077.

53. *Id.* at 2086.

stem from consumer ignorance.⁵⁴

Although the Court recognized sophisticated buyers as "knowledgeable" and "insistent" on receiving competitive prices for themselves,⁵⁵ it doubted their ability to ensure that Kodak would charge competitive prices to its unsophisticated buyers as well.⁵⁶ If unsophisticated buyers substantially outnumber sophisticates, the Court reasoned, a powerful seller could refuse to deal with sophisticated firms and charge supra-competitive prices to unsophisticated firms.⁵⁷ The Court added that even when sophisticated consumers are relatively numerous, they would be unable to protect the unsophisticated from monopoly pricing if the seller could price-discriminate between the two groups.⁵⁸ Because Kodak could allegedly discriminate in this manner,⁵⁹ the Court concluded that Kodak's sophisticated buyers would not necessarily constrain it from using information gaps to exploit unsophisticated buyers.⁶⁰

Although it rejected Kodak's argument, the Court accepted the premise that sophistication deserves special antitrust consideration. Recognizing that "large-volume, sophisticated purchasers" exist in certain markets,⁶¹ the Court acknowledged their ability to obtain competitive prices from powerful sellers.⁶² The Court also suggested that, when sophisticated buyers are relatively numerous or when sellers cannot price-discriminate between sophisticated and unsophisticated customers, sophisticates can force powerful sellers to offer competitive prices to all buyers.⁶³ By identifying sophistication as a possible counter-

54. *Id.*

55. *Id.*

56. *Id.*

57. *Id.*

58. *Id.*

59. *Id.* at 2087. Kodak sold parts to customers who serviced their own equipment but refused to sell parts to customers who hired third-party service companies. *Id.* The Court reasoned that companies with their own service staff were likely to be "high volume users, the same companies for whom it is most likely to be economically worthwhile to acquire the complex information needed for the comparative lifecycle pricing." *Id.*

60. *Id.*

61. *Id.* at 2086.

62. *Id.*

63. *Id.* at 2086-87. In particular, the Court stated that "if a company is able to price discriminate between sophisticated and unsophisticated consumers, the sophisticated will be unable to prevent the exploitation of the uninformed," *id.*, a statement whose negative inference is that, when price discrimination is not possible, sophisticated firms can protect unsophisticated firms from dominant sellers.

weight to market power, the Court thus affirmed the significance of sophistication and appreciably enlarged its scope.

III. THE PROBLEMS OF DEFINING SOPHISTICATION

Introducing corporate sophistication into antitrust law creates an obligation to specify its meaning. Defining sophistication, however, presents an intractable conceptual dilemma. If sophistication constitutes an independent variable that can influence judicial measures of market power, it must differ from already recognized measures of market power. Because pre-sophistication antitrust determined market power according to factors such as firm size and market share,⁶⁴ a concept of sophistication indistinct from these factors would be redundant. Drawing a clear line between sophistication and other sources of market power, however, inevitably results in definitions of sophistication too amorphous for effective judicial administration.

A concept of sophistication divorced from considerations of other sources of market power must embrace a specific conception of super-rationality. Two possibilities exist. Courts could define sophisticated firms as those with consistently large profits. This approach is superficially sensible; if the pursuit of profit-maximization defines rationality, then persistently high profits must mark firms as super-rational.

Several problems render this definition inadequate. Because high profits may reflect corporate size or market share,⁶⁵ this approach fails to distinguish sophistication from traditional measures of market power. In addition, large profits often reflect factors that do not indicate commercial know-how or success.⁶⁶ Finally, evaluating and comparing inter-firm and inter-market profitability levels is administratively cumbersome. For such reasons, perhaps, although most recent courts have distin-

64. See *supra* notes 23, 44 (describing courts' reliance on market share as proxy for market power). Other suggested measures of power included consistently high profits, wide price-cost margins, and the continuing ability to price-discriminate. See 2 AREEDA & TURNER, *supra* note 34, ¶¶ 507-516, at 330-46; HOVENKAMP, *supra* note 27, §§ 3.1-3.7, at 55-82.

65. Areeda and Turner write that "persistent excess returns are convincing proof of durable, individually held market power for a firm that is the only producer of a physically distinguishable product, or that has produced a high and relatively stable proportion of the output of that product." 2 AREEDA & TURNER, *supra* note 34, ¶ 508, at 331; see also 2 *id.* ¶¶ 508-512, at 331-37 (discussing excess returns and market power).

66. Large profits could, for example, arise from the sale of capital assets, reward the high risk of doing business in certain markets, or result from the choice of accounting methodology.

guished sophistication from other sources of market power,⁶⁷ none has defined sophistication by reference to corporate profits.

Courts instead have favored an approach that defines sophistication as tactical expertise or negotiating success.⁶⁸ This approach also has intuitive appeal. Common experience teaches that some firms are "smarter" than others and regularly negotiate "better" deals. So conceived, sophistication simply formalizes an everyday reality of commercial life.

Even putting aside the difficulty of defining "smarter" and "better," however, the tactical approach to defining sophistication has problems. Tactical expertise and commercial success are relative standards that do not always fairly indicate sophistication. Instead of defining "winners" as sophisticated, they may define "losers" as naive. Sensible rules of thumb do not translate easily into cogent rules of law.⁶⁹

More importantly, tactical expertise and business success cannot define sophistication because they are outward manifes-

67. See, e.g., *Eastman Kodak Co.*, 112 S. Ct. at 2086 ("As Kodak notes, there likely will be some large-volume, sophisticated purchasers who will undertake the comparative studies and insist [on] . . . competitive lifecycle prices."); *United States v. Archer-Daniels-Midland Co.*, 781 F. Supp. 1400, 1416 (S.D. Iowa 1991) (referring to "large, sophisticated and powerful buyers"); *FTC v. R.R. Donnelley & Sons Co.*, 1990-2 Trade Cas. (CCH), ¶ 69,239, at 64,852, 64,855 (D.D.C. Aug. 27, 1990) (describing buyers as "large, sophisticated customers"); *United States v. Country Lake Foods, Inc.*, 754 F. Supp. 669, 674 (D. Minn. 1990) (stating that buyers possessed "substantial power" and were "generally very sophisticated"); cf. *FTC v. Elders Grain, Inc.*, 868 F.2d 901, 905 (7th Cir. 1989) ("A concentrated and knowledgeable buying side makes collusion by sellers more difficult.").

Curiously, some courts have equated sophistication with size or power, avoiding the definitional problem but effectively eliminating sophistication as an independent construct. See, e.g., *FTC v. University Health, Inc.*, 938 F.2d 1206, 1213 n.13 (11th Cir. 1991) (equating buyer sophistication with "concentration on the buying side") (citing *Hospital Corp. of Am. v. FTC*, 807 F.2d 1381, 1391 (7th Cir. 1986), cert. denied, 481 U.S. 1038 (1987)); *United States v. United Tote, Inc.*, 768 F. Supp. 1064, 1085 (D. Del. 1991) (referring to sophisticated buyers as "very large consumers").

68. See *supra* note 40 and accompanying text (discussing cases).

69. Because even the classic formulations of economic common sense—"a fool and his money are soon parted"—use imprecise language unsuited to legal discourse (what is a "fool"? how fast is "soon"?), and are subject to theoretical criticism (in an inflationary economy, might it not be smart to spend one's money quickly?), some scholars argue that legal doctrine derived entirely from common sense creates more problems than it solves. See, e.g., Pierre Schlag, *An Appreciative Comment on Coase's The Problem of Social Cost: A View from the Left*, 1986 Wis. L. Rev. 919, 925 ("The common sense intuitions of the common law . . . are at best a crude reflection of political, economic or moral judgments. Not only are these intuitions parasitic and derivative, but they are also imperious to intellectual exploration.").

tations of something more basic and more difficult to define. This something else seems roughly akin to high corporate intelligence, a personal, intangible quality that is not amenable to easy definition. The judicial attempts to define sophistication in terms of "hard" bargaining and "successful" negotiating have tacitly acknowledged this problem but failed to resolve it. Indeed, instead of genuinely exploring the meaning of corporate intelligence, the merger courts have looked to practices or outcomes seemingly unrelated to "true" sophistication.⁷⁰

In contrast, *Kodak* more directly attempts to define sophistication in terms of corporate intelligence.⁷¹ Its view, that sophisticated buyers are "knowledgeable" about hard-to-discover price information, implies that courts can define sophistication as the quality of being fully informed about commercially relevant matters.⁷² This definition raises at least two conceptual problems of its own: intelligent firms would sometimes choose not to acquire relevant information, and the notion of commercially relevant information is itself unavoidably ambiguous.

Intelligent companies will not always inform themselves fully about important market facts. Sometimes they will have no choice but to remain uninformed. Market structure can pre-

70. Some courts have characterized as "sophisticated" such seemingly ordinary activities as paying close attention to prices and pursuing multiple competitive bids, but have failed to indicate why rational firms would not also engage in those activities. See, e.g., *United States v. Baker Hughes, Inc.*, 908 F.2d 981, 986 (D.C. Cir. 1990) (observing that the receipt of multiple bids indicates sophistication); *Country Lake Foods, Inc.*, 754 F. Supp. at 674 (finding that sophisticated milk buyers closely monitored milk prices).

71. A precise understanding of *Kodak's* approach is made difficult by, among other things, its punctuation. The relevant portion of the opinion states that "[a]s *Kodak* notes, there likely will be some large-volume sophisticated purchasers who will undertake the comparative studies [of lifecycle pricing] and insist, in return for their patronage, that *Kodak* charge them competitive lifecycle prices." *Eastman Kodak Co.*, 112 S. Ct. at 2086. The absence of a comma after the word "purchasers" might indicate that the Court defines sophisticated firms as those that are (i) fully informed about life cycle prices and (ii) insistent on receiving competitive prices. Alternatively, it might mean that the Court has no view of what constitutes sophistication but simply believes that, whatever it may be, sophistication triggers the acquisition of full information and the subsequent insistence on competitive prices. This Article reads *Kodak* to define sophistication as knowledgeability plus insistence; broader readings would be more susceptible to the Article's critique.

72. The Court of Appeals for the Seventh Circuit has also described sophisticated buyers as "knowledgeable," but without specifying that term's meaning. See *FTC v. Elders Grain, Inc.*, 868 F.2d 901, 905 (7th Cir. 1989) ("Buyers of industrial dry corn are . . . large and sophisticated A concentrated and knowledgeable buying side makes collusion by sellers more difficult.").

clude the production of full information,⁷³ or relevant information can become available too late to be useful.⁷⁴ Sometimes intelligent firms will deliberately refrain from acquiring information because its acquisition costs exceed its anticipated value. Indeed, in these circumstances companies bear witness to their intelligence by *not* becoming fully informed.⁷⁵

In addition, because commercially relevant information can come in many forms and from different sources, it will often be unclear whether and how the presence of one fact might compensate for the absence of another. In *Kodak*, for example, the Court thought that, because Kodak's competitors did not know its life cycle prices, they could not help consumers make informed choices about whose product to buy.⁷⁶ In Kodak's conceded competitive market,⁷⁷ however, competitors presumably would tell prospective buyers that Kodak's life cycle prices were indeterminate and subject to post-purchase manipulation. Although not the same as knowledge of Kodak's life cycle price,

73. The "public good" properties of information, and the relative ease with which some firms can exploit information produced by others, often deter its production. See PAUL A. SAMUELSON & WILLIAM D. NORDHAUS, *ECONOMICS* 48-49, 713-15 (12th ed. 1985); see also Alan Schwartz & Louis L. Wilde, *Intervening in Markets on the Basis of Imperfect Information: A Legal and Economic Analysis*, 127 U. PA. L. REV. 630, 632-38 (1979) (discussing the relevance of imperfect information in the marketplace).

74. This was the case in *Kodak*, and would also be the case in other markets for complex durable goods. When products are long-lived and require periodic maintenance, determining at purchase their life cycle prices entails estimating the frequency and intensity of future usage, future costs of parts and services, and the likelihood that technological changes will make the products obsolete. See *supra* note 49 (discussing life cycle prices). Buyers cannot confidently make these estimates at the time of purchase, because the information necessary to their accuracy cannot be known until the future. *Eastman Kodak Co.*, 112 S. Ct. at 2086.

75. See GEORGE J. STIGLER, *The Economics of Information*, in *THE ORGANIZATION OF INDUSTRY*, *supra* note 28, at 171; see also Richard A. Posner, *Privacy, Secrecy, and Reputation*, 28 BUFF. L. REV. 1, 13 (1979) ("The rational individual or firm will terminate search [for additional information] at the point where the marginal gain in knowledge from additional inquiry is just equal to the marginal cost . . .").

76. *Eastman Kodak Co.*, 112 S. Ct. at 2086.

77. It was stipulated on appeal to the Ninth Circuit that the primary markets for equipment were competitive. *Image Technical Servs., Inc. v. Eastman Kodak Co.*, 903 F.2d 612, 616 n.3 (9th Cir. 1990), *aff'd*, 112 S. Ct. 2072 (1992); see also 112 S. Ct. at 2081 n.10 (reiterating stipulation). Although a conspiracy to restrict the flow of life cycle pricing information would clearly be unlawful, see Harry S. Gerla, *Federal Antitrust Law and the Flow of Consumer Information*, 42 SYR. L. REV. 1029, 1029 (1991), no one alleged in *Kodak* that such a conspiracy existed.

this information arguably would serve a functionally equivalent purpose.

Ultimately, although it expressly confronts the dilemma of describing superior corporate intelligence, *Kodak* demonstrates the serious problems of defining sophistication as corporate knowledgeability.⁷⁸ The *Kodak* Court's failure to arrive at a satisfactory definition, like the failure of the merger courts, suggests that the new sophistication contains fatal conceptual flaws. The inadequacy of existing definitions may, of course, owe itself to circumstance. None of the recent cases involved a dispute about the definition of sophistication, so no court needed to delve into its precise meaning. Indeed, future courts may well formulate definitions different from those that have thus far emerged. This possibility, however, should not obscure the basic problem. On the one hand, courts must distinguish sophistication from other sources of market power. On the other hand, a distinct concept of sophistication would be too amorphous for coherent definition.

IV. THE IMPLICATIONS OF SOPHISTICATION ANALYSIS

A. DOCTRINAL CONSEQUENCES

The new sophistication substantively alters both merger law and the broader inquiry into market power. Pre-sophistication merger courts had assumed that all powerful firms were potential entrants into contestable markets offering higher than average returns on investment.⁷⁹ The sophisticated-buyer defense replaces this view with a narrower, fact-based approach that regards potential entry as a function of sophistication as well as traditional market power.⁸⁰

The new approach requires merger defendants asserting a post-merger entry defense to prove buyer sophistication.⁸¹ It

78. *Kodak's* full definition of sophistication requires knowledgeability plus insistence on receiving competitive prices. See *supra* note 71 (discussing the definition of sophistication in *Kodak*). The insistence requirement is not only imprecise, it ignores the likelihood that dominant sellers would offer competitive prices to powerful buyers without the buyers' insistence. See *FTC v. Elders Grain, Inc.*, 868 F.2d 901, 905 (7th Cir. 1989) ("Colluders are tempted to cheat on their fellows when they can augment their profits by a single large sale (at a shade below the cartel price) that is unlikely to be detected.>").

79. See *supra* notes 21, 37 and accompanying text (discussing potential entry into contested markets).

80. See *supra* part II.A (discussing the sophisticated buyer defense).

81. See *supra* notes 42-63 and accompanying text (discussing *Kodak*).

also restricts the availability of the traditional post-merger entry defense by substantially reducing the population of potential entrants.⁸² The changes wrought by the sophisticated-buyer defense thus increase the difficulty of defending merger challenges.

Sophistication doctrine also significantly reshapes the market power inquiry. At its simplest level, *Kodak* suggests that sophistication can both counteract and substitute for the market power that high market share presumptively creates.⁸³ Because high market share, as a proxy for market power, is a necessary element of proof in successful claims of monopolization,⁸⁴ attempted monopolization,⁸⁵ unlawful tying arrangements,⁸⁶ and group boycotts,⁸⁷ the market power inquiry pervades antitrust litigation. Sophistication now forms an integral part of this inquiry.

In addition, the suggestion that sophistication can negate market power implies that it can generate such power as well. Sophistication doctrine contemplates that whenever a firm can obtain market power through a maximum of intelligence and a minimum of wealth, sophisticates will obtain it. Small but knowledgeable firms might become powerful, for example, by virtue of first discovering the best source of high-quality, low-cost inputs and buying enough of such inputs to raise rivals'

82. Although courts could set the threshold of sophistication low enough to include most firms in the population of potential merger entrants, recent cases indicate that they will probably not do so. See *supra* note 70 (noting cases). Indeed, such a low threshold would call into question the entire rationale of sophistication doctrine.

83. See 112 S. Ct. 2072, 2086 (1992); see also *supra* notes 46, 61-63 (discussing the Court's perception of the relationship between sophistication and market price).

Economists generally consider "market power" and "monopoly power" as synonymous. See Richard Schmalensee, Comment, *Another Look at Market Power*, 95 HARV. L. REV. 1789, 1789 n.1 (1982). The Supreme Court views market power as a necessary but not sufficient precondition to the possession of unlawful monopoly power. See *National Collegiate Athletic Ass'n v. Board of Regents*, 468 U.S. 85, 109-13 (1984) (holding that the NCAA had market power and thus carried the "heavy burden of establishing an affirmative defense which competitively justifies [an] apparent deviation from the operations of a free market"); *United States v. Grinnell Corp.*, 384 U.S. 563, 570-71 (1966) (defining unlawful monopolization as the "wilfull acquisition or maintenance" of market power).

84. *National Collegiate Athletic Ass'n*, 468 U.S. at 113.

85. *Spectrum Sports, Inc. v. McQuillan*, 113 S. Ct. 884, 892 (1993).

86. *Jefferson Parish Hosp. Dist. No. 2 v. Hyde*, 466 U.S. 2, 13-14 (1984).

87. *FTC v. Indiana Fed'n of Dentists*, 476 U.S. 447, 458 (1986); *Northwest Wholesale Stationers v. Pacific Stationery & Printing Co.*, 472 U.S. 284, 298 (1985).

costs.⁸⁸ They might consistently outpace their rivals in devising and adopting profitable organizational and contractual innovations. Taken to its logical extreme, sophistication doctrine could thus reshape the notion of market power, uncoupling it from market share and linking it instead to intelligence or knowledge.

The doctrinal changes associated with sophistication will bring troubling consequences in their wake. The displacement of the rationality assumption will require new fact-finding methodologies and new standards for scrutinizing commercial behavior. The complexity of this new process, its cost, and the unpredictability of its outcomes will compromise the administration of antitrust litigation, deter enforcement, inhibit private ordering, and retard the law's movement toward efficiency.

B. METHODOLOGICAL CONSEQUENCES

Sophistication doctrine requires fact-intensive examinations into the sophistication of all firms in the relevant market.⁸⁹ Keeping such examinations within manageable bounds poses a substantial methodological problem. Coherent definitions of sophistication would ameliorate this problem, but, as shown above, they are impossible to formulate.⁹⁰ Even if one accepts the definitions developed to date, however, it is readily apparent that factual inquiries into sophistication would be virtually limitless.

If, as the merger courts suggest, tactical "expertise" and bargaining "success" define sophistication,⁹¹ then courts must define these terms as well. This task would not be easy.⁹² Even

88. This is a sophistication-based variant of the raising rivals' cost thesis. See Thomas G. Krattenmaker & Steven C. Salop, *Anticompetitive Exclusion: Raising Rivals' Costs to Achieve Power Over Price*, 96 YALE L.J. 209, 230-82 (1986) (discussing several exclusionary practices used to raise rival's costs, and the effectiveness of such practices).

89. Although courts have referred almost exclusively to sophisticated buyers, the rationale of sophistication doctrine is not buyer-specific. Sellers can just as easily display tactical expertise, enjoy bargaining success, and acquire full information. Moreover, because all firms buy in some markets and sell in others, sophisticated buyers are likely to be sophisticated sellers as well. The logic of sophistication thus embraces both sides of the market and by indicating that, when enough firms are sophisticated, sophistication can affect market power, *Kodak* arguably requires courts to examine all firms for sophistication. See *Eastman Kodak Co. v. Image Technical Servs., Inc.*, 112 S. Ct. 2072, 2086-87 (1992).

90. See *supra* part III (discussing difficulties).

91. See *supra* note 40 and accompanying text (discussing cases).

92. Without belaboring the point, it can safely be said that "expertise" and "success" can be viewed in either objective or relative terms. Under either view,

if accomplished, it would introduce a long series of complex inquiries. Because isolated instances of expertise or success should not define a firm as sophisticated, courts would have to examine corporate histories for "adequate" evidence of these factors. This inquiry presupposes that courts have first decided how much history, whose history, and which history to examine.⁹³ Finally, to make sense of those histories, courts will need a means of weighing successes against failures and of characterizing an entire course of conduct.

The *Kodak* informational approach to sophistication produces comparable difficulties. If sophistication consists of being "fully informed" about commercially "relevant" matters, courts must decide what these words mean.⁹⁴ They must quantify and measure market information, although the academic literature prescribes no method for doing so.⁹⁵ Courts must also decide how much of such information is relevant, how much relevant information alleged sophisticates possess, and whether, according to an "acceptable" standard,⁹⁶ a corporation's store of relevant information suffices to render it sophisticated.⁹⁷

defining the factors of interest, measuring them, and evaluating their import comprise a substantial undertaking.

93. The choices are far from simple: five years of history, or ten; the history of current management only, or of past managements as well; the entire negotiating history of the relevant period, or only the history of negotiations properly characterized as "important."

94. Several possibilities exist. "Fully informed" firms could, for example, possess (1) all conceivable information, (2) all information produced by the market, or (3) less information than (1) or (2) but "enough" to make "rational" decisions about "important" matters.

95. See, e.g., Richard Craswell, *Tying Requirements in Competitive Markets: The Consumer Protection Issues*, 62 B.U. L. REV. 661, 688 (1982) (questioning whether courts can determine how much information particular markets should produce); Schwartz & Wilde, *supra* note 73, at 660-62 (doubting that courts can reasonably speculate about the informational content of a hypothetically perfectly informed market).

96. Determining an acceptable standard would require choosing between an objective test and a relative one, and then choosing between different objective or relative tests. See *supra* note 92. Possible objective tests include: (a) information actually in the market, and (b) information that would exist if the market produced all relevant information. Relative tests, meanwhile, could ask whether alleged sophisticates are well-informed compared to: (1) firms in their market, or (2) firms in other markets as well.

97. The measurement problems are striking. If sophisticated firms are defined as those that possess all information regardless of cost, courts will have to determine how much information hypothetical spendthrift firms could elicit. If they are defined instead as firms that possess only information whose acquisition is cost-effective, courts will have to calculate the cost and value of all information available, as well as how much additional information could have been produced cost-effectively.

In addition to creating problems of measurement, sophistication doctrine raises the problem of calibrating judicial scrutiny to match the needs of various markets. The rationality assumption led pre-sophistication courts to regard all markets with equal scrutiny. Indeed, so powerful was this assumption that courts refused to pay special attention even to highly imperfect markets, such as those for professional services.⁹⁸

By acknowledging inter-firm and inter-market differences in rationality, the new sophistication requires differing levels of judicial scrutiny. The logic of sophistication suggests, for example, that transactions between participants of "unequal" intelligence deserve closer examination and merit the application of more rigid standards than those involving equals. Similarly, markets displaying "significant" informational imperfections also may warrant heightened scrutiny. Differing levels of scrutiny, in turn, necessitate methodologies for identifying the various levels, differentiating among them, and choosing the level appropriate for each case.

C. ADMINISTRATIVE CONSEQUENCES

The doctrinal and methodological changes produced by the new sophistication will impede the effective adjudication of antitrust disputes. By displacing the rationality assumption with a fact-specific approach, sophistication doctrine narrows the availability of summary judgment. The imprecision inherent in its approach will prevent private firms from confidently ordering their behavior. Its costs and uncertainty will stifle antitrust enforcement and retard efficient doctrinal change. Finally, its

98. Several Supreme Court opinions prior to 1975 left the impression that the "learned professions" were exempt from antitrust scrutiny. See, e.g., *FTC v. Raladam Co.*, 283 U.S. 643, 653 (1931) (stating that "[m]edical practitioners . . . follow a profession and not a trade"). The Court dispelled that impression in *Goldfarb v. Virginia State Bar*, 421 U.S. 773 (1975), declaring that "[t]he nature of an occupation, standing alone, does not provide sanctuary from the Sherman Act." *Id.* at 787; see also *Arizona v. Maricopa County Medical Soc'y*, 457 U.S. 332, 349 (1982) (stating that "[i]n unequivocal terms . . . the Sherman Act, so far as price-fixing agreements are concerned, establishes one uniform rule applicable to all industries alike") (internal quotations omitted); Barry R. Furrow, *The Changing Role of the Law in Promoting Quality in Health Care: From Sanctioning Outlaws to Managing Outcomes*, 26 HOUS. L. REV. 147, 172-90 (1989) (discussing the need for regulatory and judicial action to assist the free flow of information in the healthcare industry); Thomas L. Greaney, *Quality of Care and Market Failure Defenses in Antitrust Health Care Litigation*, 21 CONN. L. REV. 605, 608-16 (1989) (showing that, despite valid quality-based justifications for restraint of trade in healthcare, the Supreme Court has unqualifiedly stated that antitrust scrutiny must focus on economic factors).

methodological demands will overburden the fact-finding and interpretive capacities of existing institutional structures.

1. The Incompatibility of Sophistication and Summary Judgment

Because “[a]ntitrust cases are notoriously extended,”⁹⁹ the Supreme Court has emphasized the importance of administrative efficiency in antitrust law¹⁰⁰ and has promoted summary judgment as a particularly effective means of achieving such efficiency.¹⁰¹ Less than ten years ago, the Court described summary judgment “not as a disfavored procedural shortcut” but as an “integral part of the Federal Rules . . . , which are designed ‘to secure the just, speedy and inexpensive determination of every action.’”¹⁰² Observers widely regarded this express recognition of the benefits of summary judgment as directly rejecting the earlier view that it “should be used sparingly in complex antitrust litigation”¹⁰³ and, instead, encouraging the expanded use

99. *Ball Memorial Hosp., Inc. v. Mutual Hosp. Ins., Inc.*, 784 F.2d 1325, 1333 (7th Cir. 1986).

100. *See, e.g.*, *FTC v. Superior Court Trial Lawyers Ass’n*, 493 U.S. 411, 430 (1990) (“The administrative efficiency interests in antitrust regulation are unusually compelling.”).

101. *See Matsushita Elec. Indus. Co. v. Zenith Radio Corp.*, 475 U.S. 574, 598 (1986) (reinstating Matsushita’s motion for summary judgment and remanding for further proceedings). Along with *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242 (1986), and *Celotex Corp. v. Catrett*, 477 U.S. 317 (1986), *Matsushita* was thought to presage an expanded and easier use of summary judgment. *See, e.g.*, Jack H. Friedenthal, *Cases on Summary Judgment: Has There Been a Material Change in Standards?*, 63 NOTRE DAME L. REV. 770, 777 (1988) (“[T]he net effect [of the summary judgment trilogy] should be the more widespread granting of summary judgment”); Marcy J. Levine, Comment, *Summary Judgment: The Majority View Undergoes Complete Reversal in the 1986 Supreme Court*, 37 EMORY L.J. 171, 209 (1988) (“The impact of the three . . . cases . . . is fairly clear. Courts will adopt a considerably more permissive posture toward the summary judgment motion”). The Federal Judicial Center recently concluded that those cases “did not produce a general increase in summary judgment activity in the district courts examined.” Joe S. Cecil, *Trends in Summary Judgment Practice: A Summary of Findings 16* (Apr. 1991) (unpublished manuscript on file at the Federal Judicial Center and with author). Some United States Courts of Appeals, however, have actively employed summary judgment in antitrust cases. *See, e.g.*, *Bhan v. NME Hosp., Inc.*, 929 F.2d 1404, 1409 (9th Cir.) (citing cases), *cert. denied*, 112 S. Ct. 617 (1991).

102. *Celotex Corp.*, 477 U.S. at 327 (quoting FED. R. CIV. P. 1).

103. *Poller v. Columbia Broadcasting Sys., Inc.*, 368 U.S. 464, 473 (1961); *see also* Stephen Calkins, *Summary Judgment, Motions to Dismiss, and Other Examples of Equilibrating Tendencies in the Antitrust System*, 74 GEO. L.J. 1065, 1120 (1986) (quoting commentators critical of the use of summary judgment in antitrust cases).

of summary judgement.¹⁰⁴

Prior to the new sophistication, antitrust courts had permitted arguments founded primarily on economic theory to support successful motions for summary judgment.¹⁰⁵ Case-specific economic facts were relevant, but if facts conflicted with theory, courts tended to discount their weight.¹⁰⁶ Theoretical arguments depend heavily, however, on the vitality of the rationality assumption, and any weakening of that assumption naturally undermines their force.

For example, small- and mid-size firms could formerly argue convincingly in support of summary judgment motions that they lacked the market share prerequisite to power. Now, however, such arguments may lack dispositive force. By enabling parties to contend that low market share understates actual market power, sophistication doctrine trumps the presumption that small defendants can do no harm,¹⁰⁷ requiring factual inquiries

104. See, e.g., *Oksanen v. Page Memorial Hosp.*, 945 F.2d 696, 708 (4th Cir. 1991) (holding that *Matsushita* "approv[es] the use of summary judgment in complex antitrust litigation"), cert. denied, 112 S. Ct. 973 (1992); *Collins v. Associated Pathologists, Ltd.*, 844 F.2d 473, 475 (7th Cir. 1988) ("[C]ontrary to the emphasis of some prior precedent, the use of summary judgment is not only permitted [by *Matsushita*] but encouraged . . . in antitrust cases."), cert. denied, 488 U.S. 852 (1988); Susan S. DeSanti & William E. Kovacic, *Matsushita: Its Construction and Application by the Lower Courts*, 59 ANTITRUST L.J. 609, 632-53 (1991) (examining the implications of the summary judgment defense in antitrust cases); Samuel Issacharoff & George Loewenstein, *Second Thoughts About Summary Judgment*, 100 YALE L.J. 73, 88-91 (1990) (discussing the expanded use of summary judgment in all types of cases).

105. *Matsushita* represents the high water mark of this approach. See *Matsushita*, 475 U.S. at 587 ("[I]f the factual context renders [a] claim implausible—if the claim is one that simply makes no [theoretical] economic sense—[a party] must come forward with more persuasive evidence to support their claim than would otherwise be necessary."); see also Lawrence T. Festa, III, *Eastman Kodak Co. v. Image Technical Services, Inc.: The Decline and Fall of the Chicago Empire*, 68 NOTRE DAME L. REV. 619, 648 (1993) ("[C]ommentators and courts had viewed *Matsushita* as a colossus in the world of antitrust summary judgment."); Lisa M. Judson, Note, *Kodak v. Image Technical Services: The Taming of Matsushita and the Chicago School*, 1993 WIS. L. REV. 1633, 1649 (discussing the use of economic theory in *Matsushita*).

106. In *Matsushita*, the Court expressly rejected empirical evidence about the operation of the market, in favor of economic assumptions in conflict with that evidence. 475 U.S. at 594 n.19 ("[I]n our view the expert opinion evidence of below-cost pricing has little probative value in comparison with the [theoretical] factors, discussed in [the Opinion], that suggest that such conduct is irrational.").

107. It can also underlie the argument that large size overstates actual power. Taking their cue from the merger courts, large defendants can claim that the sophistication of firms with which they deal rebuts the presumption of power normally arising from large market share.

into sophistication and its effects and making summary judgment impossible.¹⁰⁸ The fact-specific nature of sophistication doctrine thus narrows the potential scope of summary judgment and precludes antitrust from realizing the important efficiencies of a more theoretical approach.¹⁰⁹

Diminishing the availability of summary judgment will ultimately discourage antitrust enforcement. As courts discard simplifying assumptions about market behavior in favor of complex, fact-specific investigations, the cost of trial and the unpredictability of its outcome will increase. Increased cost and complexity will inhibit agency inquiry¹¹⁰ and deter potential private plaintiffs from bringing suit.¹¹¹ Although some commentators have advocated limiting antitrust enforcement,¹¹² none contends that the expense and uncertainty of trial should serve as the means for doing so.

2. Private Ordering Concerns: Sophistication as a Sub-Optimal Rule

The conception of a law-based political order places great theoretical and practical importance on the value of private ordering. Political theory suggests that governmental intervention in private affairs should follow strictly from publicly available, comprehensible rules and standards that can produce

108. *Kodak* pays lip service to the force of economic theory, acknowledging that "[i]f the plaintiff's theory is economically senseless, no reasonable jury could find in its favor, and summary judgment should be granted." *Eastman Kodak Co. v. Image Technical Servs., Inc.*, 112 S. Ct. 2072, 2083 (1992). But, *Kodak's* concern with the market power obtainable from information gaps and, more importantly, its suggestion that sophistication constitutes a form of market power, *id.* at 2081-87, effectively makes all theories sensible and requires factual examinations in every case.

109. The impact of *Kodak* on summary judgment quickly generated substantial scholarly commentary. See Festa, *supra* note 105, at 662; William W. Schwarzer & Alan Hirsch, *Summary Judgment After Eastman Kodak*, 45 *HASTINGS L.J.* 1, 4-20 (1993); Judson, *supra* note 105, at 1633-73; *The Supreme Court, 1991 Term—Leading Cases*, 106 *HARV. L. REV.* 163, 328, 335 (1992).

110. Budgetary limitations and the high cost of the factual inquiries that sophistication doctrine requires will naturally constrain enforcement agencies from investigating allegations of anticompetitive behavior, especially given the expense of trial and increased uncertainty of a favorable outcome.

111. See *infra* note 130 (discussing factors plaintiffs consider in bringing suit).

112. See Frank H. Easterbrook, *The Limits of Antitrust*, 63 *TEX. L. REV.* 1, 2 (1984) ("If the court errs by condemning a beneficial practice, the benefits may be lost for good If the court errs by permitting a deleterious practice, though, the welfare loss decreases over time.").

concrete, predictable outcomes.¹¹³ Laws that are substantially indeterminate undermine the legitimacy of government under law.¹¹⁴ Moreover, as a practical matter, indeterminate laws may prevent citizens from predicting the legal consequences of their behavior, frustrating personal and business autonomy and burdening potentially beneficial activity with legal risk.¹¹⁵

The indeterminable meaning of sophistication doctrine and the unpredictability of its application will inhibit private ordering. Because clear and predictable legal rules are critical to private business, imprecise antitrust doctrine can prove especially costly. Antitrust disputes usually involve large sums of money, and rarely occur by accident. The firms whose transactions and behaviors engender antitrust disputes plan such activities, often years in advance, with the help of professional legal advice. The projected legal consequences of proposed transactions bear heavily on their implementation. Predictable antitrust rules thus enjoy substantial commercial value.¹¹⁶

The importance of legal predictability for corporate decision-making in general and for encouraging capital investment in particular suggests that antitrust doctrine should function like "successful" administrative rules, affording regulated actors clear behavioral guidelines that effectively promote the underlying principles of competition policy without incurring inefficient administrative or private costs.¹¹⁷ Indeed, antitrust courts and

113. See JOHN H. ELY, *DEMOCRACY AND DISTRUST* 4-7, 101-04 (1980) (arguing that courts should overrule majoritarian policies only when the political system is flawed); Jerry L. Mashaw, *Prodelegation: Why Administrators Should Make Political Decisions*, 1 J.L. ECON. & ORGANIZATION 81, 86-88 (1985) (discussing the expectation of citizens that democracy will produce a tight connection between majoritarian institutions and legal decisions).

114. See Ronald Dworkin, *Hard Cases*, in *TAKING RIGHTS SERIOUSLY* 81, 81-86 (1977); Roberto M. Unger, *The Critical Legal Studies Movement*, 96 HARV. L. REV. 563, 564-65, 576-77 (1983).

115. See generally Christopher L. Kutz, Note, *Just Disagreement: Indeterminacy and Rationality in the Rule of Law*, 103 YALE L.J. 997, 999-1000 (1994) (questioning whether indeterminate laws pose greater practical problems than the theoretical problems critics generally address).

116. See Robert Pitofsky, *In Defense of Discounters: The No-Frills Case for a Per Se Rule Against Vertical Price Fixing*, 71 GEO. L.J. 1487, 1489 (1983) ("Per se rules represent a recognition that . . . there is a virtue in telling businessmen accurately and precisely the location of legal limits on business conduct.").

117. See, e.g., Colin S. Diver, *The Optimal Precision of Administrative Rules*, 93 YALE L.J. 65, 67 (1983) (discussing the elements of a successful administrative rule); Isaac Ehrlich & Richard A. Posner, *An Economic Analysis of Legal Rulemaking*, 3 J. LEGAL STUD. 257, 257-61 (1974) (discussing the relative efficiency of legal rules and standards); Louis Kaplow, *Rules Versus Standards: An Economic Analysis*, 42 DUKE L.J. 557, 557 n.1 (1992) (citing authorities).

commentators have explicitly recognized the "close connection" between antitrust law and other forms of administrative regulation of markets.¹¹⁸ This connection argues forcefully for antitrust doctrine sufficiently precise to satisfy the needs of business for predictable behavioral guidelines.

Administrative law scholars claim that the success of a rule depends upon the effect of its wording on its intended audience.¹¹⁹ Successful rules, they contend, share three characteristics: "transparency," "accessibility," and "congruence."¹²⁰ "Transparent" rules have "[a] well-defined and universally accepted meaning within the relevant community."¹²¹ The terms in "accessible" rules apply "to concrete situations without excessive difficulty or effort."¹²² "Congruent" rules are effective in promoting underlying policy.¹²³

Sophistication doctrine displays none of the characteristics of successful administrative rules. Its terminology is not transparent; rather, its inherently ambiguous, qualitative character will prevent the business community from understanding it in any well-defined fashion. Sophistication doctrine is inaccessible because its application invariably will entail "excessive difficulty or effort" in the form of prolonged, unstructured, and inconclusive inquiries. Finally, sophistication doctrine is not congruent because its elusive meaning and the cost and uncertainty of its application will hamper its effectiveness in promoting competition policy.¹²⁴

These failures will inhibit private ordering. Without the

118. See DANIEL F. SPULBER, *REGULATION AND MARKETS* 463, 566 (1989); Andrew I. Gavil, *Reconstructing the Jurisdictional Foundation of Antitrust Federalism*, 61 GEO. WASH. L. REV. 657, 669 (1993); see also *Barry Wright Corp. v. ITT Grinnell Corp.*, 724 F.2d 227, 234 (1st Cir. 1983) ("[Antitrust] law is an administrative system . . . Rules that seek to embody every economic complexity and qualification may well, through the vagaries of administration, prove counter-productive, undercutting the very economic ends they seek to serve.").

119. Diver, *supra* note 117, at 67.

120. *Id.* at 66-67.

121. *Id.* at 67.

122. *Id.*

123. *Id.*

124. By contrast, the "rules" derived from the rationality assumption contain none of these defects. They treat all firms alike, in terms easily understood, and promote effectively, if not perfectly, well-known policy goals. Pre-sophistication merger law, for instance, permitted seller-side mergers adding notably to concentration levels, provided buyers of the merger partners were either sufficiently large or concentrated to dissipate post-merger seller dominance. The latter proviso constituted a power-based test whose terms were comprehensible and which advanced consumer welfare concerns with a minimum of administrative cost.

guidance that "successful" rules provide, private businesses will be left to guess about the meaning of market power, and therefore about the legality of innovative arrangements and transactions. Sophistication doctrine informs them that size no longer completely defines market power but neglects to tell them what does. This uncertain message increases the risk of, and therefore will discourage, potentially beneficial behavior. By clouding the meaning of antitrust law, the ambiguous rules of sophistication doctrine thus threaten to calm the "perennial gale of creative destruction,"¹²⁵ the impetus to valuable risk-taking that expands the economy and improves consumer welfare.

3. Durable Inefficiencies of Sophistication

By discouraging public and private enforcement, the cost and uncertainty of sophistication doctrine will retard any tendency of antitrust to achieve greater legal efficiency. Law and economics scholars have hypothesized that "the common law is best . . . explained as a system for maximizing the wealth of society."¹²⁶ They theorize that, because inefficient legal rules impose higher transaction costs on parties subject to them, disputes arising under such rules result in litigation more frequently than disputes arising under efficient rules.¹²⁷ More frequent litigation, they argue, improves the law's efficiency by increasing the likelihood that courts will overturn or reformulate inefficient rules.¹²⁸

Because the financial stakes involved in antitrust are so large, inefficient antitrust doctrine imposes unusually high transaction costs.¹²⁹ Such costs, in conjunction with the profit

125. JOSEPH A. SCHUMPETER, CAPITALISM, SOCIALISM, AND DEMOCRACY 83-84 (3d ed. 1950) (describing capitalism as a "perennial gale of creative destruction").

126. POSNER, *supra* note 14, at 23. Extensive literature documents the development of this theory over the past 30 years. See, e.g., Ronald H. Coase, *The Problem of Social Cost*, 3 J. LAW & ECON. 1 (1960); Richard A. Posner, *Killing or Wounding to Protect a Property Interest*, 14 J.L. & ECON. 201 (1971); George L. Priest, *The Common Law Process and the Selection of Efficient Rules*, 6 J. LEGAL STUD. 65 (1977). Although it claims descriptive and normative efficiency for the common law, efficiency theory does not argue that every common law doctrine and decision is efficient. POSNER, *supra* note 14, at 23.

127. See Priest, *supra* note 126, at 68.

128. *Id.* at 73 ("To the extent that a statute or an interpretation of a statute imposes inefficiencies, it will be more likely to be overturned because of the greater likelihood of relitigation.").

129. "Litigation costs are the product of vague rules combined with high stakes and nowhere is that combination more deadly than in antitrust litigation . . ." Easterbrook, *supra* note 112, at 12. Despite its statutory origins, anti-

motive and the benefits of greater legal predictability, should generally prompt antitrust disputants as a class to relitigate inefficient rules until courts reformulate them into coherent and predictable standards. By substantially raising the expense and uncertainty of trial, however, sophistication doctrine erects barriers to frequent litigation that will impede the movement of antitrust law toward greater efficiency.¹³⁰

For the common law to produce efficient rules, parties affected by inefficient rules must be willing and able to challenge them frequently. Efficiency theory presumes as much, postulating parties that litigate ambiguous rules, enjoy unhindered access to court, and can afford the cost of trial.¹³¹ The rules and methodology of sophistication doctrine, however, will make an already expensive trial process¹³² prohibitively costly, reducing the frequency of litigation and retarding the clarification of the law. Its complexity could thus immunize the new sophistication from regular challenge, preventing antitrust from becoming more efficient and permitting inefficient standards to linger.

trust is widely regarded as a common law field. See, e.g., Rudolph J. Peritz, *A Counter-History of Antitrust Law*, 1990 DUKE L.J. 263, 269 (“[J]udges and scholars have viewed the [Sherman Act] as little more than a congressional mandate to develop a federal common law of competition.”).

130. Formal studies of incentives inducing private parties to bring suit have examined the divergence between social and private costs and benefits, respectively, and the ways in which expanding or narrowing that divergence can affect the institution of suit. See, e.g., Louis Kaplow, *Private Versus Social Costs in Bringing Suit*, 15 J. LEGAL STUD. 371 (1986); Steven Shavell, *The Social Versus the Private Incentive to Bring Suit in a Costly Legal System*, 11 J. LEGAL STUD. 333 (1982). For potential private plaintiffs, the incidence of suit appears to be a function of anticipated private returns, discounted by the direct costs of suit, uncertainty of success, and length of time between commencement of suit and collection of judgment. The calculus for public plaintiffs would differ slightly, adding anticipated social benefits and social costs. Because sophistication doctrine substantially increases all cost factors and affects benefits uncertainly, it would discourage both categories of potential plaintiffs from bringing suit.

131. Priest, *supra* note 126, at 66-72.

132. See, e.g., JAMES B. STEWART, *THE PARTNERS* 53-113 (1983) (recounting the litigation of, and expenses incurred in litigating, IBM's antitrust cases in the 1970s and '80s). In describing the mammoth antitrust litigation between the United States and IBM in the 1970s, Stewart noted that “the government was asking for 5 billion additional documents . . . [which] would cost IBM \$1 billion to retrieve, review and produce.” *Id.* at 102. Indeed, the public good properties of litigation further increase the litigants' direct costs. See Richard A. Epstein, *The Social Consequences of Common Law Rules*, 95 HARV. L. REV. 1717, 1728 (1982).

4. Institutional Implications of Sophistication Doctrine

Twenty years ago, the United States Supreme Court expressed serious doubts about the judiciary's ability to solve complicated questions of antitrust economics. "[C]ourts," it said, "are of limited utility in examining difficult economic problems [They are] ill-equipped and ill-suited for such decision-making [and cannot] analyze, interpret, and evaluate the myriad of competing interests and the endless data that would surely be brought to bear on such decisions."¹³³ The Chicago school has since brought price theory to the forefront of antitrust analysis.¹³⁴ Its powerful assumptions have increased the availability of summary judgment and generally precluded the voluminous inquiries whose prospect troubled the Court.

By demanding elaborate inquiries, the new sophistication challenges the judiciary's capacity to resolve antitrust cases. Antitrust judges traditionally have not assessed market-wide levels of corporate sophistication or measured "difficult and costly" information gaps. Nor have they received academic training in the theoretical economics arguably bearing on these matters.¹³⁵ Consequently, concerns of judicial economy, comparative advantage, and accuracy in factfinding indicate that the judiciary may not be the best institution for unravelling the complexities of sophistication doctrine.

The inadequacy of the courts to face the new antitrust jurisprudence naturally suggests that administrative agencies might

133. *United States v. Topco Assocs.*, 405 U.S. 596, 609, 611-12 (1972) (footnote omitted).

134. See *infra* text accompanying notes 222-230 (discussing the Chicago school).

135. The complexities of sophistication doctrine will be even harder for juries to resolve. Indeed, the issues of jury ability to understand antitrust economics and the propriety of continuing jury involvement in antitrust litigation have been subjects of continuing academic debate. See, e.g., James M. Campbell, *The Current Understanding of the Seventh Amendment: Jury Trials in Modern Complex Litigation*, 66 WASH. U. L.Q. 63, 63-70 (1988) (arguing that a federal court may strike a plaintiff's jury demand in complex litigation); Thomas M. Jorde, *The Seventh Amendment Right to Jury Trial of Antitrust Issues*, 69 CAL. L. REV. 1, 67-77 (1981) (arguing that judges may bifurcate antitrust trials and decide market structure issues, while juries decide questions of conduct and damages); Frank M. Loo, *A Rationale for an Exception to the Seventh Amendment Right to a Jury Trial: In Re Japanese Electronic Products Antitrust Litigation*, 30 CLEV. ST. L. REV. 647, 657-72 (1981) (examining circumstances under which exceptions to the 7th Amendment jury trial right are permissible); Charles B. Renfrew, *The Propriety of a Jury in the Complex Antitrust Action*, 49 ANTITRUST L.J. 1023, 1023-27 (1980) (discussing practical and legal issues involved in trying antitrust cases before juries).

be better suited institutionally to resolve these complexities. Relative expertise and more flexible techniques of information-gathering could enable them to conduct and understand the industry-wide surveys that sophistication requires.¹³⁶ Moreover, while judicially-imposed remedies cover defendants only,¹³⁷ administrative rule-making can embrace entire markets, affording agencies the latitude necessary to correct structural imperfections beyond the reach of courts.¹³⁸

Significant drawbacks, however, compromise the advantages of the administrative model. Administrative rule-making demands a level of generality too broad for the firm-specific requirements of sophistication doctrine.¹³⁹ The variability of markets would require so many exceptions to rules governing sophisticated firms that any benefits of the administrative model would be lost.¹⁴⁰ In addition, the wide scope of the rule-making process would permit agency interference in private markets on a scale unimaginable under the adjudicative model, upsetting the balance between government intervention and market freedom that antitrust policy has struggled to achieve.¹⁴¹

136. The Supreme Court itself has praised "the empiric process of administration," and its ability to accomplish "validation by experience." *Phelps Dodge Corp. v. NLRB*, 313 U.S. 177, 194 (1941); see also Samuel Estreicher, *Policy Oscillation at the Labor Board: A Plea for Rulemaking*, 37 *ADMIN. L. REV.* 163, 171-75 (1985) (discussing the procedural advantages of administrative rule-making).

137. See generally AREEDA & KAPLOW, *supra* note 32, ¶¶ 137-152, at 62-104 (discussing criminal punishments, equitable remedies, and private actions directed at particular defendants).

138. Substantive administrative rule-making has been likened to legislation in its breadth and flexibility. See, e.g., RICHARD J. PIERCE, JR. ET AL., *ADMINISTRATIVE LAW AND PROCESS* § 6.4.4 (2d ed. 1992) ("Rulemaking is analogous to legislating."); BERNARD SCHWARTZ, *ADMINISTRATIVE LAW* 238-44 (3d ed. 1988) (discussing administrative agencies' promulgation of rules that have the effect of substantive law).

139. See Alfred C. Aman, Jr., *Administrative Equity: An Analysis to Exceptions to Administrative Rules*, 1982 *DUKE L.J.* 277, 289 ("Agencies face the dilemma of devising rules specific enough to be meaningful, yet general enough to fit a variety of situations. The broader the regulatory task, the greater the likelihood that unforeseen situations will arise . . ."). See generally Roscoe Pound, *Discretion, Dispensation and Mitigation: The Problem of the Individual Special Case*, 35 *N.Y.U. L. REV.* 925 (1960) (discussing the need to individualize the administration of justice).

140. See Colin S. Diver, *Policymaking Paradigms in Administrative Law*, 95 *HARV. L. REV.* 393, 418-20 (1981) (discussing efforts to resolve policy issues through the adoption of more definite, specific administrative regulations and regulatory statutes).

141. Federal antitrust law has witnessed ongoing debate between advocates of relatively frequent government intervention in private markets and those

Ultimately, the dictates of sophistication doctrine will exceed the fact-finding capabilities of both institutional models. Neither courts nor administrative agencies will be able to cope successfully or efficiently with the doctrine's definitional and methodological demands. This is not to suggest that different models might not cope more effectively with these demands. It is to suggest, however, that sophistication stretches current models to their institutional breaking points.

V. THE QUESTIONABLE RATIONALE OF SOPHISTICATION

In the past few years, antitrust has traded the clear and simple assumption of uniform rationality for the uncertain vocabulary and complicated methods of sophistication. In the process, it has obscured antitrust doctrine, opened the litigation process to extensive and futile factual inquiries, subverted the role of summary judgment, and increased the costs of antitrust administration without improving its efficiency. Inexplicably, no court has acknowledged these changes, offered a rationale for sophistication doctrine, or provided a theoretical basis for its adoption.

Perhaps courts have thought it unnecessary to explain sophistication because of its close correspondence with two other developments that have recently captivated them. On the one hand, the notion of sophistication, at first glance, fits comfortably into the post-Chicago school of antitrust analysis. On the other hand, it resembles in microcosm the larger movement of antitrust toward a jurisprudence of hyper-complexity. Although these developments may account for sophistication's easy passage into doctrine, they do not justify it. Rather, the problems inherent in these new developments only serve to underscore the theoretical and practical dilemmas of sophistication doctrine and to highlight the disturbing direction of modern antitrust.

contending that, because markets are largely self-correcting, intervention is almost always unnecessary, wasteful, or both. *See, e.g.,* Eleanor M. Fox, *Consumer Beware Chicago*, 84 MICH. L. REV. 1714, 1719 (1986) (contrasting the Chicago view that "business virtually always acts in society's interests" with its critics' view that "government intervention can do good"); Frederick M. Rowe, *The Decline of Antitrust and the Delusion of Models: The Faustian Pact of Law and Economics*, 72 GEO. L.J. 1511, 1513 (1984) (arguing that normative economic models, on which antitrust law is based, polarized antitrust into extremes of intervention and abstention).

A. SOPHISTICATION AS A MISUNDERSTANDING OF STRATEGIC VIRTUE

Perhaps the new sophistication is best understood as a judicial misapplication of strategic analysis. Analysis of strategic, or opportunistic, behavior has taken hold in many areas of the law. Legal scholars have applied principles of strategic behavior, and the related discipline of game theory, to bankruptcy,¹⁴² corporate law,¹⁴³ contracts,¹⁴⁴ private decisions to settle or litigate,¹⁴⁵ plea bargaining,¹⁴⁶ property law,¹⁴⁷ and torts.¹⁴⁸ In the past ten years, antitrust economists of the post-Chicago school,¹⁴⁹ applying insights from game theory,¹⁵⁰ have postu-

142. See Douglas G. Baird & Randal C. Picker, *A Simple Noncooperative Bargaining Model of Corporate Reorganizations*, 20 J. LEGAL STUD. 311 (1991) (using noncooperative bargaining theory models to reexamine bankruptcy rules); David G. Carlson, *Game Theory and Bankruptcy Reorganizations*, 9 BANKR. DEV. J. 219 (1992) (examining bankruptcy priority rules through game theory).

143. See Symposium, *Just Winners and Losers: The Application of Game Theory to Corporate Law and Practice*, 60 U. CIN. L. REV. 405 (1991) (collecting various articles).

144. See Ian Ayres & Robert Gertner, *Strategic Contractual Inefficiency and the Optimal Choice of Legal Rules*, 101 YALE L.J. 729, 732-34 (1992) (discussing strategic reluctance of parties to enter into maximized contingent contracts); Jason S. Johnston, *Strategic Bargaining and the Economic Theory of Contract Default Rules*, 100 YALE L.J. 615 (1990) (using contemporary game theory and strategic behavior to analyze courts finding implied terms in contracts); Avery Katz, *The Strategic Structure of Offer and Acceptance: Game Theory and the Law of Contract Formation*, 89 MICH. L. REV. 215 (1990) (evaluating the law of contract formation under the rules of game theory).

145. See Keith N. Hylton, *Asymmetric Information and the Selection of Disputes for Litigation*, 22 J. LEGAL STUD. 187, 187-205 (1993) (showing that strategic behavior, through asymmetric information advantages, affects decisions to litigate or settle disputes).

146. See Jennifer F. Reinganum, *Plea Bargaining and Prosecutorial Discretion*, 78 AM. ECON. REV. 713 (1988).

147. See Carol M. Rose, *Property as Storytelling: Perspectives from Game Theory, Narrative Theory, Feminist Theory*, 2 YALE J.L. & HUMAN. 37, 48-53 (1990) (using game theory to argue that classic property theory fails to account for other preferences of interested parties).

148. See Mark F. Grady, *Common Law Control of Strategic Behavior: Railroad Sparks and the Farmer*, 17 J. LEGAL STUD. 15, 15-16, 25-41 (1988) (examining the role of strategic behavior in tort scenarios).

149. This term apparently originated in Herbert Hovenkamp, *Antitrust Policy After Chicago*, 84 MICH. L. REV. 213 (1985), which characterized post-Chicago economics as "both more complex and more ambiguous than the Chicago School model." *Id.* at 225.

150. For an excellent guide to the development, practice, and vocabulary of game theory, see ERIC RASMUSEN, *GAMES AND INFORMATION: AN INTRODUCTION TO GAME THEORY* (1989); see also Jonathan B. Baker, *Recent Developments in Economics that Challenge Chicago School Views*, 58 ANTITRUST L.J. 645, 646-55

lated that strategic behavior can enable firms to achieve market dominance.¹⁵¹ To behave strategically, firms need not be large, but they must understand and seize opportunities for gaining power at their rivals' expense.¹⁵²

As its name implies, post-Chicago scholarship follows and responds to the Chicago school of antitrust analysis.¹⁵³ In the 1950s and '60s, the Harvard school of industrial organization, with its focus on detailed case studies of particular industries,¹⁵⁴ claimed the attention of most antitrust courts and economists. In the 1970s and '80s, however, the price-theoretical model of the Chicago school supplanted Harvard's empirical approach. Chicagoans contended specifically that price theory explained diverse markets better than industry case studies that, although

& n.8 (1989) (discussing developments in economic theory that challenge the Chicago school's conclusions on antitrust, and noting that most challenges "reflect insights gained through the application of game theory").

151. See Jonathan B. Baker, *Vertical Restraints Among Hospitals, Physicians and Health Insurers that Raise Rivals' Costs*, 14 AM. J.L. & MED. 147 (1988) (arguing that vertical restraints in health care may create market dominance by raising competitors' costs without creating concomitant offsetting efficiencies); Thomas J. Campbell, *Predation and Competition in Antitrust: The Case of Nonfungible Goods*, 87 COLUM. L. REV. 1625 (1987) (showing that an established firm may use predatory pricing to force an equally efficient entrant out of the market); Krattenmaker & Salop, *supra* note 88, at 209 (arguing that firms can achieve monopoly power by making cost advantageous arrangements with suppliers); Steven C. Salop & David T. Scheffman, *Cost-Raising Strategies*, 36 J. INDUS. ECON. 19 (1987) (establishing that cost-raising strategies may disadvantageously affect rival firms in a market); Oliver E. Williamson, *Predatory Pricing: A Strategic and Welfare Analysis*, 87 YALE L.J. 284 (1977) (arguing that strategic behavior by dominant firms may overwhelm competitors' predation efforts). See generally Charles A. Holt & David T. Scheffman, *Strategic Business Behavior and Antitrust*, in ECONOMICS AND ANTITRUST POLICY 39 (Robert J. Lerner & James W. Meehan, Jr., eds., 1989) (analyzing strategic behavior in competitive markets, including predatory pricing, credibility, strategic precommitment, entry deterrence, and collusion).

152. See Krattenmaker & Salop, *supra* note 88, at 223-27.

153. An extensive literature describes the work of the Chicago school. See, e.g., ROBERT BORK, *THE ANTITRUST PARADOX: A POLICY AT WAR WITH ITSELF* (1978); Richard A. Posner, *The Chicago School of Antitrust Analysis*, 127 U. PA. L. REV. 925 (1979). An equally extensive literature criticizes it. See, e.g., Eleanor M. Fox, *The Politics of Law and Economics in Judicial Decision Making*, 61 N.Y.U. L. REV. 554 (1986); Eleanor M. Fox & Robert Pitofsky, *The Antitrust Alternative*, 62 N.Y.U. L. REV. 931 (1987); Robert Pitofsky, *The Political Content of Antitrust*, 127 U. PA. L. REV. 1051 (1979); Gordon Spivack, *The Chicago School Approach to Single Firm Exercises of Monopoly Power: A Response*, 52 ANTITRUST 651 (1983).

154. See, e.g., JOE S. BAIN, *INDUSTRIAL ORGANIZATION* (1959); JAMES MCKIE, *TIN CANS AND TIN PLATE: A STUDY OF COMPETITION IN TWO RELATED METHODS* (1959).

rich in factual detail, were poorly founded in economic theory.¹⁵⁵

The post-Chicago school builds on the industrial organization approach.¹⁵⁶ Arguing that the broad generalizations of price theory are inappropriate when small numbers of firms act strategically,¹⁵⁷ post-Chicago scholars have applied insights from game theory to develop models of strategic behavior describing how small and moderate-sized firms can use market imperfections to disadvantage competitors.¹⁵⁸ Game theory conceives of business decision-making as a series of strategic choices about the outcomes and payoffs available from various courses of action.¹⁵⁹ It concerns itself expressly with proposing and weighing alternative strategies, and with deriving the best set of tactics for the actors, or firms, participating in the game.¹⁶⁰

Post-Chicagoans have described several ways in which firms can put such strategic behavior to anti-competitive use. Some have suggested that firms in competitive markets can attain monopoly power by foreclosing rivals from lower cost inputs; this practice raises rivals' costs and forces them either to quit the market or to increase prices to levels at which the strategic firms can earn supra-competitive profits.¹⁶¹ Others have proposed that predatory pricing, which some judges and academicians consider implausible,¹⁶² can succeed in certain markets if the predator implements the proper strategy.¹⁶³ Still others

155. See RICHARD A. POSNER, *ANTITRUST LAW: AN ECONOMIC PERSPECTIVE* 8 (1976).

156. See generally Timothy F. Bresnahan & Richard Schmalensee, *The Empirical Renaissance in Industrial Economics: An Overview*, 35 *J. INDUS. ECON.* 371 (1987) (maintaining that post-Chicago focuses on empirical testing of specific hypotheses and formal theories in industrial organizations, rather than a case study methodology).

157. See Ian Ayres, *Playing Games With the Law*, 42 *STAN. L. REV.* 1291, 1316-17 (1990).

158. See Baker, *supra* note 150, at 649-50.

159. See RASMUSEN, *supra* note 150, at 22-25; see also Ayres, *supra* note 157, at 1295 (discussing RASMUSEN).

160. See Ayres, *supra* note 157, at 1297; RASMUSEN, *supra* note 150, at 27; see also Carl Shapiro, *The Theory of Business Strategy*, 20 *RAND. J. ECON.* 125 (1989) (studying the effects of the exact specification and timing of the firm's actions on game theory and business strategy generally).

161. See Krattenmaker & Salop, *supra* note 88, at 213-14; Oliver E. Williamson, *Delimiting Antitrust*, 76 *GEO. L.J.* 271, 274 (1987).

162. See BORK, *supra* note 153, at 144-60; Frank Easterbrook, *Predatory Strategies and Counterstrategies*, 48 *U. CHI. L. REV.* 263, 268 (1981); John S. McGee, *Predatory Pricing Revisited*, 23 *J.L. & ECON.* 289, 296-300 (1980).

163. Campbell, *supra* note 151, at 1648 ("[In markets for non-fungible goods, an] incumbent firm can . . . erode the customer base of an equally efficient en-

have hypothesized that strategic behavior can take the form of advertising, investment, product selection, or other activities that raise the cost of doing business or deter entry.¹⁶⁴ In general, post-Chicagoans emphasize the capacity of market imperfections¹⁶⁵ to create market power, even for firms with small market shares.

Judicial application of post-Chicago theory, however, is no simple matter. Unlike the theoreticians who develop game-theoretic models, antitrust courts cannot assume that markets under review contain structural imperfections. Judges require evidence of these imperfections, of their adaptability to anti-competitive uses, and of a relationship linking them first to defendant's strategy and then to plaintiff's harm. Post-Chicago theory thus contemplates rigorous empirical analysis, a methodology that post-Chicagoans justify as productive of more accurate results and as a necessary antidote to the perceived laissez-faire bias of the Chicago school.¹⁶⁶

Post-Chicago is not without its critics. Chicago scholars doubt the judiciary's ability to use complicated strategic models¹⁶⁷ and to analyze their antitrust implications.¹⁶⁸ Others have suggested that the factual issues post-Chicago theory raises "are too complex to be dealt with in antitrust litigation."¹⁶⁹ Still others contend that courts should regard strategy-

trant without suffering an equivalent loss itself. The strategy involves moving towards an entrant, either geographically or by mimicking the [product] characteristics of an entrant."); see also Janusz A. Ordovery & Robert D. Willig, *An Economic Definition of Predation: Pricing and Product Innovation*, 91 *YALE L.J.* 8, 15-21 (1981) (discussing strategies).

164. See Holt & Scheffman, *supra* note 151, at 47.

165. Among other things, market imperfections include precommitment, network externalities, installed base, sunk costs, and information and switching costs. See *Post-Chicago Analysis After Kodak: Interview with Professor Steven C. Salop*, 7 *ANTITRUST* 20, 20 (1992).

166. Some post-Chicago scholars see their models as consistent with the efficiency paradigm of Chicago theory. See Baker, *supra* note 151, at 646 ("[W]e need not reject the value of economic efficiency in order to question the Chicago School."). Others regard the post-Chicago approach as more skeptical about business behavior than Chicago and more open to governmental intervention. See *Post-Chicago Analysis After Kodak: Interview With Professor Steven C. Salop*, *supra* note 165, at 20 ("Post-Chicago analysis does not unskeptically attribute efficiency properties to conduct and . . . is more open to the possibility of anticompetitive effects . . . [and] to intervention by policy makers.").

167. Frank H. Easterbrook, *Workable Antitrust Policy*, 84 *MICH. L. REV.* 1696, 1701, 1709-12 (1986) (also opposing as too costly and unpredictable the case-by-case examination of allegedly strategic practices).

168. Frank H. Easterbrook, *Allocating Antitrust Decisionmaking Tasks*, 76 *GEO. L. REV.* 305, 314-16 (1987).

169. Hovenkamp, *supra* note 149, at 261. Professor Hovenkamp contended,

based arguments warily because strategy of some sort underlies all business behavior but seems to fail as often as it succeeds. Therefore, these critics argue, "the competitive effects of business strategies are ambiguous."¹⁷⁰

The new sophistication doctrine arguably results from judicial misunderstanding of the import of strategic analysis. On its face, sophistication seems ideologically compatible with the post-Chicagoans' game-theoretic models of strategic behavior. Strategy, after all, sounds like an activity reserved for the smarter-than-average. Sophisticates, by any definition, are super-rational firms. Without paying strict attention to the premises of game theory, courts could therefore assume that effective strategies are the exclusive province of the sophisticated. Despite its appeal, however, this assumption would be wrong. Super-rationality has nothing to do with game theoretic models of strategic behavior.

No post-Chicago model of strategic conduct predicates the adoption of successful strategy on the actor's sophistication or super-rationality. In discussing strategies for raising rivals' costs, for example, Professors Krattenmaker and Salop make no mention of sophisticated or super-rational firms, nor do they imply that only such firms can formulate anticompetitive tactics.¹⁷¹ Similarly, Professor Campbell's model of strategic, non-price predation expressly presumes that all strategic firms behave equally rationally.¹⁷² In the same vein, Professor Hovenkamp's model of strategic conduct assumes a "dominant" firm acting rationally.¹⁷³

Rather than create models that distinguish firms according to their varying levels of rationality, game theory, as applied to antitrust, has preferred to distinguish firms on the basis of knowledge. For example, in the 1970s, some game theorists expanded their models to focus on individuals acting "rationally but with limited information."¹⁷⁴ These models explicitly as-

however, that because courts had not been asked (as of 1985) to consider issues of strategic behavior there was "no consensus among the courts that strategic behavior should be ignored." *Id.*

170. Holt & Scheffman, *supra* note 151, at 66.

171. See Krattenmaker & Salop, *supra* note 88, at 230-49.

172. See Campbell, *supra* note 151, at 1642 n.73.

173. Hovenkamp, *supra* note 149, at 266, 276-79 ("The two forms of strategic behavior have to do with the relationship between the credibility of threats and the sunk costs of either the dominant firm or the victim, and the strategy of raising rivals' costs.")

174. RASMUSEN, *supra* note 150, at 14; see also David M. Kreps et al., *Rational Cooperation in the Finitely Repeated Prisoners' Dilemma*, 27 J. ECON.

sumed that knowledgeable, rational players could distinguish correctly between credible and implausible threats¹⁷⁵ while equally rational but less knowledgeable players¹⁷⁶ could revise their strategies to consider the prior behavior of more knowledgeable ones.¹⁷⁷ Like the post-Chicago scholars mentioned above, these game theorists premised their models on the assumption that all firms are equally rational.

Courts postulating that hyper-rational, sophisticated firms have a corner on strategy miss the real point of strategic analysis. Strategic analysis does not seek to determine which firms are sophisticated and which are not. Rather, it attempts to theorize usefully about how all firms use strategy to their benefit. Courts that single out sophisticated firms for special antitrust attention are thus embarking on uncharted theoretical waters. At best, the link between sophistication and strategic behavior is tenuous; at worst, it is non-existent.

Kodak attempts to connect post-Chicago theory and corporate sophistication by defining sophistication in terms of corporate knowledgeability.¹⁷⁸ Its focus on information gaps reflects post-Chicago thinking about market imperfections as a source of market power.¹⁷⁹

If *Kodak* exemplifies post-Chicago analysis, however, it demonstrates the unbridgeable distance between post-Chicago theory and viable rules of antitrust. It is one thing for a theorist first to assume, for argument's sake, that Buyer A lacks "sufficient" information about Seller B's product, and then to postulate models of strategic conduct illustrating how B can harm A. It is quite another, however, for a court to require proof of what constitutes information, which information is relevant, how

THEORY 245 (1982) (studying asymmetrical information's capability to generate cooperative behavior in the prisoner's dilemma); David M. Kreps & Robert Wilson, *Reputation and Imperfect Information*, 27 J. ECON. THEORY 253 (1982) (showing how imperfect information about an independent market can affect the rational strategies in another market).

175. See RASMUSEN, *supra* note 150, at 40, 88; Ayres, *supra* note 157, at 1306.

176. Although particular game-theoretic models assume that some players are less knowledgeable than others, those models provide no methodology for identifying knowledgeable players or measuring their specific stores of information.

177. See RASMUSEN, *supra* note 150, at 58; Ayres, *supra* note 157, at 1307.

178. See *supra* notes 48-63 and accompanying text (discussing *Kodak*).

179. See *Post-Chicago Analysis After Kodak: Interview with Professor Steven C. Salop*, *supra* note 165, at 21. According to Professor Salop, who served as a consultant to plaintiffs in *Kodak*, "[t]he [*Kodak*] Court's analysis of the plaintiffs' claims is post-Chicago." *Id.*

much information is "enough," whether and under what circumstances buyers without "enough" can effectively imitate more informed buyers, and when competing sellers can supply related information that can compensate for missing facts about a given seller's product. In practice, the neatness of the theory is undone by the factual inquiries that it demands.

As embodied in *Kodak*, the post-Chicago approach requires factual measurements and evaluations that courts have never before made and for which they lack competence. These measurements will not necessarily lead to more accurate judicial understanding of market dynamics, but they will certainly raise the administrative costs of litigation and make its outcome less predictable. In this sense, the post-Chicago approach is ultimately ironic. In seeking to incorporate consideration of market failures into antitrust analysis, it creates a market failure of its own. Information gaps about the legal import of *Kodak's* definitional tests will contribute to greater uncertainty among prospective plaintiffs about the likely results of litigation and increase the costs of investigation and trial. These effects will erect new entry barriers for would-be enforcers. By demonstrating the difficulty of applying post-Chicago theory to the complex facts of real markets, *Kodak* thus confirms the doubts of post-Chicago's early critics¹⁸⁰ and illustrates academic economists' ability to devise hypotheses of anticompetitive behavior whose proof requirements outstrip the fact-finding capacity of judges and juries.

B. SOPHISTICATION AND THE TREND TOWARDS HYPER-COMPLEXITY

The new sophistication is part of an unparalleled increase in the factual complexity of antitrust inquiry. In three recent opinions, *FTC v. Ticor Insurance Co.*,¹⁸¹ *Brooke Group Ltd. v. Brown & Williamson Tobacco Corp.*,¹⁸² and *Eastman Kodak Co. v. Image Technical Services, Inc.*,¹⁸³ the United States Supreme Court has announced rules that depend heavily on ambiguous, fact-intensive inquiries. Although these rules apparently seek greater factual precision, their definitional ambiguity is self-defeating and their single-minded focus on market arcana will ulti-

180. See *supra* text accompanying notes 167-170 (discussing critics).

181. 112 S. Ct. 2169 (1992).

182. 113 S. Ct. 2578 (1993).

183. 112 S. Ct. 2072 (1992).

mately mystify antitrust by removing more of its simplifying assumptions.

1. *Ticor, Brooke Group, and Kodak*

In *FTC v. Ticor Title Insurance Co.*,¹⁸⁴ the Supreme Court re-examined the state-action doctrine the Court established fifty years ago in *Parker v. Brown*.¹⁸⁵ Prior to *Ticor*, defendants seeking *Parker* immunity needed to satisfy a two-part test. They had to prove that they had undertaken their allegedly anticompetitive behavior pursuant to a program "clearly articulated and affirmatively expressed as state policy,"¹⁸⁶ and they needed to show that the state itself had "actively supervised" this behavior.¹⁸⁷

Under *Parker*, proof of "active supervision" required a simple showing of actual state involvement in the administration or oversight of the challenged program.¹⁸⁸ *Ticor* departs from *Parker* by demanding evidence that "the State has played a substantial role in determining the specifics of the economic policy."¹⁸⁹ Under *Ticor*, "active supervision" exists not simply by virtue of state administration or oversight, but only if the state "has exercised sufficient independent judgment and control" over the program's operation.¹⁹⁰

By turning the focus of judicial inquiry to the "sufficiency" of state oversight, *Ticor* complicates the active supervision test. It does not guarantee, however, a more probing examination. *Ticor* can only encourage meaningful state oversight if "active" supervision equals supervision of "high quality." Courts reading *Ticor* to require such oversight will need to specify the elements of high-quality supervision, apply these elements to varying and lengthy historical records, and ultimately characterize the over-

184. 112 S. Ct. 2169 (1992).

185. 317 U.S. 341 (1943). In *Parker*, the Court held that the Sherman Act neither prevents nor prohibits "state action or official action directed by a state." *Id.* at 351. Decisions since *Parker* have extended state action immunity to private actors participating in state-authorized programs allegedly restraining trade, provided that those programs clearly articulate an explicit state policy to restrict competition and that the state itself actively supervises the policy. See, e.g., *Ticor Title Ins. Co.*, 112 S. Ct. at 2176-77 (chronicling the development of the state action doctrine).

186. *California Retail Liquor Dealers Ass'n v. Midcal Aluminum, Inc.*, 445 U.S. 97, 105 (1980).

187. *Id.*

188. *Id.*

189. *Ticor Title Ins. Co.*, 112 S. Ct. at 2177.

190. *Id.*

all quality of oversight as "good" or "bad." Under any meaningful reading of *Ticor*, the process for determining active supervision will become more complicated and costly without becoming more effective.

The Supreme Court's decision in *Brooke Group Ltd. v. Brown & Williamson Tobacco Corp.*¹⁹¹ rewrites the rules proscribing predatory pricing¹⁹² and primary-line price discrimination.¹⁹³ Because scholars had strongly criticized the Court's prior stance on price discrimination,¹⁹⁴ *Brooke Group* was much anticipated. On the positive side, by combining inconsistent approaches to predatory pricing¹⁹⁵ into one comprehensive test, *Brooke Group* promotes doctrinal efficiency. On the negative side, however, *Brooke Group* partially resurrects a hopelessly subjective inquiry into corporate intent that the Court had only recently discarded.¹⁹⁶ The revival of subjective intent analysis will greatly dilute *Brooke Group's* gains in efficiency.

Brooke Group involved a claim by one cigarette manufacturer that a competitor sought to drive it from the generic market by offering discriminatory price discounts and selling its own

191. 113 S. Ct. 2578 (1993).

192. Predatory pricing occurs when a firm prices below cost in order to drive a rival from the market or to discipline the rival for having competed vigorously. See *Cargill, Inc. v. Monfort of Colo., Inc.*, 479 U.S. 104, 117 (1986); *Matsushita Elec. Indus. Supply Co. v. Zenith Radio Corp.*, 475 U.S. 574, 585 (1986). Circuit Courts of Appeals disagree on the appropriate test for determining whether price is below cost. See *Cargill*, 479 U.S. at 117 n.12. *Brooke Group* did not resolve this disagreement. See 113 S. Ct. at 2587 n.1.

193. Price discrimination is made unlawful by § 2(a) of the Robinson-Patman Act, 15 U.S.C. § 13(a) (1988). The Supreme Court has stated repeatedly that a "price discrimination" within the meaning of the statute "is merely a price difference." See *Texaco Inc. v. Hasbrouck*, 496 U.S. 543, 558 (1990). Claims of primary-line price discrimination allege injury to direct competitors of the discriminating seller. See *Utah Pie Co. v. Continental Baking Co.*, 386 U.S. 685, 702-04 (1967); *FTC v. Anheuser-Busch, Inc.*, 363 U.S. 536, 538 (1960).

194. Prior to *Brooke Group*, *Utah Pie* had provided the standard for testing claims of primary line injury in the predatory pricing context. 386 U.S. at 702-04. Because it arguably stood for the proposition that selected pricing cuts in healthy, competitive markets can violate the law, *Utah Pie* was roundly criticized. See, e.g., Ward S. Bowman, *Restraint of Trade by the Supreme Court: The Utah Pie Case*, 77 YALE L.J. 70, 70-85 (1967) (denouncing the result in *Utah Pie* and stating, "*Utah Pie* must rank as the most anticompetitive antitrust decision of the decade"); Kenneth G. Elzinga & Thomas F. Hogarty, *Utah Pie and the Consequences of Robinson-Patman*, 21 J.L. & ECON. 427, 427 (1978) ("[The decision] has provoked much criticism on the grounds that it serves to protect localized firms from the competition of more distant sellers.").

195. Compare *Utah Pie Co.*, 386 U.S. at 702-04 (describing early approach) with *Cargill, Inc.*, 479 U.S. at 121 (describing structural test for predatory pricing).

196. See *infra* note 205 (citing cases).

generic cigarettes below cost.¹⁹⁷ To test these claims, the Supreme Court established a two-part formula for unlawful pricing.¹⁹⁸ Plaintiffs must prove that "the prices complained of are below an appropriate measure of [their] rival's costs"¹⁹⁹ and that the predator had a reasonable prospect "of recouping its investment in below-cost prices."²⁰⁰ Proof of prospective recoupment requires a showing that the intended target will likely succumb to the predatory conduct.²⁰¹ This showing must demonstrate "the extent and duration of the alleged predation, the relative financial strength of the predator and its intended victim, and their respective incentives and will."²⁰²

The numerous requirements of *Brooke Group* will each add to the length and complexity of predatory pricing analysis.²⁰³ None, however, will add more difficulty than the requirement of proof regarding the parties' "respective incentives and will."²⁰⁴ By demanding such proof, *Brooke Group* modifies the Court's own recently articulated view that predation analysis should ignore intent and focus exclusively on structural factors.²⁰⁵ It also conflicts with the similar views of several Courts of Appeals,²⁰⁶

197. The plaintiff in *Brooke Group* (formerly Liggett) charged that Brown & Williamson sought to stifle price competition in the emerging generic segment of the national cigarette market by introducing its own line of generic cigarettes and selling them to wholesalers at discriminatorily low prices. *Brooke Group Ltd. v. Brown & Williamson Tobacco Corp.*, 113 S. Ct. 2578, 2582 (1993).

198. In *Brooke Group*, the Court acknowledged that the same test governs predatory pricing claims under the Sherman Act and price-discrimination claims under the Robinson-Patman Act. 113 S. Ct. at 2587.

199. *Id.*

200. *Id.* at 2588.

201. *Id.* at 2589.

202. *Id.*

203. For example, the term "likelihood" (as in "likelihood of recoupment") is subject to several different interpretations. See Stephen Calkins, *The October 1992 Supreme Court Term and Antitrust: More Objectivity Than Ever*, 62 ANTI-TRUST L.J. 327, 399 (1994) (offering three different conceptions of "recoupment").

204. *Brooke Group Ltd.*, 113 S. Ct. at 2589.

205. See *Cargill, Inc. v. Monfort of Colo., Inc.*, 479 U.S. 104, 118 (1986); *Matsushita Elec. Indus. Co. v. Zenith Radio Corp.*, 475 U.S. 574, 583 (1986).

206. Until the early 1980s, intent was a key factor in predation analysis. See *Utah Pie Co. v. Continental Baking Co.*, 386 U.S. 685, 702 (1967). Since then, mounting skepticism about the judiciary's ability to distinguish anticompetitive animus from lawful rivalrous vigor has led many courts and commentators to conclude that intent should play no role whatever in predation claims. See, e.g., *Ocean State Physicians Health Plan, Inc. v. Blue Cross & Blue Shield*, 883 F.2d 1101, 1113 (1st Cir. 1989), *cert. denied*, 494 U.S. 1027 (1990); *A.A. Poultry Farms, Inc. v. Rose Acre Farms, Inc.*, 881 F.2d 1396, 1401-03 (7th Cir. 1989), *cert. denied*, 494 U.S. 1019 (1990); *Indiana Grocery, Inc. v. Super Valu Stores, Inc.*, 864 F.2d 1409 (7th Cir. 1989); *Olympia Equip. Leasing Co. v. West-*

and with the consensus of scholarly opinion.²⁰⁷ *Brooke Group's* focus on recoupment follows the form of structural analysis, but its insistence on inquiries into "incentives and will" compromises this analysis and sacrifices the efficiencies attainable from an exclusively structural approach.

In practice, *Brooke Group's* subjective inquiries likely will prove inconclusive. They will elicit testimony that promises to display a scripted quality that could discredit the fact-finding process. Asked about their incentives and will, plaintiffs likely will testify that they were too dispirited to withstand defendants' predation. Defendants will swear to their own purely commercial motivation. The parties' experts will offer conflicting views about the relationship between past behavior and probable intent. Like *Ticor*, *Brooke Group* rejects a simpler, more determinate rule for an uncertain test requiring numerous factual inquiries into intangible corporate qualities.²⁰⁸

Kodak best illustrates the pitfalls of the new jurisprudence. The Court's holding—"difficult and costly information gaps" in markets for "complex durable goods" can confer market power on small firms²⁰⁹—adds several tests to antitrust litigation. Its specific concern with markets for "complex durable goods," for example, makes *Kodak* the first modern antitrust opinion to distinguish analytically between different kinds of markets.²¹⁰ Its

ern Union Tel. Co., 797 F.2d 370, 379 (7th Cir. 1986), cert. denied, 480 U.S. 934 (1987); *Barry Wright Corp. v. ITT Grinnell Corp.*, 724 F.2d 227, 232 (1st Cir. 1983); see also AREEDA & HOVENKAMP, *supra* note 7, ¶ 714.2(c) (discussing the elusive nature of intent in the marketplace).

207. See, e.g., Kenneth G. Elzinga, *Predatory Pricing Requires 60% Market Share: No "Oligopoly" Recoupment Without Firm Market Power* (VI), 23 ANTI-TRUST L. & ECON. REV. 73, 84, 90 (1991) (indicating unanimous agreement among economists that predator needs market share between 40% and 60%, in order to succeed); Paul L. Joskow & Alvin K. Klevorick, *A Framework for Analyzing Predatory Pricing Policy*, 89 YALE L.J. 213, 235 (1979) (arguing that predation requires market structure conducive to recoupment); Steven R. Beck, Note, *Intent as an Element of Predatory Pricing Under Section 2 of the Sherman Act*, 76 CORNELL L. REV. 1242, 1263-84 (1991) (discussing the usefulness of intent in antitrust law); Michael C. Quinn, Note, *Predatory Pricing Strategies: The Relevance of Intent Under Antitrust, Unfair Competition, and Tort Law*, 64 ST. JOHN'S L. REV. 607, 613-22 (1990) (discussing the importance of intent in antitrust).

208. But see *The Supreme Court, 1992 Term—Leading Cases*, 107 HARV. L. REV. 322, 328 (1993) (stating that after *Brooke Group*, "plaintiffs alleging a predatory pricing scheme will be forced to present economic data rather than elusive and slippery subjective evidence of 'predatory intent'"); Calkins, *supra* note 203, at 403 ("The single clear lesson from the [1992] Term is that the movement toward antitrust objectivity continues.").

209. See *supra* part II.B (discussing the *Kodak* holding).

210. See *supra* notes 71-74 and accompanying text.

failure to define "complex durable goods" relegates the difficult task of fleshing out this distinction to the lower courts.²¹¹ That the proper reach of this new category is unclear further complicates this analysis. The connection that *Kodak* implies between information gaps and complex products generally suggests that informational imperfections can confer market power on small firms in markets for equally complex non-durable goods.²¹²

These difficulties, however, pale in comparison to the problems of evaluating single-firm informational imperfections and determining whether these imperfections generate market power. *Kodak* requires that lower courts identify information gaps, decide whether overcoming them is sufficiently "difficult and costly" to create market power, and explore whether the efforts of sophisticated buyers or other competitors can defuse these gaps. Thus, like *Ticor* and *Brooke Group*, *Kodak* announces tests that are new to antitrust, contain ambiguous terminology and demand lengthy factual investigation.

2. The New Complexity in Historical Perspective

Collectively, *Ticor*, *Brooke Group*, *Kodak*, and sophistication doctrine represent the second phase of a movement toward a more fact-intensive approach to antitrust. In the first phase, the Supreme Court relaxed its reliance on the per se approach in favor of Chicago's price-theoretic orientation. The second phase marks the Court's abandonment of the simplifying, streamlining assumptions that made Chicago administratively practicable. The new antitrust jurisprudence thus promises complex factual inquiry without the benefit of workable theoretical guidance.

In the past fifteen years, as it has come to favor rule-of-reason analysis,²¹³ the Supreme Court has restricted the applicabil-

211. For a discussion of these difficulties, see Michael S. Jacobs, *Market Power Through Imperfect Information: The Staggering Implications of Eastman Kodak Co. v. Image Technical Services and a Modest Proposal for Limiting Them*, 52 MD. L. REV. 336, 364-65 (1993).

212. Complexities in the markets for health care and legal services arguably warrant the kind of concern voiced in *Kodak*. See, e.g., E. Haavi Morreim, *Blessed Be the Tie that Binds? Antitrust Perils of Physician Investment and Self-Referral*, 14 J. LEGAL MED. 359 (1993) (arguing that information gaps and the fiducial nature of the doctor-patient relationship can combine to confer market power on individual physicians, enabling them to refer patients to high-cost diagnostic or laboratory facilities in which the physicians themselves have a large financial stake).

213. The classic statement of the rule of reason appears in *Chicago Bd. of Trade v. United States*, 246 U.S. 231, 238 (1918). It requires courts to consider the facts peculiar to the business to which the restraint is ap-

ity of per se rules.²¹⁴ For instance, the Court has narrowed proscriptions against vertical resale price maintenance.²¹⁵ It has eased categorical prohibitions of group boycotts and tying arrangements.²¹⁶ Furthermore, the Court has relaxed strict rules forbidding price-fixing²¹⁷ to permit "quick looks" into facts that might justify otherwise impermissible agreements.²¹⁸

plied; its condition before and after the restraint was imposed; the nature of the restraint and its effect, actual or probable. The history of the restraint, the evil believed to exist, the reason for adopting the particular remedy, the purpose or end sought to be attained, are all relevant facts.

Id. Judge Easterbrook has criticized this formulation as "empty" and "open-ended." Easterbrook, *supra* note 112, at 12.

214. Antitrust courts have developed two separate but complementary approaches to claims arising under § 1 of the Sherman Act, 15 U.S.C. § 1 (1988 & Supp. V 1993), which prohibits collective conduct in restraint of trade. Because most business conduct restrains trade in some fashion, the Sherman Act has long been held to prohibit only unreasonable restraints of trade. See *Chicago Bd. of Trade*, 246 U.S. at 238; see also Thomas A. Piraino, Jr., *Reconciling the Per Se and Rule of Reason Approaches to Antitrust Analysis*, 64 S. CAL. L. REV. 685, 689 (1991) (discussing the Sherman Act's application only to unreasonable restraints on trade). Under the rule of reason, courts analyze allegations of unlawful behavior by undertaking potentially wide-ranging factual inquiries into the "competitive circumstances and justifications" of that behavior in order to determine its reasonableness. Piraino, *supra*, at 689.

The per se rule developed partly in response to the burdensome factual inquiry the rule of reason required, and partly as a result of the judiciary's experience with certain kinds of restraints. Over time, the Supreme Court recognized that some agreements, "because of their pernicious effect on competition and lack of any redeeming virtue," should be "conclusively presumed to be unreasonable . . . without elaborate inquiry as to the precise harm they have caused or the business excuse for their use." *Northern Pac. Ry. v. United States*, 356 U.S. 1, 5 (1958). Commentators have recognized that although this categorical approach occasionally suffers from overbreadth, it reduces the time and expense of litigation and provides the business community with clear guidelines. Piraino, *supra*, at 691-92.

215. *Business Elecs. Corp. v. Sharp Elecs. Corp.*, 485 U.S. 717, 724 (1988); *Monsanto Co. v. Spray-Rite Serv. Corp.*, 465 U.S. 752, 762 (1986).

216. See *FTC v. Indiana Fed'n of Dentists*, 476 U.S. 447, 458-59 (1986) (discussing boycotts); *Northwest Wholesale Stationers, Inc. v. Pacific Stationery & Printing Co.*, 472 U.S. 284, 293-98 (1985) (discussing boycotts); *Jefferson Parish Hosp. Dist. No. 2 v. Hyde*, 466 U.S. 2, 26-29 (1984) (discussing tying arrangements).

217. See, e.g., *United States v. Socony-Vacuum Oil Co.*, 310 U.S. 150, 226 n. 59 (1940) (referring to the pricing mechanism as "the central nervous system of the economy").

218. See *National Collegiate Athletic Ass'n v. Board of Regents*, 468 U.S. 85, 100-01 (1984); *Broadcast Music, Inc. v. Columbia Broadcasting Sys.*, 441 U.S. 1, 20 (1979). The "quick look" seeks to strike a balance between per se and rule of reason approaches to horizontal price-fixing cases. If defendant's business is unfamiliar to antitrust courts or the price-fix is arguably justified by pro-competitive considerations, courts will take a "quick look" at the facts, to determine whether competitive benefits might outweigh anticompetitive effects. If net

The Court's decision to increase the use of the rule-of-reason, a method much-maligned for its indeterminacy,²¹⁹ should have generated additional administrative complexity.²²⁰ This complexity, however, failed to occur. Contemporaneous developments in antitrust philosophy, summary judgment law, and politics²²¹ effectively reduced the number of antitrust trials and tempered the administrative impact of a more expansive rule of reason.

The revitalization of the rule of reason owed much to the Chicago school²²² and its use of price theory to expose the flawed economic premises underlying many of the old per se rules.²²³ Chicagoans were dissatisfied with the rigor of industrial organi-

benefits appear plausible, courts apply the rule of reason; if not, they judge the practice illegal per se. Thomas C. Arthur, *Farewell to the Sea of Doubt: Jet-tisoning the Constitutional Sherman Act*, 74 CAL. L. REV. 263, 356-57 (1986).

219. See *supra* note 213 (discussing the classic statement of the rule of reason).

220. Some per se rules remain. Still intact, although subject to heated debate, is the absolute proscription against vertical resale price maintenance. See *Atlantic Richfield Co. v. USA Petroleum Co.*, 495 U.S. 328, 339 (1990); *Business Elecs. Corp. v. Sharp Elecs. Corp.*, 485 U.S. 717, 724 (1988). For a review of the debate, see generally Warren S. Grimes, *The Seven Myths of Vertical Price Fixing: The Politics and Economics of a Century Long Debate*, 21 Sw. L. REV. 1285 (1992). Recently reaffirmed, the per se rule against horizontal division of territories seems firmly entrenched. See *Palmer v. BRG of Georgia, Inc.*, 498 U.S. 46, 49-50 (1990).

221. Some commentators regarded the Reagan Administration as having intentionally narrowed the scope of antitrust enforcement to shelter big business from government intervention, and argued that the Administration accomplished this goal through personnel changes and funding reductions in federal enforcement agencies; efforts to amend antitrust legislation; and the appointment to the federal bench of Chicago school adherents. See, e.g., Thomas J. Campbell, *The Antitrust Record of the First Reagan Administration*, 64 TEX. L. REV. 353, 354-55 (1985); Alan Fischer et al., *Price Effects of Horizontal Mergers*, 77 CAL. L. REV. 777, 784 n.25 (1989); William C. Kovacic, *Public Choice and the Public Interest: Federal Trade Commission Antitrust Enforcement During the Reagan Administration*, 33 ANTITRUST BULL. 467, 480-500 (1988); Ira M. Millstein & Jeffrey L. Kessler, *The Antitrust Legacy of the Reagan Administration*, 33 ANTITRUST BULL. 505, 519-38 (1988).

222. See *supra* text accompanying notes 153-155. The Chicagoans' opposition to most rules of per se illegality led them to propose standards of per se legality that flatly contradicted the teachings of the older rules. See Frank A. Easterbrook, *Predatory Strategies and Counterstrategies*, 48 U. CHI. L. REV. 263, 335 (1981) ("The same considerations that support rules of per se illegality also support rules of per se legality."); Richard A. Posner, *The Next Step in the Antitrust Treatment of Restricted Distribution: Per Se Legality*, 48 U. CHI. L. REV. 6, 8 (1981) (arguing that rule of analysis reasoning does not offer sufficient guidance for "judges, juries, or the [FTC]").

223. See BORK, *supra* note 153, at 116-33; Hovenkamp, *supra* note 149, at 226-33; Posner, *supra* note 153, at 925-33.

zation economics, an industry-specific approach that animated antitrust doctrine in the 1950s and '60s.²²⁴ They offered formal, theoretic explanations demonstrating that behaviors condemned as unlawful per se often generated important economic efficiencies.²²⁵ By encouraging courts to abandon per se rules and to permit dominant firms to offer efficiency justifications for their conduct, Chicagoans arguably encouraged an expansive application of the rule-of-reason and its more fact-intensive approach.

The Chicago school's simplifying theoretic assumptions, however, countered its potential to complicate antitrust litigation. Chicago philosophy relied heavily on assumptions about the workings of markets, the structural fragility of conspiracies, and the role of new entry as a force for maintaining competition.²²⁶ It consciously disregarded market imperfections that it deemed immeasurable or impervious to judicial solution.²²⁷ Chicagoans conceded that their assumptions were not perfectly realistic²²⁸ and lacked empirical support,²²⁹ but contended that their explanatory power, simplicity, and ease of application outweighed such drawbacks.²³⁰

224. For a discussion of Industrial Organization (I.O.) philosophy, see generally Peter C. Carstensen, *Antitrust Law and the Paradigm of Industrial Organization*, 16 U.C. DAVIS L. REV. 487 (1983). I.O. philosophy has been summarized as follows: "The basic I.O. ideas are, first, that industry details have to be understood before policymakers can gain useful insights . . . and, second, that an industry's structure influences the conduct of firms within it." ELEANOR M. FOX & LAWRENCE A. SULLIVAN, CASES AND MATERIALS ON ANTITRUST 112 (1989).

Chicagoans viewed the Industrial Organization approach as "un-theoretical, descriptive, . . . and even metaphorical." Posner, *supra* note 153, at 928. Describing the bias of I.O. economists, Ronald Coase remarked, "[i]f an economist finds something—a business practice of one sort or another—that he does not understand, he looks for a monopoly explanation." Ronald Coase, *Industrial Organization: A Proposal for Research*, in POLICY ISSUES AND RESEARCH OPPORTUNITIES IN INDUSTRIAL ORGANIZATION 59, 67 (V.R. Fuchs ed., 1972).

225. See Posner, *supra* note 153, at 926-33 (citing Chicago literature and discussing the particulars of Chicago theory).

226. See BORK, *supra* note 153, at 263-79; Easterbrook, *supra* note 112, at 2-3, 5-7, 9.

227. See POSNER, *supra* note 14, at 17.

228. *Id.* at 16 ("[T]he assumptions of economic theory are one-dimensional and pallid when viewed as descriptions of human behavior . . .").

229. See Richard A. Posner, *Some Uses and Abuses of Economics in Law*, 46 U. CHI. L. REV. 281, 292-94 (1979).

230. See, e.g., Easterbrook, *supra* note 112, at 14-39 (discussing presumptions upon which to structure antitrust inquiry, and describing five filters to proscribe inquiry in cases with "sufficiently small" impact on society); Richard A. Posner, *Antitrust Policy and the Supreme Court: An Analysis of the Restricted Distribution, Horizontal Merger and Potential Competition Decisions*, 75 COLUM. L. REV. 282, 313 (1975) ("Rebuttal based on ease of entry, economies

Critics denounced the Chicago approach as "minimalist"²³¹ and ideological.²³² Their overriding theme was that Chicago's hidden ideological motivation biased its approach with assumptions that invariably justified pro-business outcomes²³³ and that these assumptions were simplistic, not simple.²³⁴ Despite their fundamental differences, however, Chicagoans and their critics implicitly shared the view that antitrust must center around simplifying assumptions that broadly explain the manifold workings of the marketplace, obviate extensive factual inquiry, and economize on the use of judicial resources.²³⁵

Coinciding roughly with Chicago's emergence, the Supreme Court's encouragement of an expanded use of summary judgment²³⁶ further simplified the administration of the price-theoretic approach. As a result, the doctrinal and methodological

of scale, or managerial efficiencies should not be allowed, because these factors, although clearly relevant to a correct evaluation of the competitive significance of a merger, are intractable subjects for litigation."). In this respect, the Chicago school's concern for administrability was itself foreshadowed by the earlier work of others. See, e.g., Derek C. Bok, *Section 7 of the Clayton Act and the Merging of Law and Economics*, 74 HARV. L. REV. 226, 227-28 (1960) (observing that an objective in simplifying antitrust analysis is to aid judicial administration).

231. See Fox & Pitofsky, *supra* note 153, at 958.

232. See Rudolph J. Peritz, *The "Rule of Reason" in Antitrust Law: Property Logic in Restraint of Competition*, 40 HASTINGS L.J. 285, 336-41 (1989).

233. See, e.g., Hovenkamp, *supra* note 149, at 232 ("Outsiders regard [the] Chicago School claim of freedom from political interest with a good deal of skepticism, and some believe it to be simple hogwash, or perhaps even a cover for a very strong, probusiness political bias that works to the benefit of the rich."); Barbara Ann White, *Black and White Thinking in the Gray Areas of Antitrust: The Dismantling of Vertical Restraints Regulation*, 60 GEO. WASH. L. REV. 1, 7 (1992) ("Chicago School analysts often give scholars the impression of instinctively condoning business strategies and then developing post-hoc efficiency arguments to justify those positions.").

234. See, e.g., John J. Flynn, *The "Is" and "Ought" of Vertical Restraints After Monsanto Co. v. Spray-Rite Service Corp.*, 71 CORNELL L. REV. 1095, 1121-25 (1986) (criticizing the "preconceived substantive rules" of the Chicago school and its inattention to factual and policy concerns); Eleanor M. Fox, *The Battle for the Soul of Antitrust*, 75 CAL. L. REV. 917, 919, 922-23 (1987) (arguing that antitrust policy should focus not only on the questions of allocative efficiency raised by Chicago, but also on goals of fairness, consumer choice, product innovation, decentralized decisionmaking, and the continued economic independence of small business).

235. See Easterbrook, *supra* note 167, at 1706 (discussing the need to simplify antitrust analysis); Fox, *supra* note 234, at 919, 922-23 (discussing the benefits of antitrust analysis as espoused by the Chicago school's critics). For a more complete description of this debate, see Hovenkamp, *supra* note 149, at 226-55. Professor Hovenkamp, who describes himself as a centrist, acknowledges that the largest virtue of the Chicago school "is its simplicity." *Id.* at 224.

236. See *supra* part IV.C.1 (discussing summary judgment).

complexities potentially inherent in Chicago jurisprudence failed to materialize.

Unlike the philosophies of the Chicago school and its critics, the new jurisprudence of *Ticor*, *Brooke Group*, *Kodak*, and corporate sophistication abandons streamlining assumptions in favor of intensive factual investigations. The importance that sophistication places on firm-specific rationality, for example, will immerse antitrust in the kind of administrative complications that Chicago and its critics sought to avoid. Furthermore, its emphasis on the impact of market imperfections will threaten the viability of those few economic assumptions still intact.²³⁷ Thus, unlike the Chicago school approach, the new jurisprudence is truly complex.

CONCLUSION: CYCLICAL JURISPRUDENCE AND THE FUTURE OF ANTITRUST

Seen in perspective, the hyper-complexity of current antitrust represents a predictable phase in a jurisprudential cycle. Modern antitrust jurisprudence has regularly adopted highly assumptive modes of analysis, only to reject them for more fact-intensive methodologies. Each theory has been attacked, moreover, for embodying the political biases of its authors. Thirty years ago, for example, antitrust courts employed the industrial organization model, with its assumptions about the effects of firm size, concentration levels, exclusive contracting, and vertical arrangements. Price theorists criticized this model as counter-factual and as more political than economic.²³⁸ In turn, as price theory achieved preeminence, critics bemoaned the political content of its assumptions and denounced its inattention to market imperfections and empirical data.²³⁹ Having failed to command lasting consensus, these philosophies have

237. One of these is the static market assumption, defined by Professor Hovenkamp as "a premise that the market being examined is unaffected by external events." Hovenkamp, *supra* note 149, at 256. Markets are certainly dynamic in fact, but measuring and weighing their dynamic elements would burden antitrust courts tremendously. Nevertheless, the Ninth Circuit Court of Appeals recently chastised the Justice Department for adopting a static model of market demand in a merger challenge, assuming itself—without explanation—that demand in the relevant market would continue to grow. *United States v. Syufy Enters.*, 903 F.2d 659, 667 n.13 (9th Cir. 1990).

238. See, e.g., BORK, *supra* note 153, at 418-25 (discussing political trends); Posner, *supra* note 153, at 928-33 (criticizing the Industrial Organization model as "inconsistent with economic theory").

239. See *supra* text accompanying notes 153-155, 222-235 (discussing the Chicago school and its critics).

given way for the time being to the intensive empiricism of the new jurisprudence. This approach arguably combines new economic theory with fact-intensive inquiries into the workings of specific markets.

The political biases and perceived empirical shortcomings of the earlier philosophies may have sparked recent interest in a more fact-specific jurisprudence and in the seemingly apolitical strategic models of the post-Chicago scholars. Judicial attempts to apply the new approach, however, have exposed its serious definitional ambiguities, methodological problems, and administrative costs. The litigation process has proved that, at least in certain respects, post-Chicago theory is unworkable in practice. Indeed, the most valuable lesson of the new sophistication ultimately may be that, at a certain point, an increasingly factual inquiry does more harm than good.

This is not to suggest that antitrust should blind itself to commercial reality. Modern antitrust has always been fact-intensive,²⁴⁰ and the expanded use of the rule of reason will keep it that way.²⁴¹ No jurisprudence, however, can or should consider all potentially relevant facts. More importantly, no jurisprudence can function effectively without the theoretical guidance that powerful assumptions provide. Jurisprudence needs such assumptions to organize fact-finding into a manageable task and to provide a philosophical framework into which relevant facts can fit meaningfully.

The new sophistication fails not simply because it requires the open-ended pursuit of fact. It fails because, by rejecting the rationality assumption, it shatters the world of relevant commercial data into millions of tiny fragments and disassembles the theoretical framework that might piece them together. Just as theory cannot function without factual context, fact becomes meaningless in a theoretical void.

240. See Arthur, *supra* note 218, at 303-04 (stating that the complexity associated with defining the market and evaluating market power "make virtually all data relevant"); Easterbrook, *supra* note 112, at 11-13 (observing that antitrust's vague rules prompt diligent and lengthy discovery); Richard A. Posner, *The Rule of Reason and the Economic Approach: Reflections on the Sylvania Decision*, 45 U. CHI. L. REV. 1, 10-17 (1978) (observing generally the complexity of antitrust inquiry following *Sylvania*).

241. See, e.g., Thomas A. Piraino, Jr., *Beyond Per Se, Rule of Reason or Merger Analysis: A New Antitrust Standard for Joint Ventures*, 76 MINN. L. REV. 1, 13-14 & n.54 (1991) (describing the delineation of relevant product and geographic markets, the assessment of market share, and the prediction of the extent to which mergers will increase market concentration as "fact-intensive and time-consuming" determinations).

Perhaps there is a message in this failure. Even before the arrival of sophistication and despite their political differences, the Chicago school and its critics shared a deep appreciation for the economizing features of simplifying assumptions. Both recognized, for example, that the extreme length, expense, and complexity of antitrust trials require sacrificing comprehensive factual accuracy for the benefits of neat explanatory assumptions. Both acknowledged the importance of enforcing antitrust efficiently. Both therefore espoused philosophies driven by powerful theoretical premises.²⁴²

This shared history argues now for a return to the jurisprudential past. Aware of the limits of atheoretical complexity, antitrust should concern itself anew with fashioning assumptions that capture its policy purposes simply and efficiently. Scholars, of course, will continue to differ over what these purposes should be. The failure of sophistication, however, should convince them that the future of antitrust lies not with more facts but with new assumptions.

242. Compare a Chicago Critic, for example, Robert Pitofsky, *supra* note 116, at 1489 ("Per se rules represent a recognition that (1) antitrust trials, absent a per se approach, are long, expensive, and complex, (2) efficient enforcement of the antitrust laws is a justifiable policy goal, and (3) there is a virtue in telling businessmen accurately and precisely the location of legal limits on business conduct.") with a Chicagoan, for example, Easterbrook, *supra* note 167, at 1706 ("What's wrong with models that contain 'unrealistic' assumptions? . . . Without simplification we do not know what to look for. Any approach to antitrust must simplify; modeling is essential; the best model is the simplest one that can cope with the data.").

