An Essay on the Normative Foundations of Antitrust Economics

Michael S. Jacobs

AN ESSAY ON THE NORMATIVE FOUNDATIONS OF ANTITRUST ECONOMICS

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Since the 1980s, the Chicago School model of antitrust economics has reigned as the predominant approach of both courts and agencies. Today, the primary debate among antitrust economists involves competing views about the nature of the market and the role that the courts should take in enforcing antitrust law. Chicagoans believe that markets are generally efficient, that market imperfections are usually self-correcting, and that, in the name of efficiency, courts should show restraint in their rulings. "Post-Chicagoans" view market imperfections to be more frequent and persistent, and would have courts and agencies undertake a more complex assessment of allegedly uncompetitive practices to decide whether intervention in the market is appropriate. Post-Chicagoans believe that while this type of governmental intervention is costly, it can ultimately succeed in promoting a more efficient market.

In this Essay, Professor Jacobs chronicles the rise of the Chicago School and details the contours of the debate between Chicago and post-Chicago. While both camps have put forth studies and data to provide empirical proof for their economic assertions, Professor Jacobs argues that the data is inconclusive, and that the type of information needed is not currently available or attainable. Professor Jacobs suggests that this empirical impasse can be resolved only by an open discussion of the value choices that underlie both Chicago and post-Chicago theories. Using the recent Kodak *decision as an illustration, Professor Jacobs argues that decisions about antitrust policy must not hinge on inadequate economic data, but rather on the acceptance or rejection of normative, political assumptions.*

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INTRODUCTION

During the 1970s the most important debate among antitrust scholars centered on the extent to which an exclusively economic approach should govern the judicial analysis of arguably anticompetitive behavior. Members of the Chicago School contended that consumer welfare, narrowly conceived in explicitly economic terms, should be the only object of inquiry.[1] Other approaches, they claimed, were "untheoretical, descriptive ... and even metaphorical,"[2] substituting "casual observation," "colorful characterization," and "eclectic forays into sociology and psychology" for "the careful definitions and parsimonious logical structure of economic theory."[3] Those in the opposing camp, sometimes called the "Modern Populist School,"[4] did not seek to exclude economics from antitrust analysis, but argued that courts should resort to other interpretive tools as well. In their view, the antitrust laws were enacted to combat deeply felt social and political problems. A policy that ignored those concerns would be "unresponsive to the will of Congress and out of touch with the rough political consensus" that supports antitrust.[5]

This debate enlivened antitrust scholarship for a generation, but by the end of the 1980s Chicago's position had proved persuasive to federal administrative agencies and most courts.[6] Increasingly, those authorities conceived of competition strictly in terms of allocative

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1. *See, e.g.*, Herbert Hovenkamp, *Antitrust Policy After Chicago*, 84 MICH. L. REV. 213, 215 (1985) [hereinafter Hovenkamp, *After Chicago*] ("The Chicago School model of antitrust policy dictates that allocative efficiency as defined by the market should be the only goal of the antitrust laws."). "Allocative efficiency refers to the welfare of society as a whole. Given a certain amount of inputs or resources, what use and assignment of these resources will make society best off?" HERBERT HOVENKAMP, ECONOMICS AND FEDERAL ANTITRUST LAW 46 (1st ed. 1985).

2. Richard A. Posner, *The Chicago School of Antitrust Analysis*, 127 U. PA. L. REV. 925, 928 (1979) [hereinafter Posner, *The Chicago School of Antitrust Analysis*].

3. *Id.* at 929.

4. *See* Barbara Ann White, *Countervailing Power—Different Rules for Different Markets? Conduct and Context in Antitrust Law and Economics*, 41 DUKE L.J. 1045, 1055 (1992).

5. Robert Pitofsky, *The Political Content of Antitrust*, 127 U. PA. L. REV. 1051, 1052 (1979) [hereinafter Pitofsky, *The Political Content of Antitrust*].

6. *See* Harry S. Gerla, *A Micro-Microeconomic Approach to Antitrust Law: Games Managers Play*, 86 MICH. L. REV. 892, 892 (1988); Hovenkamp, *After Chicago*, *supra* note 1, at 216.

efficiency,[7] rejecting the concerns for small business and competitive process that informed the antitrust philosophy of the Warren Court and animated much of the scholarship critical of Chicago.[8] Though some opponents have continued to question the historical and political underpinnings of Chicago's approach,[9] by 1981 a prominent member of Chicago's opposition had conceded that "regard for efficiency is in the ascendancy";[10] by 1987, Chicago partisans could proudly proclaim that "antitrust law has become . . . a branch of economics";[11] and by

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7. By the late 1980s, several opinions of the United States Supreme Court, along with revisions to the Department of Justice Merger Guidelines, strongly suggested that antitrust authorities had adopted Chicago's exclusive focus on allocative efficiency. *See, e.g.*, Matsushita Elec. Indus. Co. v. Zenith Radio Corp., 475 U.S. 574, 588-89 (1986) (accepting implicitly Chicago's view of predatory pricing); Northwest Wholesale Stationers v. Pacific Stationery & Printing Co., 472 U.S. 284, 296 (1985) (adding market power requirement to prohibition against group boycotts); National Collegiate Athletic Ass'n v. Board of Regents of Univ. of Okla., 468 U.S. 85, 104-07 (1984) ("Restrictions on price and output are the paradigmatic examples of restraints of trade . . . ."); Continental T.V., Inc. v. GTE Sylvania, Inc., 433 U.S. 36, 53 n.21 (1977) (indicating that antitrust jurisprudence should primarily deal with "market considerations," and not with "restrictions on the autonomy of independent businessmen"); *see also* Oliver Williamson, *Delimiting Antitrust*, 76 GEO. L.J. 271, 273-74 (1987) [hereinafter Williamson, *Delimiting Antitrust*] ("The differences between the 1968 and the 1982 merger guidelines . . . evidence some of the changes that resulted from the paradigm shift away from market power (monopolizing) in favor of efficiency (economizing).").

8. Chicago's critics interpreted both the Warren Court's solicitude for the preservation of small business—expressed most clearly in Brown Shoe Co. v. United States, 370 U.S. 294, 315-16 (1962) and United States v. Von's Grocery Co., 384 U.S. 270, 276 (1966)—and its concern for fairness in the competitive process—typified by Klor's, Inc. v. Broadway-Hale Stores, Inc., 359 U.S. 207, 213 (1959)—as the groundwork of a jurisprudence focused not only on allocative efficiency; but also on fairness, consumer choice, product innovation, decentralized decisionmaking, and the continued economic independence of small business. *See, e.g.*, Eleanor M. Fox, *The Battle for the Soul of Antitrust*, 75 CAL. L. REV. 917, 919, 922-23 (1987).

9. *See, e.g.*, Edwin J. Hughes, *The Left Side of Antitrust: What Fairness Means and Why It Matters*, 77 MARQ. L. REV. 265, 269-87 (1994); James May, *Antitrust in the Formative Era: Political and Economic Theory in Constitutional and Antitrust Analysis, 1880-1918*, 50 OHIO ST. L.J. 257, 259 (1989); David Millon, *The Sherman Act and the Balance of Power*, 61 S. CAL. L. REV. 1219, 1222-23 (1988); Rudolph J. Peritz, *The "Rule of Reason" in Antitrust: Property Logic in Restraint of Competition*, 40 HASTINGS L.J. 285, 287 (1989); F.M. Scherer, *Efficiency, Fairness, and the Early Contributions of Economists to the Antitrust Debate*, 29 WASHBURN L.J. 243, 247 (1990).

10. Eleanor M. Fox, *The Modernization of Antitrust: A New Equilibrium*, 66 CORNELL L. REV. 1140, 1140 (1981) [hereinafter Fox, *The Modernization of Antitrust*]; *see also* Robert H. Lande, *Commentary: Implications of Professor Scherer's Research for the Future of Antitrust*, 29 WASHBURN L.J. 256, 258 (1990) ("[T]he dominant paradigm today is that the only goal of the existing antitrust laws is to increase economic efficiency . . . .").

11. Frank H. Easterbrook, *Allocating Antitrust Decisionmaking Tasks*, 76 GEO. L.J. 305, 305 (1987) [hereinafter Easterbrook, *Allocating Antitrust Decisionmaking Tasks*].

1993, a non-aligned scholarly observer could plausibly conclude that "today we tend to view antitrust in technocratic terms."[12]

Drained of its vitality, the old debate between Chicago's exclusively economic viewpoint and the socio-political perspective of its Modern Populist critics has lately ceded priority of place to an intramural dispute between antitrust economists. Over the past ten years, the terms of the scholarly discourse have shifted. A post-Chicago School of economics[13] has arisen, working within the efficiency model, but starting from assumptions and ending with an enforcement methodology markedly different from Chicago's. Though these differences constitute the core of their dispute, the Chicago and post-Chicago Schools share common ground that invests their controversy with a thematic unity absent from previous debates about antitrust policy. Both agree that economics is "the essence of antitrust"[14] and that protecting consumer welfare, conceived in allocative efficiency terms, should be the exclusive goal of competition law. Both eschew the subjective inquiries that they ascribe to the overtly political approaches of the past, and both assert that unless business conduct raises prices or reduces output it should be left alone, regardless of the political or distributive consequences.[15]

The new debate involves contending visions of the workings of the market mechanism and of the proper model for antitrust enforcement. Chicagoans believe that markets tend toward efficiency, that market imperfections[16] are normally transitory, and that judicial enforcement should proceed cautiously, lest it mistakenly proscribe behavior that promotes consumer welfare.[17] Post-Chicagoans, by

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12. OWEN M. FISS, HISTORY OF THE SUPREME COURT, VOL. VIII: TROUBLED BEGINNINGS OF THE MODERN STATE, 1888-1910, at 107 (1993).

13. The term "post-Chicago" apparently was coined by Professor Hovenkamp. *See* Hovenkamp, *After Chicago*, *supra* note 1, at 225 (describing the post-Chicago approach as "both more complex and more ambiguous than the Chicago School model").

14. Jonathan B. Baker, *Recent Developments in Economics That Challenge Chicago School Views*, 58 ANTITRUST L.J. 645, 646 (1989).

15. *Id.*

16. Market imperfections include such phenomena as contractual precommitment, network externalities, installed base, sunk costs, and information and switching costs. *See Post-Chicago Analysis After* Kodak*: Interview with Professor Steven C. Salop*, ANTITRUST, Fall/Winter 1992, at 20, 20 [hereinafter *Interview with Professor Salop*].

17. Judge Easterbrook, a pillar of the Chicago School, has observed that "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. Monopoly is self-destructive. Monopoly prices eventually attract entry." Frank H. Easterbrook, *The Limits of Antitrust*, 63 TEX. L. REV. 1, 2 (1984) [hereinafter Easterbrook, *The Limits of Antitrust*].

contrast, believe that market failures are not necessarily self-correcting, and that firms can therefore take advantage of imperfections, such as information gaps or competitors' sunk costs,[18] to produce inefficient results even in ostensibly competitive markets. They argue that the distortions to competition made possible by market imperfections should prompt enforcement authorities to scrutinize a wider variety of conduct than Chicagoans would examine.[19] On the doctrinal level, this debate has produced conflicting answers to some of antitrust's most pressing questions: the relevant measures of market power,[20] the competitive effects of tying arrangements[21] and

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18. When investments are irreversible—that is, when they have little or no value in some other use, or cannot be recovered in a liquidation sale—expenditures on them are called sunk costs. *See* Baker, *supra* note 14, at 651.

19. *See Interview with Professor Salop*, *supra* note 16, at 20 ("Post-Chicago analysis does not unskeptically attribute efficiency properties to conduct and it is more open to the possibility of anticompetitive effects. Thus, it is more open to intervention by policy makers."); Janusz A. Ordover & Garth Saloner, *Predation, Monopolization, and Antitrust*, *in* 1 HANDBOOK OF INDUSTRIAL ORGANIZATION 537, 537 (Richard Schmalensee & Robert D. Willig eds., 1989) ("Theoretical models studied here provide a guarded support for the proposition that strategic choices made by dominant firms are not invariably consistent with the objective of welfare-maximization and that some constraints on firm behavior may, in fact, increase welfare.").

20. Market power is generally defined as the ability of a firm (or group of firms acting collectively) profitably to raise price by reducing output. *See, e.g.*, U.S. Department of Justice Merger Guidelines—1984, *reprinted in* 4 Trade Reg. Rep. (CCH) ¶ 13,103, at 20,556 (June 14, 1984) (defining market power as the "ability of one or more firms profitably to maintain price above a competitive level for a significant period of time"); William M. Landes & Richard A. Posner, *Market Power in Antitrust Cases*, 94 HARV. L. REV. 937, 937 (1981) ("[M]arket power refers to the ability of a firm . . . to raise price above the competitive level without losing so many sales so rapidly that the price increase is unprofitable and must be rescinded."). While making allowance for entry conditions and aspects of industry structure that permit collusion in unconcentrated markets, Chicagoans generally infer market power from market concentration, using market share as the relevant proxy. *Id.* at 938. In the past ten years, however, economists associated with the post-Chicago School have developed a variety of new techniques for measuring market power, techniques that are recognized to require even more empirical investigation than the market share test, but that are claimed to provide a more accurate picture of market dynamics. *See* Jonathan B. Baker & Timothy F. Bresnahan, *Empirical Methods of Identifying and Measuring Market Power*, 61 ANTITRUST L.J. 3, 5-15 (1992).

21. "A tie-in or tying arrangement is a sale or lease of one product or service on the condition that the buyer take a second product or service as well." HERBERT HOVENKAMP, FEDERAL ANTITRUST POLICY: THE LAW OF COMPETITION AND ITS PRACTICE 351 (1994). Tying arrangements may violate § 1 of the Sherman Act or § 3 of the Clayton Act. The standard formulation for determining their legality appears in Northern Pac. Ry. Co. v. United States, 356 U.S. 1, 6 (1958) (stating that tie-ins "are unreasonable in and of themselves whenever a party has sufficient economic power with respect to the tying product to appreciably restrain free competition in the market for the tied product and a 'not insubstantial' amount of interstate commerce is affected"). *See also* Eastman Kodak Co. v. Image Technical Servs., Inc., 504 U.S. 451, 461-62 (1992)

other vertical restraints,[22] the economic plausibility of predatory pricing schemes,[23] and the durability of cartels and oligopolies.[24]

On its surface, the nature of this debate confirms the view that antitrust analysis has taken a decidedly technological turn. Talk of political values is conspicuously absent from the discussion, which employs the vocabulary of academic economics and relies frequently on complicated mathematical proofs.[25] What apparently divide the

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(stating the test for determining whether an arrangement violates § 1 of the Sherman Act); Jefferson Parish Hosp. Dist. No. 2 v. Hyde, 466 U.S. 2, 13-14 (1984) (stating that "[w]hen the seller has some special ability . . . to force a purchaser to do something that he would not do in a competitive market," the Supreme Court has "found the tying arrangement to be unlawful").

22. Chicago scholars are skeptical that exclusive contracts, in which, for example, one party agrees to purchase all its requirements from the other, threaten significant competitive harm. On their view, exclusionary practices tend to be unprofitable because the party whose freedom is restricted will invariably insist on compensation for limiting its options. For that reason, firms will rarely engage in exclusionary practices; when they do, it is safe to assume that the practices are more efficient than alternative arrangements. *See, e.g.*, RICHARD A. POSNER, ANTITRUST LAW: AN ECONOMIC PERSPECTIVE 203 (1976) [hereinafter POSNER, ANTITRUST LAW] (stating that predatory pricing strategies may be unlikely to be profitable "given the risks faced by the predator and the responses available to rivals"); Aaron Director & Edward Levi, *Law and the Future: Trade Regulation*, 51 NW. U. L. REV. 281, 292 (1956). Post-Chicagoans, by contrast, have developed theoretical models demonstrating that exclusion may be privately profitable yet socially wasteful. *See* Phillipe Aghion & Patrick Bolton, *Contracts as a Barrier to Entry*, 77 AM. ECON. REV. 388, 388 (1987); Joseph F. Brodley & Ching-to Albert Ma, *Contract Penalties, Monopolizing Strategies, and Antitrust Policy*, 45 STAN. L. REV. 1161, 1163-64 (1993).

23. Predatory pricing occurs when a firm prices below cost in order to drive a rival from the market or discipline the rival for competing vigorously. *See* Brooke Group Ltd. v. Brown & Williamson Tobacco Corp., 113 S. Ct. 2578, 2587 (1993) (describing the prerequisites for recovery under the Robinson-Patman Act). Chicagoans doubt whether predatory pricing schemes make economic sense from the perspective of the would-be predator. *See* Frank A. Easterbrook, *Predatory Strategies and Counterstrategies*, 48 U. CHI. L. REV. 263, 264 (1981) [hereinafter Easterbrook, *Predatory Strategies and Counterstrategies*]. But post-Chicagoans regard predatory strategies as highly plausible under a variety of circumstances. *See, e.g.*, Charles A. Holt & David T. Scheffman, *Strategic Business Behavior and Antitrust*, *in* ECONOMICS & ANTITRUST POLICY 39, 47-63 (Robert J. Larner & James W. Meehan, Jr. eds., 1989).

24. "The strategic oligopoly models [employed by post-Chicago analysts] . . . are typically richer and more complex than the standard Chicago models of either perfect competition or monopoly. These models also suggest a greater scope for antitrust intervention into markets than does the static Chicago-School model." Steven Salop, Kodak *as Post-Chicago Law and Economics*, CHARLES RIVER ASSOCIATES PERSP., Apr. 1993, at 1, 4.

25. *See, e.g.*, Janusz A. Ordover et al., *Equilibrium Vertical Foreclosure*, 80 AM. ECON. REV. 127, 134 (1990) [hereinafter Ordover et al., *Equilibrium Vertical Foreclosure*] (using the "envelope theorem" and "Shepard's lemma" to derive a differential equation denoting the level of anticipated profitability from integrated operations necessary to persuade a downstream oligopolist to merge with its upstream oligopolist supplier).

parties are not their political ideologies or interpretations of history, but differing evaluations of the efficiency implications of their respective theories and methodologies. Indeed, some post-Chicagoans characterize their work not as an alternative to Chicago thinking but as a refinement of it, an effort to provide decisionmakers with a more accurate picture of the marketplace and more sensitive tools for detecting inefficient behavior.[26]

These appearances, however, are deceptive. The parties' shared commitment to efficiency and the debate's specialized vocabulary mask deep divisions regarding the normative assumptions most appropriate to competition policy. The contending economic models reflect very different views of human nature, firm behavior, and judicial competence. While Chicagoans assume that the desire to maximize profits drives firms to compete away market imperfections and destabilizes collusive activity, post-Chicagoans believe that strategizing firms can create or perpetuate market imperfections that can seriously hamper competitive balance. Similarly, while Chicagoans presuppose that markets promote efficient business behavior and that judges untrained in economics are ill-equipped to identify and measure market imperfections, post-Chicagoans have less trust in markets and more confidence in the judiciary's ability to distinguish between competitive and anticompetitive conduct.

Post-Chicagoans have shown that the neoclassical price model is not the only method for analyzing the efficiency questions central to antitrust. They have demonstrated that economists equally loyal to the goal of consumer welfare can disagree markedly with price theorists about the means most conducive to allocative efficiency. In doing so, however, they have revealed, albeit unintentionally, the inability of economics to furnish empirical or theoretical criteria for resolving the differences between their model and Chicago's. Their work has produced a stalemate in economic theory that effectively requires antitrust decisionmakers, most of whom accept the legitimacy of the economic model, to probe the technocratic surface of the current debate and evaluate the conflicting beliefs about firms, markets, and governments embedded in its foundation. Ironically, far from having marginalized the role of value choice in antitrust discourse, the ascendancy of economic models underscores its enduring importance.

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26. *See, e.g.*, Williamson, *Delimiting Antitrust*, *supra* note 7, at 280.

This Essay does not aim to refute the thesis that economics is a scientific discipline.[27] Nor does it seek to establish the indeterminacy of economic thinking,[28] or the failure of the law and economics movement to incorporate broader measures of personal and social well-being that reflect more fully the work of other social sciences.[29] Rather, it argues that the contemporary debate between antitrust economists demonstrates how efforts to base antitrust policy solely upon economic theory inevitably draw on political assumptions about the marketplace and the proper role of enforcement authorities. It contends that inconclusive evidence of the efficiency effects of many business practices, and the inability of economic theory to determine which model promises greater efficiency, expose these political assumptions and effectively transform the economics debate into a political one. Finally, it suggests that antitrust discourse would benefit from the acknowledgment by policymakers that the current economic debate is theoretically and empirically irresolvable, and from their express recognition that the choice between conflicting economic models constitutes a normative ordering of divergent political beliefs.

I. ANTITRUST ECONOMICS AS APPLIED SCIENCE: THE EMERGENCE AND ASCENDANCY OF THE CHICAGO SCHOOL

The Chicago School is hardly the first to have developed an economic approach to antitrust. In almost every era of antitrust history, policymakers have employed economic models to explain or modify the state of the law and the rationale for its enforcement.[30]

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27. For an attempt to refute that thesis, see Gregory Scott Crespi, *The Mid-Life Crisis of the Law and Economics Movement: Confronting the Problems of Nonfalsifiability and Normative Bias*, 67 NOTRE DAME L. REV. 231, 233 (1991) ("[A]ny evaluative criteria that can be provided by economics are necessarily political and ideological 'all the way down.' ").

28. For an argument that economics is indeterminate as a guide to legal problem-solving, see James Boyle, *The Anatomy of a Torts Class*, 34 AM. U. L. REV. 1003 app. at 1051 (1985) (indicating the difficulty of using policy and economics to construct convincing legal arguments). For a rebuttal, see RICHARD A. POSNER, THE PROBLEMS OF JURISPRUDENCE 255-59 (1990) [hereinafter POSNER, THE PROBLEMS OF JURISPRUDENCE].

29. For an argument that the methodology of law and economics improperly constrains the meaning of "welfare" by failing to consider the teachings of other disciplines, see Herbert Hovenkamp, *The Limits of Preference-Based Legal Policy*, 89 NW. U. L. REV. 4, 11 (1994).

30. *See* Hovenkamp, *After Chicago*, *supra* note 1, at 220-25. According to Professor Hovenkamp, "one must go all the way back to the first thirty years of antitrust enforcement to find a policy that can reasonably be characterized as having little or no economic content." *Id.* at 220. Professor May has argued persuasively that, even in the earliest days of antitrust history, notions of classical economics, as well as "historical" or

What distinguishes Chicago from its predecessors is not its application of economic theory, but its insistence on two fundamental propositions: that allocative efficiency, narrowly conceived, should be the exclusive goal of the antitrust laws; and that the legislative history of those laws requires, or at least permits, the judicial implementation of that narrow efficiency goal.

Chicago scholars rose to prominence in the late 1960s, offering a theory of business behavior that ran counter to the views of the then-dominant Harvard School of industrial organization.[31] The Harvard School was distrustful of large firms and concentrated industries.[32] Its members undertook detailed case studies of particular industries,[33] and on the basis of their results postulated that economies of scale rarely required firms to grow very large,[34] that dominant firms could readily create substantial entry barriers for newcomers,[35] and that markets performed uncompetitively at relatively low levels of concentration.[36] These postulates led Harvard theorists to view large firms and mergers with suspicion and to explain non-standard or unfamiliar business practices as motivated

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"new" school approaches to economic theory, contributed significantly to the debates over antitrust legislation and helped to inform judicial decisionmaking at the state and national levels. *See* James May, *Antitrust in the Formative Era: Political and Economic Theory in Constitutional and Antitrust Analysis, 1880-1918*, 50 OHIO ST. L.J. 257, 283-88 (1989).

31. For a discussion and analysis of Industrial Organization (I.O.) philosophy, see Peter C. Carstensen, *Antitrust Law and the Paradigm of Industrial Organization*, 16 U.C. DAVIS L. REV. 487 (1983). The guiding principles of that philosophy have 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).

32. *See* JOE S. BAIN, INDUSTRIAL ORGANIZATION 462-63 (2d ed. 1968); Leonard W. Weiss, *The Structure-Conduct-Performance Paradigm and Antitrust*, 127 U. PA. L. REV. 1104, 1105 (1979).

33. *See, e.g.*, JAMES W. MCKIE, TIN CANS AND TIN PLATE: A STUDY OF COMPETITION IN TWO RELATED MARKETS (1959); Joe S. Bain, *Economies of Scale, Concentration, and the Condition of Entry in Twenty Manufacturing Industries*, 44 AM. ECON. REV. 15 (1954) [hereinafter Bain, *Economies of Scale*].

34. *See* Bain, *Economies of Scale*, *supra* note 33, at 38.

35. *See* JOE S. BAIN, BARRIERS TO NEW COMPETITION: THEIR CHARACTER AND CONSEQUENCES IN MANUFACTURING INDUSTRIES 1-42 (1956).

36. *Id.*

by monopolistic intent,[37] positions largely adopted in important antitrust opinions of the Warren Court.[38]

Chicagoans disagreed with both the research methodology and the policy conclusions of the Harvard School. They contended that a lack of intellectual rigor, arguably the product of a bias against big business, led Harvard scholars to conclude mistakenly that large firms operated less efficiently than smaller ones and that non-standard contracting practices betokened monopolistic intent. Members of the Chicago School argued that efficiency, not monopoly, explained these phenomena.[39] On their view, firms using innovative contractual arrangements were presumptively trying to economize on transaction costs or discourage free-riding.[40] Large firms that had attained their size through internal growth had presumably achieved superior efficiencies or realized important economies of scale.[41]

Working from a model of perfect competition[42] founded in

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37. Ronald Coase summarized this view, and remarked critically that

> [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. And as in this field we are very ignorant, the number of ununderstandable practices tends to be rather large, and the reliance on a monopoly explanation, frequent.

R.H. Coase, *Industrial Organization: A Proposal for Research*, *in* ECONOMIC RESEARCH: RETROSPECT AND PROSPECT: POLICY ISSUES AND RESEARCH OPPORTUNITIES IN INDUSTRIAL ORGANIZATION 59, 67 (Victor R. Fuchs ed., 1972).

38. *See, e.g.*, Brown Shoe Co. v. United States, 370 U.S. 294, 344 (1962) (declaring that Congress intended amended § 7 of the Clayton Act "to promote competition through the protection of viable, small, locally owned businesses"); *see also* United States v. Von's Grocery Co., 384 U.S. 270, 277 (1966) (invalidating merger between grocery store chains that would have produced post-merger firm with 7.5% of the relevant market, citing "threatening trend toward concentration" in Los Angeles retail grocery industry as justification).

39. *See, e.g.*, Posner, *The Chicago School of Antitrust Analysis*, *supra* note 2, at 926-33 (citing Chicago literature and articulating the specifics of Chicago theory).

40. *Id.*

41. *See, e.g.*, ROBERT H. BORK, THE ANTITRUST PARADOX: A POLICY AT WAR WITH ITSELF 430 (2d ed. 1993) [hereinafter BORK, THE ANTITRUST PARADOX]; *see also* F.M. Scherer, *Economies of Scale and Industrial Concentration*, *in* INDUSTRIAL CONCENTRATION: THE NEW LEARNING 15 (Harvey J. Goldschmid et al. eds., 1974) [hereinafter INDUSTRIAL CONCENTRATION] (addressing whether high levels of industrial concentration are based upon economies of scale); John S. McGee, *Efficiency and Economies of Size*, *in* INDUSTRIAL CONCENTRATION, *supra*, at 55 (same); F.M. Scherer, *Commentary*, *in* INDUSTRIAL CONCENTRATION, *supra*, at 97 (same); John S. McGee, *Commentary*, *in* INDUSTRIAL CONCENTRATION, *supra*, at 101 (same); *Dialogue*, *in* INDUSTRIAL CONCENTRATION, *supra*, at 105 (same).

42. Descriptions of perfect competition usually include four assumptions: homogeneous products, identical with respect to physical characteristics, quality and service, so that only price determines sales; perfectly informed buyers and sellers; instantly mobile and infinitely divisible productive assets, capable of flowing immediately from one

neoclassical price theory,[43] Chicagoans constructed a relatively simple analytical framework within which the drive for greater efficiency accounts for almost all competitively ambiguous business behavior.[44] This framework, they claimed, permits courts to interpret commercial behavior coherently, efficiently, and free of political bias.[45] Since price theory views firms as profit-maximizers,[46] it regards conspiracies as inherently unstable,[47] monopoly markets as self-correcting,[48] and entry barriers—except for those imposed by government regulation—as inadequate to prevent the flow of capital to profitable markets.[49] These premises led Chicagoans to argue that antitrust enforcement should punish only inefficient con-

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market to another with changes in demand; and a sufficient number of sellers, independent and of roughly equal size, so that no one seller can unilaterally affect output or price. *See, e.g.*, ROGER D. BLAIR & DAVID L. KASERMAN, ANTITRUST ECONOMICS 4-5 (1985); F.M. SCHERER & DAVID ROSS, INDUSTRIAL MARKET STRUCTURE AND ECONOMIC PERFORMANCE 15-18 (3d ed. 1990).

43. *See* GEORGE J. STIGLER, THE THEORY OF PRICE 87-89 (3d ed. 1966).

44. *See* Posner, *The Chicago School of Antitrust Analysis*, *supra* note 2, at 926-33 (citing Chicago literature and articulating the specifics of Chicago theory).

45. *Cf. id.* at 926-33 (criticizing the concepts of industrial organization as being derived from the unsystematic and superficial observation of business).

46. Although Chicago and post-Chicago economists share the assumption that firms seek to maximize profit, others theorize that the limits of human knowledge and the inclination to follow proven patterns of behavior lead firms to "satisfice"—that is, to set profit goals intentionally short of maximal levels. *See, e.g.*, ADOLF A. BERLE & GARDINER C. MEANS, THE MODERN CORPORATION AND PRIVATE PROPERTY 113-16, 303-08 (1967) (arguing that terms used by Adam Smith, such as "the profit motive," no longer accurately describe modern corporations); HERBERT A. SIMON, ADMINISTRATIVE BEHAVIOR 61-78 (2d ed. 1957) (describing how good administrators make choices with incomplete knowledge); Robert G. Harris & Thomas M. Jorde, *Antitrust Market Definition: An Integrated Approach*, 72 CAL. L. REV. 3, 28-29 (1984) (arguing that in modern corporations in which ownership is separate from control, the assumption that a person is acting to maximize profit becomes more complicated).

47. Since cartel members usually have different marginal costs, agreeing on a common price forces low-cost firms to accommodate higher-cost co-conspirators; at the same time, the desire to maximize profits enhances the temptation of the low-cost firms to cheat on the cartel by making secret, below-cost sales—a practice that is difficult to detect and police, and that will frequently destabilize the cartel and lead to its collapse. *See* RICHARD A. POSNER, ANTITRUST: CASES, ECONOMIC NOTES, AND OTHER MATERIALS 47-48 (1974); *cf.* BORK, THE ANTITRUST PARADOX, *supra* note 41, at 179-91(arguing that oligopolies do not result in substantial restrictions of output; acknowledging that cartels are fragile).

48. *See* Easterbrook, *The Limits of Antitrust*, *supra* note 17, at 2.

49. *Cf.* BORK, THE ANTITRUST PARADOX, *supra* note 41, at 310-29 (explaining the difference between natural and artificial barriers to entry, and arguing that antitrust law should seek only to punish predation).

duct[50]—which they defined as conduct that reduces output[51]—and to criticize the Warren Court and its predecessors for having established an "inhospitality tradition of antitrust"[52] characterized by the reflexive judicial proscription of business practices whose novelty blinded courts to their efficiency.[53]

Chicago scholars claimed that linking antitrust policy to price theory would remove competition law from the political arena and set it on a scientific[54] course.[55] Price theory, they argued, evaluates competitive well-being not by reference to subjective beliefs but by objective observation of the effects of business behavior on output and price. It thus transcends partisan politics and avoids idiosyncratic assessments of such issues as the value of small business, distributional justice, and "fair" competitive processes.[56] For Chicagoans, the

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50. *See, e.g.*, William M. Landes, *Optimal Sanctions for Antitrust Violations*, 50 U. CHI. L. REV. 652, 652-61 (1983) (arguing that an optimal antitrust fine equal to "the net harm to persons other than the offender" yields an efficient outcome); Warren F. Schwartz, *An Overview of the Economics of Antitrust Enforcement*, 68 GEO. L.J. 1075, 1075-76 (1980) (describing the difficulties of applying economic analysis to enforcement policies).

51. *See* Robert H. Bork, *Legislative Intent and the Policy of the Sherman Act*, 9 J.L. & ECON. 7, 7 (1966) [hereinafter Bork, *Policy of the Sherman Act*] (arguing that proper antitrust policy "requires courts to distinguish between agreements or activities that increase wealth through efficiency and those that decrease it through restriction of output").

52. Attributing this phrase to Professor Turner, Judge Easterbrook remarked that it stands for the judicial habit of "view[ing] each business practice with suspicion, always wondering how firms are using it to harm consumers." Easterbrook, *The Limits of Antitrust*, *supra* note 17, at 4. The phrase may have originated, however, with Professor Williamson. *See* Oliver E. Williamson, *The Modern Corporation: Origins, Evolution, Attributes*, 19 J. ECON. LITERATURE 1537, 1540 (1981) (describing the "inhospitality tradition" in antitrust as "ingrained public policy animosity" toward organizational innovations, because of their suspected departures from the competitive model).

53. *Cf.* Frank H. Easterbrook, *Is There a Ratchet in Antitrust Law?*, 60 TEX. L. REV. 705, 714 & n.42 (1982) (citing some antitrust cases in which the Supreme Court calls for economic analysis, and others in which the Court "condemn[s] efficiency as a source of evil").

54. *See, e.g.*, BORK, THE ANTITRUST PARADOX, *supra* note 41, at 8 ("Basic microeconomic theory is of course a science, though like many other sciences it is by no means complete in all its branches. Were it not a science, rational antitrust policy would be impossible."). Efforts by economists to characterize their work as scientific are almost as old as the discipline itself. *See* THOMAS HOBBES, LEVIATHAN 261 (C.B. Macpherson ed., 1968) (1651) (asserting that the skill of making and maintaining commonwealths "consisteth in certain Rules, as doth Arithmetique and Geometry; not (as Tennis-play) on Practise onely").

55. *Cf.* RICHARD A. POSNER, THE ECONOMICS OF JUSTICE 92-94 (1981) (explaining that efficiency can be defended on the ground that it allows issues of allocation to be discussed separately from issues of distribution).

56. *See* Herbert Hovenkamp, *Distributive Justice and the Antitrust Laws*, 51 GEO. WASH. L. REV. 1, 16-26 (1982); *see also* BORK, THE ANTITRUST PARADOX, *supra* note 41,

movement away from these "nebulous values"[57] marked "an intellectual shift in the underpinnings of antitrust."[58] Even for neutral observers, the changes wrought by Chicago constituted "a genuine scientific revolution."[59]

Chicagoans also contended that their approach would economize on the cost of antitrust enforcement and litigation. By defining anticompetitive behavior solely in terms of price and output, the Chicago model arguably furnishes enforcement authorities with simple quantitative tests that remove the guesswork from antitrust adjudication. Its mathematical simplicity presumably frees courts from the need to hazard qualitative judgments about the supposed norms of business competition or the inchoate effects of corporate size on the body politic.[60] In addition, Chicagoans contended, by defining expanded output and lower prices as the exclusive measure of welfare, their methodology avoids the problems associated with weighing and balancing the conflicting interests of different market segments, such as consumers and small business.[61] Finally, Chicago scholars believed that the clarity of their approach would enable firms to predict more accurately the legal consequences of important business practices, and would thereby promote capital investment and generally facilitate private ordering.[62]

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at 429 (criticizing those who would encourage judicial consideration of "an open-ended list of attractive-sounding goals to be weighed against consumer welfare").

57. Bork, *Policy of the Sherman Act*, *supra* note 51, at 9. According to Judge Bork, importing noneconomic values into antitrust jurisprudence was closely akin to playing "tennis with the net down." *Id.* at 10.

58. Robert H. Bork, *The Role of the Courts in Applying Economics*, 54 ANTITRUST L.J. 21, 25 (1985) [hereinafter Bork, *The Role of the Courts*].

59. William Frech, *Comments on Antitrust Issues*, 7 ADVANCES IN HEALTH ECON. & HEALTH SERVS. RES. 263, 264 (1987).

60. Chicago scholars criticize judicial concern for a "fair" competitive process on several grounds. Professor Stigler characterized the fairness concept as "a suitcase full of bottled ethics from which one freely chooses to blend his own type of justice." George J. Stigler, *The Law and Economics of Public Policy: A Plea to the Scholars*, 1 J. LEGAL STUD. 1, 4 (1972). Similarly, Professors Areeda and Turner state that "[a]s a goal of antitrust policy, 'fairness' is a vagrant claim applied to any value that one happens to favor." 1 PHILLIP AREEDA & DONALD F. TURNER, ANTITRUST LAW: AN ANALYSIS OF ANTITRUST PRINCIPLES AND THEIR APPLICATION ¶ 109a, at 21 (1978). Instead of focusing on the plasticity of the term, Judge Easterbrook attacks the value of fair competition itself ("Who says that competition is supposed to be fair . . . ?"), declaring that "[f]air competition is tempered competition." Fishman v. Estate of Wirtz, 807 F.2d 520, 577 (7th Cir. 1986) (Easterbrook, J., concurring in part and dissenting in part).

61. *See* Hovenkamp, *After Chicago*, *supra* note 1, at 234.

62. Easterbrook, *The Limits of Antitrust*, *supra* note 17, at 14.

Chicagoans also recognized that their policy prescriptions were addressed to courts acting in a statutory tradition and that therefore, no matter how intellectually compelling, their model could exert no influence unless it furthered the intent that informed that tradition. Accordingly, they argued that nothing in the legislative history of the antitrust laws prevents courts from regarding allocative efficiency as the exclusive congressional goal. Robert Bork offered the strongest version of this argument, asserting that the Sherman Act affirmatively "displays the clear and exclusive policy intention of promoting consumer welfare."[63] Others took a more moderate tack, arguing simply that the congressional debates preceding the passage of the Sherman Act present a "confused picture" and that courts must therefore "make sense out of the statute pretty much on their own, without the benefit of legislative history."[64] Still others, conceding that "populist" goals underlay the history of the Sherman Act and other antitrust laws, dismissed those goals as inappropriate to the formulation of antitrust rules, claiming that they would "increase vagueness in the law, and . . . discourage conduct that promotes efficiencies."[65]

II. CHICAGO'S EARLY CRITICS AND THE DEMISE OF THE POPULIST STRAIN IN ANTITRUST DISCOURSE

Chicago's approach has attracted widespread academic criticism. Important scholarship directly contests Chicago's reading of the legislative history of the Sherman Act.[66] These scholars contend that

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63. BORK, THE ANTITRUST PARADOX, *supra* note 41, at 61. *See also* Bork, *Policy of the Sherman Act*, *supra* note 51, at 7 (arguing that Congress wants the courts to implement the policy of "consumer welfare").

64. *From* Von's *to* Schwinn *to the Chicago School: Interview with Judge Richard Posner, Seventh Circuit Court of Appeals*, ANTITRUST, Spring 1992, at 4. Earlier, Judge Posner had contended that the framers of the Sherman Act "appear to have been concerned mainly with the price and output consequences of monopolies and cartels." POSNER, ANTITRUST LAW, *supra* note 22, at 23.

65. Donald F. Turner, *The Durability, Relevance, and Future of American Antitrust Policy*, 75 CAL. L. REV. 797, 798 (1987). Judge Easterbrook has suggested that courts should regard the antitrust laws as a "blank check," a tabula rasa, on which they can and should inscribe efficient policy prescriptions. Frank H. Easterbrook, *Workable Antitrust Policy*, 84 MICH. L. REV. 1696, 1702 (1986) [hereinafter Easterbrook, *Workable Antitrust Policy*].

66. *See* Robert H. Lande, *Wealth Transfers as the Original and Primary Concern of Antitrust: The Efficiency Interpretation Challenged*, 34 HASTINGS L.J. 65 (1982) (arguing that the Sherman Act was concerned with preventing unfair wealth transfers from consumers to monopolists); May, *supra* note 9, at 260 (criticizing Chicago scholars, and others, for de-emphasizing "the broader theoretical context within which early antitrust law

Chicago's conception of allocative efficiency was not even remotely familiar to the drafters of the Sherman Act, who conceived of competition mainly in terms of such classical ideals as individual liberty and freedom of choice.[67] As to other statutes, especially the Robinson-Patman Act of 1936 and the 1950 amendments to Section 7 of the Clayton Act, no one—not even a die-hard Chicagoan—regards the legislative history as supporting the efficiency hypothesis.[68]

Judge Bork's view that the history of the Sherman Act compels a price-theory approach has come under particularly harsh attack. One critic has characterized Bork's reading as "transparently revisionist," dismissing it as an effort "to adjust historical facts to fit a preordained model."[69] But the less doctrinaire interpretations of other Chicagoans have survived scholarly criticism largely unscathed. The sheer size and conceded ambiguity of the historical record, along with the acknowledged variety of political considerations that contributed to the final legislative product, make it difficult, if not impossible, to advance one particular view as the definitive reading of

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developed"); Rudolph J. Peritz, *A Counter-History of Antitrust Law*, 1990 DUKE L.J. 263, 272-74 [hereinafter Peritz, *A Counter-History of Antitrust Law*].

67. *See, e.g.*, Herbert Hovenkamp, *The Sherman Act and the Classical Theory of Competition*, 74 IOWA L. REV. 1019, 1025 (1989). For a discussion of the classical view of competition, see George Stigler, *Perfect Competition, Historically Contemplated*, 65 J. POL. ECON. 1 (1957).

68. *See, e.g.*, Derek Bok, *Section 7 of the Clayton Act and the Merging of Law and Economics*, 74 HARV. L. REV. 226, 233-38 (1960) (arguing that the 1950 amendments to the Clayton Act were especially designed to protect small business); Hugh C. Hansen, *Robinson-Patman Law: A Review and Analysis*, 51 FORDHAM L. REV. 1113, 1114-17 (1983) (arguing that the Robinson-Patman Act was concerned mainly with protecting small business from the buying power of large firms). In addition, the Clayton Act's prohibition against price discrimination, originally enacted at ch. 323, § 2(a), 38 Stat. 730 (1914), now codified as amended at 15 U.S.C. § 13(a) (1988), is generally conceded to have been "born of a desire by Congress to curb the use by financially powerful corporations of localized price-cutting tactics which had gravely impaired the competitive position of other sellers." FTC v. Anheuser-Busch, Inc., 363 U.S. 536, 543 (1959).

69. John J. Flynn, *The Misuse of Economic Analysis in Antitrust Litigation*, 12 SW. U. L. REV. 335, 339-40 (1981). In recent years, even prominent Chicagoans have qualified their initial support for Bork's thesis. *See, e.g.*, Lloyd Constantine, *An Antitrust Enforcer Confronts the New Economics*, 58 ANTITRUST L.J. 661, 662 n.7 (1989) (quoting Judge Easterbrook's characterization of Chicago's reading of the legislative history of the Sherman Act as "a post hoc rationalization, but . . . the one I happen to favor"). In the mid-1980s, moreover, while he continued to insist that allocative efficiency should be the only goal of antitrust, Bork himself made some apparent concessions to his critics, revising his earlier view and conceding that the legislative history of the antitrust laws reflects a concern not only for efficiency but for "a potpourri of other values" as well. Bork, *The Role of the Courts*, *supra* note 58, at 25.

the Sherman Act's statutory background.[70] And the reading of mainstream Chicagoans has apparently proved persuasive: Even liberal scholars allow that most judges and academics view the Sherman Act "as little more than a congressional mandate to develop a federal common law of competition."[71]

A second strand of criticism rebuked the Chicago School for unfairly rejecting the values informing the American tradition of business competition. For these critics, Chicago's position on legislative history, though incorrect, matters less than its attempt to replace antitrust's long-standing process orientation with an outcome measure far removed from the intellectual and political concerns which, on their view, should animate competition law.[72] Antitrust, say these populist critics, "is rooted in a preference for pluralism, freedom of trade, access to markets, and freedom of choice,"[73] values ignored in Chicago's efforts to remake antitrust in its own, exclusively economic image.

Because they regarded Chicago's efficiency presumptions and anti-interventionist bias as unduly favorable to large and powerful corporations, many critics accused Chicago of implementing an agenda more ideological than intellectual, calculated to favor the wealthy and institutionalize the economic status quo.[74] Referring to Chicago as a "Church," some attacked its analysis as a "theology . . . out of touch with its own empirical and moral roots, detached from present-day realities."[75] Others denounced it as "a sterile and

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70. *See, e.g.*, E. THOMAS SULLIVAN & HERBERT HOVENKAMP, ANTITRUST LAW: POLICY AND PROCEDURE 35 (2d ed. 1989); HANS THORELLI, THE FEDERAL ANTITRUST POLICY: ORIGINATION OF AN AMERICAN TRADITION 226-32 (1954); William L. Letwin, *Congress and the Sherman Antitrust Law: 1887-1890*, 23 U. CHI. L. REV. 221, 222, 255-58 (1956).

71. Peritz, *A Counter-History of Antitrust Law*, *supra* note 66, at 269.

72. *See, e.g.*, Eleanor M. Fox & Lawrence A. Sullivan, *Antitrust—Retrospective and Prospective: Where Are We Coming From? Where Are We Going?*, 62 N.Y.U. L. REV. 936, 936 (1987) (stating that the antitrust laws' "summarizing norm" is a "commitment to the maintenance of competitive process").

73. *Id.*

74. *See, e.g.*, *id.* at 957 ("[T]he Chicago School, in the name of law and economics, has waged ideological warfare, assaulting antitrust itself."); Thomas M. Melsheimer, *Economics and Ideology: Antitrust in the 1980s*, 42 STAN. L. REV. 1319, 1335 (1990) ("[I]n the hands of Chicago School proponents, economics has become an engine for an ideology hostile to the operation of antitrust laws."); 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.").

75. Flynn, *supra* note 69, at 344.

irrelevant exercise in confirming inappropriate political goals."[76] During the second term of the Reagan presidency, this criticism became increasingly embittered and fatalistic,[77] reflecting in part the populists' growing concern that the Reagan administration had "minimalized and trivialized" the antitrust laws.[78]

A third form of criticism came from antitrust economists. Though they accepted economic efficiency as the exclusive goal of antitrust policy, these critics found fault with particular features of Chicago's model. Some challenged the view that vertical price restraints inevitably increase consumer welfare, arguing that price theory's blinkered focus on marginal consumers ignored buyers within the margin, who would not benefit from the increased services that resale price maintenance presumably encourages.[79] Others contended that by concentrating strictly on allocative efficiency, Chicagoans overlook other types of efficiency equally important to consumer welfare.[80] Still others attacked Chicago's assumption that the marginal value of a dollar is the same for different consumer groups,[81] as well as Chicago's use of static analytical models.[82]

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76. John J. Flynn & James F. Ponsoldt, *Legal Reasoning and the Jurisprudence of Vertical Restraints: The Limitations of Neoclassical Economic Analysis in the Resolution of Antitrust Disputes*, 62 N.Y.U. L. REV. 1125, 1130 (1987).

77. *See, e.g.*, Thomas C. Arthur, *Workable Antitrust Law: The Statutory Approach to Antitrust*, 62 TUL. L. REV. 1163, 1167-68 (1988) (decrying the "name calling and allegations of bad faith" on both sides of the Chicago-populist debate). Others lamented the "attenuation of antitrust," *see* Robert A. Katzmann, *The Attenuation of Antitrust*, BROOKINGS REV., Summer 1984, at 23, and mourned its "euthanasia," *see* Walter Adams & James W. Brock, *The "New Learning" and the Euthanasia of Antitrust*, 74 CAL. L. REV. 1515 (1986).

78. Eleanor M. Fox & Robert Pitofsky, *Airlie House Conference on the Antitrust Alternative: Introduction*, 76 GEO. L.J. 237, 237 (1987); *see also* Milton Handler, *Is Antitrust's Centennial a Time for Obsequies or for Renewed Faith in Its National Policy?*, 10 CARDOZO L. REV. 1933, 1935 (1989) (criticizing the Reagan administration's "non-enforcement" of the antitrust laws); Robert Pitofsky, *Antitrust in the Next 100 Years*, 75 CAL. L. REV. 817, 818 (1987) ("The only matters that regularly attract the attention of the [Reagan administration's] enforcement authorities are cartels, horizontal mergers tending to create a monopoly, and various forms of predation.").

79. William S. Comanor, *Vertical Price-Fixing, Vertical Market Restrictions, and the New Antitrust Policy*, 98 HARV. L. REV. 983, 999 (1985).

80. F.M. Scherer, *Antitrust, Efficiency, and Progress*, 62 N.Y.U. L. REV. 998, 1002 (1987) (arguing that, while difficult to measure, the effects of "X-efficiency" (the efficiency of production) and of long-run technological efficiency (the rate of useful invention) probably outweigh those of allocative efficiency).

81. *See, e.g.*, Richard S. Markovits, *A Basic Structure for Microeconomic Policy Analysis in Our Worse-than-Second-Best World: A Proposal and Related Critique of the Chicago Approach to the Study of Law and Economics*, 1975 WIS. L. REV. 950, 987 (characterizing the constant dollar assumption as, in some measure, "heroic").

Because it operated from within the efficiency paradigm, this criticism differed fundamentally from the political and historical critiques. Moreover, because it lacked an organizing principle, an economic counter-vision of antitrust, it also differed from the later, more coherent post-Chicago critique of Chicago's methodology.

For nearly a decade, the legal literature resounded with criticism of Chicago, mostly from Modern Populist scholars.[83] As the 1980s drew to a close, however, and the ascendancy of Chicago's approach became increasingly apparent, the Populist criticism took on a frantic tone,[84] and by the late 1980s the Populists spoke largely to themselves.[85] Not only could Chicagoans proclaim the dominance of their "scientific" model,[86] they could point to opinions of the Supreme Court[87] and lower federal courts[88] and to Justice Department Merger

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82. *See, e.g.*, Hovenkamp, *After Chicago*, *supra* note 1, at 256; Louis Kaplow, *Extension of Monopoly Power Through Leverage*, 85 COLUM. L. REV. 515, 523-25 (1985).

83. A search of the legal literature reveals that between 1977 and 1987, Chicago's leading Modern Populist critics—Professors Flynn, Fox, Pitofsky, Ponsoldt, and Sullivan—wrote more than 30 articles challenging the Chicago School's approach to antitrust. (Citations on file with the author).

84. *See, e.g.*, Eleanor M. Fox, *Consumer Beware Chicago*, 84 MICH. L. REV. 1714, 1715 (1986) ("Chicago is not fighting a war against inefficiency. Chicago is fighting a war *for* private freedom of action."); Flynn & Ponsoldt, *supra* note 76, at 1136 ("[T]o define the role of antitrust . . . solely in terms of the neoclassical model would result in the abolition of the antitrust laws.").

85. See, for example, the Symposia produced from the Airlie House Conference on the Antitrust Alternative, published in 1987 by the *Georgetown Law Journal*, 76 GEO. L.J. 237, and the *New York University Law Review*, 62 N.Y.U. L. REV. 931, respectively. In the introduction to the Georgetown issue, Professors Fox and Pitofsky note that, with the exception of an essay by Judge Easterbrook, neither the Georgetown issue nor its N.Y.U. companion included papers representative of Chicago thinking: "The need, we felt, was not to reiterate the Chicago School's antitrust positions. It was, rather, to present an antitrust alternative." Fox & Pitofsky, *supra* note 78, at 240.

86. *See, e.g.*, Frank H. Easterbrook, *On Identifying Exclusionary Conduct*, 61 NOTRE DAME L. REV. 972, 977-80 (1986) (describing the Supreme Court's opinion in Aspen Skiing Co. v. Aspen Highlands Skiing Corp., 472 U.S. 585 (1985), as a triumph of Chicago reasoning: "The Court cited Robert Bork's work from beginning to end"; and suggesting that antitrust courts become more scientific in their thinking: "[C]ourts must approach the task of finding efficiency in the same way a social scientist would.") [hereinafter Easterbrook, *On Identifying Exclusionary Conduct*]. Chicago's claim to scientific neutrality was vigorously contested by its Modern Populist critics. *See, e.g.*, Pitofsky, *The Political Content of Antitrust*, *supra* note 5, at 1065 ("[A]ntitrust enforcement along economic lines . . . incorporates large doses of hunch, faith, and intuition.").

87. *See supra* note 7 (citing applicable cases). *See also* Easterbrook, *Workable Antitrust Policy*, *supra* note 65, at 1698-99 n.7 (listing numerous Supreme Court decisions adopting the Chicago approach).

88. Some of these decisions were authored by Chicagoans themselves, *see, e.g.*, Olympia Equip. Leasing Co. v. Western Union Tel. Co., 797 F.2d 370 (7th Cir. 1986) (Posner, J.), *cert. denied*, 480 U.S. 934 (1987). But others were written by non-aligned

Guidelines[89] as evidence of its widespread acceptance. Though some opponents continued to brand Chicagoans as apologists for Reagan administration ideology,[90] most scholars who disagreed with what they regarded as Chicago's dismissive attitude towards the historical and political values of antitrust grudgingly acknowledged the success, if not the virtues, of the Chicago approach.[91]

Observers attributed Chicago's success, and the concomitant demise of the Modern Populist School, to a variety of factors. Some credited the clarity of Chicago's model, stating that Chicagoans had presented their theory to judges and policymakers "in ways that most of them can easily understand."[92] Some pointed to Chicago's

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judges who had come to embrace Chicago's philosophy. *See, e.g.*, Barry Wright Corp. v. ITT Grinnell Corp., 724 F.2d 227 (1st Cir. 1983) (Breyer, J.); Berkey Photo, Inc. v. Eastman Kodak Co., 603 F.2d 263 (2d Cir. 1979) (Kaufman, J.), *cert. denied*, 444 U.S. 1093 (1980).

89. *See, e.g.*, U.S. Department of Justice Merger Guidelines—1982, *reprinted in* 4 Trade Reg. Rep. (CCH) ¶ 13,102 (June 14, 1982); U.S. Department of Justice Merger Guidelines—1984, *reprinted in* 4 Trade Reg. Rep. (CCH) ¶ 13,103 (June 14, 1984). Robert Pitofsky, one of the Chicago School's foremost Modern Populist critics, has credited "influential" Chicago scholarship for galvanizing intellectual and judicial support for the expansive approach to market definition embodied in those Guidelines. *See* Robert Pitofsky, *New Definitions of Relevant Market and the Assault on Antitrust*, 90 COLUM. L. REV. 1805, 1808 n.10 (1990). With small modifications, the 1984 Merger Guidelines have been readopted by subsequent Justice Departments and continue in effect. *See, e.g.*, U.S. Department of Justice Merger Guidelines—1992, *reprinted in* 4 Trade Reg. Rep. (CCH) ¶ 13,104 (Apr. 7, 1992).

90. *See, e.g.*, Robert Pitofsky, *Does Antitrust Have a Future?*, 76 GEO. L.J. 321, 321-22 (1987) (describing the Reagan administration's antitrust policy as "the most lenient antitrust enforcement program in fifty years"; stating that with the exception of horizontal cartels, large horizontal mergers, and predation, "antitrust has been consigned to a non-enforcement oblivion"; and claiming that "[t]he basis for this extraordinary turnaround in enforcement" is Chicago School theory).

91. *See, e.g.*, Fox, *The Modernization of Antitrust*, *supra* note 10, at 1140 ("[R]egard for efficiency is in the ascendancy."); Gerla, *supra* note 6, at 892 ("Classical microeconomic theory (sometimes known as Chicago School Economics) has become the dominant tool for contemporary antitrust analysis."); Lawrence A. Sullivan, *Antitrust, Microeconomics, and Politics: Reflections on Some Recent Relationships*, 68 CAL. L. REV. 1, 3 (1980) (stating that "free access to markets and dealer independence have been rejected as antitrust goals," as antitrust courts have become "expositors of applied microeconomic policy").

Some argued that Chicago's perceived dominance was more illusory than real. *See, e.g.*, Diane Wood Hutchinson, *Antitrust 1984: Five Decisions in Search of a Theory*, 1984 SUP. CT. REV. 69, 140 ("[A] majority of the Justices have knowingly rejected the consumer welfare school of antitrust analysis in favor of something closer to the political content approach."); Gordon B. Spivack, *The Chicago School Approach to Single Firm Exercises of Monopoly Power: A Response*, 52 ANTITRUST L.J. 651, 672 (1983) (characterizing Chicago's claim that the Supreme Court has implemented its view of antitrust as "wishful thinking").

92. Sullivan, *supra* note 91, at 9.

capacity for promoting its work through self-referential scholarship.[93] Others believed that Chicago's dominance reflected an intellectual and political backlash to the perceived antibusiness bias of the Warren Court,[94] while still others linked its ascendancy to the academic veneer that it provided for the Reagan administration's conservative economic policies.[95] Scholars less critical of Chicago ascribed its preeminence to substantive factors, noting that Chicago's price-theory approach not only offered powerful efficiency explanations for many business practices central to antitrust, but provided courts with coherent, easily applied, and seemingly neutral decisional criteria.[96]

Though populist criticism of Chicago has not disappeared altogether from academic journals,[97] the debate about the organizing values of antitrust has lost its drama. Secure in the scientific nature of their approach,[98] Chicagoans have successfully weathered the

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93. *See, e.g.*, Eleanor Fox & Robert Pitofsky, *The Antitrust Alternative: Introduction*, 62 N.Y.U. L. REV. 931, 932 (1987) ("While the minimalists had one simple theory, and generously cited one another in their scholarship and even in judicial opinions, the work of the eclectics seemed scattered and unorganized.").

94. Williamson, *Delimiting Antitrust*, *supra* note 7, at 272 (observing that during the 1960s, "[t]he standards for judging an antitrust offense fell so low that respondents not only made no affirmative case for economies as an antitrust defense but even *disclaimed* economies that were ascribed to a merger by the government" (citing FTC v. Procter & Gamble Co., 386 U.S. 568 (1967))).

95. *See, e.g.*, Thomas J. Campbell, *The Antitrust Record of the First Reagan Administration*, 64 TEX. L. REV. 353, 354-55 (1985) (arguing that the Reagan administration intentionally eased antitrust enforcement to shelter big business from government intervention, accomplishing this objective 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); William V. Kovacic, *Public Choice and the Public Interest: Federal Trade Commission Antitrust Enforcement During the Reagan Administration*, 33 ANTITRUST BULL. 467, 500 (1988) (arguing that the Reagan administration eased the burdens of FTC enforcement upon the business community); *see also* Ira M. Millstein & Jeffrey L. Kessler, *The Antitrust Legacy of the Reagan Administration*, 33 ANTITRUST BULL. 505, 506-09 (1988) (arguing that the Reagan administration tried to base its antitrust policy on economic theory rather than factual analysis or legal precedent, and thereby persuaded the courts to continue and accelerate their reliance upon economic analysis in antitrust cases).

96. *See, e.g.*, Hovenkamp, *After Chicago*, *supra* note 1, at 217-18 (attributing the rise of the Chicago School to a "change[] [in] economic models"); William H. Page, *Ideological Conflict and the Origins of Antitrust Policy*, 66 TUL. L. REV. 1, 67 n.9 (1991) ("[T]he Chicago School has gained judicial acceptance at the same time that parallel changes have occurred in other areas of the law.").

97. For recent examples, see Eleanor M. Fox, Eastman Kodak Co. v. Image Technical Services, Inc.—*Information Failure as Soul or Hook?*, 62 ANTITRUST L.J. 759 (1994) [hereinafter Fox, *Soul or Hook?*]; Hughes, *supra* note 9.

98. "Economists pride themselves on being engaged in a scientific endeavor." POSNER, THE PROBLEMS OF JURISPRUDENCE, *supra* note 28, at 362. Judge Posner apparently saw no irony in his claim, but observers with broader (or different) historical

ideological criticism, partly by attacking the political biases of their detractors[99] and partly by citing the wide array of political views among academic economists as evidence of the scientific neutrality of the economic enterprise.[100] As the normative criticism subsided, disputes about seemingly technical economic questions moved to the forefront of antitrust discourse.[101] The issues occupying contemporary antitrust scholarship involve the extent to which new theoretical work should modify the fundamental insights of price theory.[102] The victory of a purely economic analysis over what Robert Bork referred to as "the intellectual mush"[103] of the Modern Populist School could hardly seem more complete. Having won the

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perspectives have argued convincingly that every generation of antitrust economists has proclaimed the scientific nature of its work, making the boundaries of the science flexible enough to encompass a wide array of economic theory, some parts of which are diametrically opposed to others. *See, e.g.*, James May, *Antitrust Practice and Procedure in the Formative Era: The Constitutional and Conceptual Reach of State Antitrust Law, 1880-1918*, 135 U. PA. L. REV. 495, 563, 589-92 (1987).

99. *See, e.g.*, BORK, THE ANTITRUST PARADOX, *supra* note 41, at 422 (charging that the populist antitrust vision of Chicago critics reflects a basic antagonism to the principle of open markets and a preference for governmentally mandated equal outcomes). According to Judge Posner, while the law and economics movement associated with the Chicago School has been criticized frequently for its conservative ideological stance, "economic research that provides support for liberal positions is rarely said to exhibit political bias." RICHARD A. POSNER, ECONOMIC ANALYSIS OF LAW 26 (4th ed. 1992) [hereinafter POSNER, ECONOMIC ANALYSIS OF LAW].

100. *See* POSNER, THE PROBLEMS OF JURISPRUDENCE, *supra* note 28, at 435 n.16 ("As for the suggestion that law and economics is inherently right-wing, this is both an error and an affront to its liberal practitioners (Calabresi, Polinsky, Ackerman, Cooter, Kaplow, Kornhauser, Donohue, others).").

101. The Supreme Court's recent opinion in Eastman Kodak Co. v. Image Technical Servs., Inc., 504 U.S. 451 (1992), best illustrates this phenomenon. *See infra* notes 138-43 and accompanying text.

102. For example, see the colloquy between Oliver Williamson, an economist-critic of Chicago, and Frank Easterbrook, a notable Chicagoan, in Volume 76 of the *Georgetown Law Journal* (1987). Responding to an earlier article by Easterbrook (*The Limits of Antitrust*, 63 TEX. L. REV. 1 (1984)) proposing various economic filters to simplify and rationalize antitrust litigation, Williamson states, "My reservations with Easterbrook's filters notwithstanding, I nonetheless am sympathetic to his main purpose . . . to develop better criteria to distinguish good and bad cases." Williamson, *Delimiting Antitrust*, *supra* note 7, at 289. Replying to Williamson, Easterbrook agrees "wholeheartedly" that "learning about strategic behavior is one of the most important programs for the future of antitrust." Easterbrook, *Allocating Antitrust Decisionmaking Tasks*, *supra* note 11, at 314.

103. E. William Barnett et al., *Panel Discussion: Merger Enforcement and Practice*, 50 ANTITRUST L.J. 233, 238 (1981). Attacking the populist alternative to the exclusively economic approach, Bork observed that "if we are going to take into account all this vague political rhetoric that many people find so attractive, not only is it questionable which way the rhetoric leads, not only is it intellectual mush, but I think it makes [§ 7 of the Clayton Act] unconstitutional," as an excessive delegation of Congressional power. *Id.*

battle for the soul of antitrust, economists now vie largely against each other, as contending schools of economic thought struggle "to seize the scientific high ground."[104]

III. THE POST-CHICAGO CHALLENGE TO CHICAGO'S SUPREMACY

During the 1980s the field of economics known as industrial organization reinvented itself. From its original focus on empirical studies of industry structure, conduct, and performance, industrial organization turned to the research and development of new theory about the strategic behavior of firms in imperfectly competitive markets. Broadly influenced by game theory—the study of profit-maximizing strategic behavior in small groups of mutually dependent rivals—much of that research was ground breaking.[105] According to some economists, during the past decade game theory has become "the premier fashionable tool of microtheorists."[106]

As game theory achieved preeminent status in academic economics, legal scholars came to apply its teachings to a variety of disciplines,[107] including antitrust where it now constitutes the major alternative to the Chicago School. Over the past ten years, game

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104. Ian Ayres, *Playing Games with the Law*, 42 STAN. L. REV. 1291, 1317 (1990) (describing the current debate between Chicago and post-Chicago economists) [hereinafter Ayres, *Playing Games*].

105. Although game theory first received attention in the 1940s, *see* JOHN VON NEUMANN & OSCAR MORGENSTERN, THEORY OF GAMES AND ECONOMIC BEHAVIOR (1944), it has achieved prominence only in the past 20 years. Reporting on the award of the 1994 Nobel Memorial Prize in Economic Science to "three pioneers in the field of game theory," *The New York Times* described the emergence of game theory over the past two decades as "a sea of change in economics." Peter Passell, *Game Theory Captures a Nobel*, N.Y. TIMES, Oct. 12, 1994, at D1. The major theoretical developments in modern industrial organization economics appear in HANDBOOK OF INDUSTRIAL ORGANIZATION, *supra* note 19, a two-volume compilation of essays by the world's leading industrial organization economists. For a review summarizing these developments and placing them in historical and theoretical perspective, see Robert H. Porter, *A Review Essay on* Handbook of Industrial Organization, 29 J. ECON. LITERATURE 553 (1991).

106. Franklin M. Fisher, *Games Economists Play: A Noncooperative View*, 20 RAND J. ECON. 113, 113 (1989). For a comprehensive guide to the development, practice, and vocabulary of game theory, see ERIC RASMUSSEN, GAMES AND INFORMATION: AN INTRODUCTION TO GAME THEORY (1989); for an informative overview of the application of game theory to business problems, see AVINASH K. DIXIT & BARRY J. NALEBUFF, THINKING STRATEGICALLY (1991). Many intermediate economics textbooks also provide good introductions to concepts and problems germane to game theory. *See, e.g.*, ROBERT S. PINDYCK & DANIEL L. RUBINFELD, MICROECONOMICS 453-90 (3d ed. 1995).

107. For an especially clear exposition of the fundamentals of game theory and its application to a wide variety of legal issues, as well as an extensive bibliography of legal scholarship dealing with game theory, see DOUGLAS G. BAIRD ET AL., GAME THEORY AND THE LAW (1994).

theorists have offered new theoretical accounts of the efficiency effects and market dynamics underlying vertical restraints,[108] oligopoly,[109] mergers,[110] and predatory pricing,[111] providing in each case one or more anticompetitive explanations for behavior regarded by Chicago scholars as unambiguously efficient. They have suggested strategic models[112] for evaluating the potential efficacy and durability of collusive behavior.[113] And they have proposed broader measures for assessing market power, the critical factor in antitrust litigation[114]—measures that would modify Chicago's heavy emphasis on market share[115] by considering strategic factors that

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108. *See, e.g.*, Thomas G. Krattenmaker & Steven C. Salop, *Anticompetitive Exclusion: Raising Rivals' Costs to Achieve Power over Price*, 96 YALE L.J. 209, 224 (1986); Richard Markovits, *The Limits to Simplifying Antitrust: A Reply to Professor Easterbrook*, 63 TEX. L. REV. 41, 64 (1984).

109. *See, e.g.*, Carl Shapiro, *Theories of Oligopoly Behavior*, *in* 1 HANDBOOK OF INDUSTRIAL ORGANIZATION, *supra* note 19, at 269, 330.

110. *See, e.g.*, Ordover et al., *Equilibrium Vertical Foreclosure*, *supra* note 25.

111. Thomas J. Campbell, *Predation and Competition in Antitrust: The Case of Nonfungible Goods*, 87 COLUM. L. REV. 1625, 1636-74 (1987); William S. Comanor & H.E. Frech III, *Predatory Pricing and the Meaning of Intent*, 38 ANTITRUST BULL. 293, 294-97 (1993); Paul Milgrom & John Roberts, *New Theories of Predatory Pricing*, *in* INDUSTRIAL STRUCTURE IN THE NEW INDUSTRIAL ECONOMICS 112, 112-37 (Giacomo Bonanno & Dario Brandolini eds., 1990); Ordover & Saloner, *supra* note 19, at 537.

112. "Strategic behavior arises when two or more individuals interact and each individual's decision turns on what that individual expects the other to do." BAIRD ET AL., *supra* note 107, at 1. Because parties usually possess less than perfect information about the decisional processes of those with whom they interact, expectations about the future decisions of others usually contain some degree of uncertainty; indeed, incomplete information is said to be "the central problem in game theory and the law." *Id.* at 2.

113. *See, e.g.*, Ian Ayres, *How Cartels Punish: A Structural Theory of Self-Enforcing Collusion*, 87 COLUM. L. REV. 295 (1987).

114. For a general discussion of market power, see George A. Hay, *Market Power in Antitrust*, 60 ANTITRUST L.J. 807 (1992). Hay states that "[t]he concept of market power is at the core of antitrust." *Id.* at 807.

115. Chicago's basic approach to measuring market power has been summarized as follows: "[T]he standard method of proving market power in antitrust cases involves first defining a relevant [product and geographic] market in which to compute the defendant's market share, . . . and then deciding whether it is large enough to support an inference of the required degree of market power." Landes & Posner, *supra* note 20, at 938. Chicagoans acknowledge problems with this approach, *id.* at 939-52, and have expanded it to allow the absence of entry barriers to offset high market share, *see* Ball Memorial Hosp., Inc. v. Mutual Hosp. Ins., Inc., 784 F.2d 1325, 1335 (7th Cir. 1986) (Easterbrook, J.) (stating that high share in market for health insurance is not indicative of market power, because "[n]ew firms may enter easily . . . [since] insurers need only a license and capital . . . [and the existing firms] do not own any assets that block or delay entry"). They nevertheless justify its continued use on prudential grounds. *See, e.g.*, Easterbrook, *The Limits of Antitrust*, *supra* note 17, at 22.

may confer leverage on smaller firms.[116]

Despite their differences, post-Chicago and Chicago scholars share a common metric. They agree that wealth maximization should be the exclusive goal of antitrust policy, and antitrust enforcement should strive to achieve the highest practicable level of consumer welfare.[117] They eschew the multivalent inquiries informing the Modern Populists' approach in favor of the single-minded pursuit of allocative efficiency. Their debate, it seems, revolves around technical disagreement over the role of market imperfections in shaping antitrust policy and the enforcement methodology most conducive to consumer welfare.

Unlike Chicago scholars, post-Chicagoans refuse to assume that markets function perfectly.[118] They start from the premise that because the marginal cost of additional information is positive, firms will rarely acquire complete information about their markets, rivals, and options.[119] In addition, they posit that because different firms in the same or related markets will rarely assign identical value to the acquisition of additional information or acquire new information at precisely the same time, their informational holdings will rarely be

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116. *See* Baker, *supra* note 14, at 655; Baker & Bresnahan, *supra* note 20, at 5-15; Joseph Kattan, *Market Power in the Presence of an Installed Base*, 62 ANTITRUST L.J. 1, 4-11 (1993).

117. According to one post-Chicago scholar, the new developments in antitrust economics "demonstrate that we need not reject the value of economic efficiency in order to question the Chicago School. These challenges to Chicago arise from within the efficiency paradigm." Baker, *supra* note 14, at 646.

118. *See, e.g.*, Kaplow, *supra* note 82, at 536-37 ("Markets do not always function in accordance with the textbook model of perfect competition, and the economic analysis of any situation must be adjusted accordingly. In fact, the whole of antitrust concerns the study of imperfect markets."). Scholars applying principles of game theory to antitrust analysis are not the only ones to criticize Chicago's insistence on the perfect-market assumption. *See, e.g.*, Michael E. DeBow, *Markets, Government Intervention, and the Role of Information: An "Austrian School" Perspective, with an Application to Merger Regulation*, 14 GEO. MASON U. L. REV. 31, 55 (1991) (criticizing the perfect-market assumption as an unrealistic snapshot of an end-state that ignores the dynamic features of competition). Other scholars have argued that the law and economics movement suffers generally from its failure to incorporate other disciplines, notably sociology and psychology, into its jurisprudence. *See, e.g.*, Robert C. Ellickson, *Bringing Culture and Human Frailty to Rational Actors: A Critique of Classical Law and Economics*, 65 CHI.-KENT L. REV. 23, 25-35 (1989); Arthur Leff, *Economic Analysis of Law: Some Realism About Nominalism*, 60 VA. L. REV. 451, 470-74 (1974).

119. *See, e.g.*, David M. Kreps & Robert Wilson, *Reputation and Imperfect Information*, 27 J. ECON. THEORY 253, 256, 276-77 (1982); Garth Saloner, *Predation, Mergers, and Incomplete Information*, 18 RAND J. ECON. 165, 167 n.7 (1987).

symmetrical.[120] The Chicago School acknowledges the existence of informational and other market imperfections,[121] but argues that judicial consideration of those imperfections would confuse and complicate antitrust theory without adding to its predictability or coherence.[122] In the view of post-Chicagoans, however, these informational asymmetries tend to persist, rather than dissolve, thus enabling well-informed firms—even relatively small ones—to take advantage of less informed rivals and trading partners.[123] Other market imperfections, such as sunk costs, are equally durable in their view, and equally corrosive of competitive conditions.[124]

Their emphasis on market failures has led post-Chicago theorists to find anticompetitive potential in business behavior that Chicagoans regard as benign. In at least four areas of acute interest to antitrust policymakers, post-Chicago scholarship has explored the efficiency justifications offered by Chicago and found them wanting. In each of these areas—predatory pricing, vertical contracting restraints, tie-ins, and vertical mergers—post-Chicago game theory provides new answers to questions that Chicagoans have long regarded as settled.

Chicago scholars have consistently contended that predatory pricing is almost always economically irrational for the putative predator. It can succeed, on their view, only if the structure of the predator's market—in particular, the barriers to post-predation

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120. *See generally* Charles A. Holt & David T. Scheffman, *Strategic Business Behavior and Antitrust*, *in* ECONOMICS AND ANTITRUST POLICY 39 (Robert J. Larner & James W. Meehan, Jr. eds., 1989) (discussing the antitrust implications of new theories about industrial organization).

121. *See* GEORGE J. STIGLER, THE ORGANIZATION OF INDUSTRY 171 (1968); Richard A. Posner, *Some Uses and Abuses of Economics in Law*, 46 U. CHI. L. REV. 281, 304 (1979) (describing economic models that contemplate imperfect competition and imperfect information). Indeed, informational imperfections, and their disruptive effect on competitive equilibrium, received the attention of economists and legal scholars before the post-Chicago School emerged. *See, e.g.*, 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 (1979); J.E. Stiglitz, *Equilibrium in Product Markets with Imperfect Information*, 69 AM. ECON. REV. 339, 339-40 (1979). This earlier work, however, did not form the core of a unified theory of antitrust.

122. *See* POSNER, ECONOMIC ANALYSIS OF LAW, *supra* note 99, at 17; Easterbrook, *Workable Antitrust Policy*, *supra* note 65, at 1706 ("What's wrong with models that contain 'unrealistic' assumptions? The purpose of any model is to strip away complications, to make things simple enough that we can see how particular variations matter.").

123. *See, e.g.*, Baker, *supra* note 14, at 646.

124. *Id.* at 651-52; Steven C. Salop, *Measuring Ease of Entry*, 31 ANTITRUST BULL. 551, 557, 562 (1986).

entry—enable the predator to recoup its losses.[125] By contrast, post-Chicago theorists argue that information gaps frequently make price predation a profitable strategy, and that a predator's reputation for irrational conduct can prove profitable, regardless of market structure.[126] Post-Chicagoans have also challenged Chicago's thesis that long-term exclusive contracts not only maximize the contracting parties' profits but also promote social welfare.[127] In their view, strategically conceived exclusive contracts can diminish social welfare, even while enhancing private gain.[128]

Post-Chicagoans disagree with Chicago's position on tying arrangements and vertical mergers. Before the birth of the Chicago School, the "leverage theory" provided the dominant framework for analyzing tying agreements. Under that theory, tie-ins enabled a firm with monopoly power in one market to use that power to foreclose sales, and thus monopolize, a second market.[129] Chicagoans attacked the leverage theory—in their words, they "demolished" it[130]—by demonstrating that tie-ins produced economic effects that were either beneficial or inconsequential, and were thus undeserving

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125. *See* Easterbrook, *Predatory Strategies and Counterstrategies*, *supra* note 23, at 268-69. The Supreme Court has largely accepted Chicago's view. *See* Brooke Group Ltd. v. Brown & Williamson Tobacco Corp., 113 S. Ct. 2578, 2587 (1993) (focusing analysis of predatory pricing claims on market structure: number of firms, ease of entry, likelihood of recoupment); Cargill, Inc. v. Monfort of Colo., Inc., 479 U.S. 104, 119 n.15 (1986) (same); Matsushita Elec. Indus. Co. v. Zenith Radio Corp., 475 U.S. 574, 585, 588 n.9 (1986) (same).

126. In particular, post-Chicagoans have theorized that, by creating a reputation for irrational pricing behavior, a would-be predator can cause inexperienced rivals to fear that if they compete strongly against the irrational firm they will become the target of predatory activity, inducing them to temper their competitive vigor. *See, e.g.*, Baker, *supra* note 14, at 648-49; Campbell, *supra* note 111, at 1640-55; Janusz A. Ordover & Robert D. Willig, *An Economic Definition of Predation: Pricing and Product Innovation*, 91 YALE L.J. 8, 15-21 (1981) (discussing various strategies).

127. The Chicago view is set forth in BORK, THE ANTITRUST PARADOX, *supra* note 41, at 138-42, 262, 304, 309, and in POSNER, ANTITRUST LAW, *supra* note 22, at 203-04.

128. *See, e.g.*, Brodley & Ma, *supra* note 22, at 1163 (using game theoretic analysis to argue that, contrary to Chicago theory, in certain carefully defined monopoly markets long-term exclusive dealing contracts can directly lead to "reduced output, diminished return to innovation and new entry, and enhanced profit for the monopolist").

129. *See, e.g.*, Michael D. Whinston, *Tying, Foreclosure, and Exclusion*, 80 AM. ECON. REV. 837, 837 (1990).

130. BORK, THE ANTITRUST PARADOX, *supra* note 41, at 372 ("[The leverage] theory . . . is merely another example of the discredited transfer-of-power theory, and perhaps no other variety of that theory has been so thoroughly and repeatedly demolished in the legal and economic literature.").

of antitrust scrutiny.[131] Post-Chicagoans have resuscitated the leverage theory, arguing that market imperfections, such as sunk costs and network externalities,[132] can make tying a profitable anticompetitive strategy.[133] Similarly, they have reexamined Chicago's notion that vertical mergers pose no threat to competition,[134] concluding that such mergers "can be used to achieve anticompetitive foreclosure of downstream firms from an essential source of supply."[135]

Other important differences divide these schools. As noted above, post-Chicagoans define market power more expansively than their Chicago counterparts.[136] They also tend to be less sanguine

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131. *See, e.g.*, Roger D. Blair & David L. Kaserman, *Vertical Integration, Tying, and Antitrust Policy*, 68 AM. ECON. REV. 397 (1978); Ward S. Bowman, *Tying Arrangements and the Leverage Problem*, 67 YALE L.J. 19 (1957).

132. Network externalities are the benefits realized by or available to consumers of goods that are interchangeable or technologically compatible—by standardized interface, for example—with a relatively large number of complementary goods or services. Technology requiring specific training is particularly subject to network externalities: The more widely adopted the associated technology, the more valuable the training. Post-Chicagoans theorize that "the dynamics of industries subject to network externalities are fundamentally different from those of conventional industries"; and specifically that "technology that is superior today has a strategic, first-mover advantage: it can become locked in as the standard." *See* Michael L. Katz & Carl Shapiro, *Technology Adoption in the Presence of Network Externalities*, 94 J. POL. ECON. 822, 823-25 (1986). *See generally* JEAN TIROLE, THE THEORY OF INDUSTRIAL ORGANIZATION 404-09 (1988) (giving an account of the recent developments in, and the traditions of, industrial organization).

133. Whinston, *supra* note 129, at 855.

134. *See* POSNER, ANTITRUST LAW, *supra* note 22, at 171-84, 195-207 (1976); RICHARD A. POSNER & FRANK H. EASTERBROOK, ANTITRUST 869-76 (2d ed. 1981).

135. Ordover et al., *Equilibrium Vertical Foreclosure*, *supra* note 25, at 140; *see also* Michael A. Salinger, *Vertical Mergers and Market Foreclosure*, 1988 Q.J. ECON. 345, 354-55 (concluding that, while under some circumstances a vertical merger may cause the price of the intermediate good to increase, a vertical merger does not necessarily result in market foreclosure of unintegrated products).

136. *See supra* notes 118-35 and accompanying text. The Chicago view of market power is set forth, among other places, in PHILLIP AREEDA & LOUIS KAPLOW, ANTITRUST ANALYSIS ¶ 340 (4th ed. 1988). Examples of the broader, post-Chicago view include Warren S. Grimes, *Spiff, Polish, and Consumer Demand Quality: Vertical Price Restraints Revisited*, 80 CAL. L. REV. 815 (1992), and Joseph Kattan, *Market Power in the Presence of an Installed Base*, 62 ANTITRUST L.J. 1 (1993). The First Circuit Court of Appeals has expressed the view that "no subject in antitrust law [is] more confusing than market definition" because in applying the concept, lawyers and judges impose on it "nuances and formulas that reflect administrative and antitrust policy goals," intertwining "normative and descriptive ideas." U.S. Healthcare, Inc. v. Healthsource, Inc., 986 F.2d 589, 598 (1st Cir. 1993); *accord* SCFC ILC, Inc. v. Visa USA, Inc., 36 F.3d 958, 965-66 (10th Cir. 1994) (quoting the above-quoted text from *U.S. Healthcare*).

about the frequency and longevity of collusive behavior.[137] Consequently, despite a shared allegiance to the efficiency metric, the post-Chicago and Chicago Schools approach the major issues in antitrust from markedly different directions. Most significantly, the emergence of post-Chicago theory has demonstrated that the economic model is not orthodox: It can and does yield divergent answers to the most important questions about the efficiency effects of business behavior and government intervention.

The United States Supreme Court's recent decision in *Eastman Kodak Co. v. Image Technical Services, Inc.*[138] bears compelling witness to the growing acceptance of the post-Chicago perspective. Faced with a tie-in claim that Chicago's price-theoretic approach would have rejected,[139] the *Kodak* Court embraced the post-Chicago thesis that market imperfections—specifically information gaps and high switching costs—can confer power on small firms in ostensibly competitive markets and thus enable them to put tying arrangements

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137. *See, e.g.*, Baker, *supra* note 14, at 649-50 ("Chicago-oriented antitrusters tend to interpret an industry price war as demonstrating the inherent difficulty of enforcing collusion in that industry. But new economic models demonstrate that occasional competitive episodes are not inconsistent with long periods of collusive pricing.").

138. 504 U.S. 451 (1992). Plaintiffs in *Kodak*, independent service organizations (ISOs) that repaired and maintained Kodak copying and micrographic equipment, alleged that Kodak violated §§ 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 equipment. *Id.* at 456. According to the ISOs, after obtaining control over the supply of Kodak brand replacement parts—the only brand that would work with its equipment—Kodak refused to sell parts to equipment owners who employed the ISOs, effectively driving ISOs from the market. *Id.* at 458. 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, 60,211-60,214 (N.D. Cal. Apr. 18, 1988), *rev'd*, 903 F.2d 612 (9th Cir. 1990), *aff'd*, 504 U.S. 451 (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 as to whether Kodak possessed sufficient power in replacement parts to force some customers to purchase service from Kodak. Image Technical Servs., Inc. v. Eastman Kodak Co., 903 F.2d 612, 616-18 (9th Cir. 1990), *aff'd*, 504 U.S. 451 (1992).

139. In both the Ninth Circuit and the Supreme Court, Kodak argued that the dictates of neoclassical price theory, coupled with the concession that Kodak's primary equipment market was competitive, precluded it from possessing power in the after-market for Kodak parts. *Image Technical Servs.*, 903 F.2d at 616. Price theory teaches that equipment buyers would regard a rise in the price of parts as an increase in the overall price of the equipment; in Kodak's concededly competitive equipment market, a unilateral price increase would lead to lost revenues. Because "market power" whose exercise reduces profitability is not market power at all, Kodak claimed that it could not have violated the antitrust laws. *See id.* at 616; *Kodak*, 504 U.S. at 465-66. Judge Bork, among others, strongly agreed with Kodak's argument. *See* BORK, THE ANTITRUST PARADOX, *supra* note 41, at 436-39.

to anticompetitive use.[140] Antitrust scholars, Chicago and post-Chicago alike, view *Kodak* as a jurisprudential milestone[141] and a victory for post-Chicago thought.[142] Some believe it indicates that post-Chicago theory may supplant Chicago's approach as the dominant method of antitrust analysis.[143]

The post-Chicago focus on market imperfections demands an enforcement methodology more complicated than Chicago's.[144]

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140. The *Kodak* Court indicated that while Kodak's argument was "intuitively appealing," price theory "may not accurately explain the behavior of primary and derivative markets for complex durable goods." *Kodak*, 504 U.S. at 473. In such markets, said the Court, "difficult and costly" information gaps and "high switching costs" can confer market power on sellers with relatively low market shares. *Id.* at 473-78. The Court's focus on information gaps and switching costs—market imperfections consciously ignored by Chicago theorists—prompted post-Chicago scholars to declare that the *Kodak* analysis was "post-Chicago." *Interview with Professor Salop*, *supra* note 16, at 21; Jonathan B. Baker, *Predatory Pricing After* Brooke Group*: An Economic Perspective*, 62 ANTITRUST L.J. 585, 603 (1994) ("In *Kodak*, the Court embraced post-Chicago economic arguments.").

141. In prior years, facts comparable to those alleged in *Kodak*—a big firm harms smaller competitors by abusing the competitive process and breaking from behavior patterns that had encouraged the entry and growth of smaller firms—would arguably have caused at least some members of the Court to see *Kodak* through the socio-political lens of the Modern Populists. *See* Michael S. Jacobs, *Market Power Through Imperfect Information: The Staggering Implications of* Eastman Kodak Co. v. Image Technical Services, 52 MD. L. REV. 336, 361-62 (1993). The total absence of the Modern Populist view from *Kodak*'s discussion makes manifest the analytical dominance of exclusively economic models. *Id.* at 363.

A prominent Modern Populist scholar interprets *Kodak* differently. *See* Fox, *Soul or Hook?*, *supra* note 97, at 760 (reading *Kodak* as a "chink in the armor of the allocative efficiency model" and as a reaffirmation of the "legitimacy and process values of antitrust").

142. *See, e.g.*, 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, 620 (1993); Jacobs, *supra* note 141, at 355-56; Robert Lande, *Chicago Takes It on the Chin: Imperfect Information Could Play a Crucial Role in the Post-*Kodak *World*, 62 ANTITRUST L.J. 193, 193 (1993) [hereinafter Lande, *Chicago Takes It on the Chin*]; Salop, *supra* note 24, at 4; Lisa M. Judson, Note, Kodak v. Image Technical Services*: The Taming of* Matsushita *and the Chicago School*, 1993 WIS. L. REV. 1633, 1635; Ronald S. Katz & Janet S. Arnold, Eastman Kodak v. ITS: *The Downfall of the Chicago School*, 9 COMPUTER LAW., July 1992, at 1, 1. Without expressly acknowledging the *Kodak* Court's adoption of post-Chicago theory, Robert Bork attacked the majority's reasoning, charging that "it is capable of driving rational economic analysis once more from the law." BORK, THE ANTITRUST PARADOX, *supra* note 41, at 438.

143. *See, e.g.*, Lande, *Chicago Takes It on the Chin*, *supra* note 142, at 197 ("*Kodak* thus dramatically crystallizes many of the differences between Chicago School and post-Chicago School antitrust analysis and suggests that . . . the post-Chicago School has the opportunity to advance.").

144. Antitrust scholars agree on this point. *See, e.g.*, Hovenkamp, *After Chicago*, *supra* note 1, at 261 ("The static market fallacy and the failure of orthodox Chicago School antitrust policy to take strategic behavior seriously are closely related weaknesses in the

Alleged market imperfections must be identified and evaluated for commercial significance.[145] Markets that appear competitive—by virtue, for example, of their relatively large number of small firms—may nevertheless warrant antitrust scrutiny if information gaps or other imperfections can arguably convey power on one or more firms.[146] In addition, rather than alter structural conditions, remedies under post-Chicago process must ameliorate the effects of the relevant market imperfections, either by repairing the imperfections directly or preventing firms from taking unfair advantage of them. Collectively, these features result in a complex and costly enforcement methodology, but one whose cost and complexity are implicitly justified, in the view of post-Chicagoans, by a heightened sensitivity to market dynamics and the promotion of efficiency.[147]

Of course, Chicago scholars are acutely aware of these methodological complexities, and have criticized proposed applications of post-Chicago theory as administratively unworkable.[148] Even scholars more sympathetic to strategic models acknowledge the

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market efficiency model."). In this respect post-Chicago methodology shares the difficulties of its intellectual predecessor, the industrial organization economics of the 1950s. *See, e.g.*, Joseph F. Brodley, *Potential Competition Mergers: A Structural Synthesis*, 87 YALE L.J. 1, 29 (1977) (describing the model of entry barriers proposed by the Harvard scholar and Industrial Organization economist Joe Bain, and concluding that "there is no way the judicial process can handle concepts of this complexity and indeterminacy").

145. *See, e.g.*, Jacobs, *supra* note 141, at 369-71.

146. *See, e.g.*, Thomas C. Arthur, *The Costly Quest for Perfect Competition:* Kodak *and Nonstructural Market Power*, 69 N.Y.U. L. REV. 1, 61 (1994) ("After *Kodak*, courts must also consider nonstructural market power with no guidance as to how this should be done. Both the expansion of antitrust and the uncertainty as to its extent will greatly increase antitrust's costs of administration.").

147. The cost and complexity of this methodology are justified only "implicitly" because, despite the outpouring of literature on antitrust game theory and its application, post-Chicagoans have yet to formulate a precise description of their enforcement methodology or explain how or why it might differ from the presumptively simpler approach of the Chicago School. Thus, while Chicago scholars have criticized the cost and complexity of post-Chicago enforcement by imagining or inferring its complications, post-Chicagoans themselves have yet to elaborate or defend their process; and some post-Chicagoans have themselves questioned the applicability of strategic models to antitrust enforcement. *See, e.g.*, *Interview with Dennis A. Yao, Former FTC Commissioner*, 9 ANTITRUST, Fall 1994, at 12, 16 ("Game-theoretic models generally become unwieldy unless they adopt restrictive assumptions, and these restrictive assumptions may not be descriptive of reality.").

148. *See, e.g.*, Hovenkamp, *After Chicago*, *supra* note 1, at 261 (stating that factual issues central to post-Chicago theory "are too complex to be dealt with in antitrust litigation"); *see also* Easterbrook, *Workable Antitrust Policy*, *supra* note 65, at 1701, 1709-12 (stating that the "development of complex models is one thing, [but] proof of their utility is another," and recognizing that "[e]very thoughtful scholar in antitrust works on these problems").

problems in developing related enforcement mechanisms.[149] Other scholars have observed that many of the competitively harmful effects identified by post-Chicago game theory arise from business practices that are equally likely, *ex ante*, to generate efficiency benefits.[150] According to these scholars, courts faced with claims of anticompetitive strategic behavior confront an intractable problem. Because no economically meaningful test can distinguish strategic from efficiency motives *ex ante*, and because proof of an efficiency motivation is a defense under rule of reason analysis,[151] "credible efficiency defenses will exist *whenever* a strategic claim can be made."[152] On their view, until game theorists devise criteria for differentiating harmful strategies from efficient ones, post-Chicago methodology will remain impracticable and indeterminate.[153]

Moreover, although Chicagoans usually refrain from scrutinizing product and service markets for competitively meaningful imperfections, imperfections in the market for antitrust enforcement attract their undivided attention.[154] Chicago adherents emphasize the complexity and ambiguity of economic evidence, as well as the limitations of the trial process,[155] and contend that these imperfections often prevent the judiciary from understanding the welfare implications of most business conduct.[156] This inevitably imperfect

149. *See, e.g.*, Ayres, *Playing Games*, *supra* note 104, at 1317; Hovenkamp, *After Chicago*, *supra* note 1, at 261.

150. Edward A. Snyder & Thomas E. Kauper, *Misuse of the Antitrust Laws: The Competitor Plaintiff*, 90 MICH. L. REV. 551, 589 (1991); *see also* Easterbrook, *Workable Antitrust Policy*, *supra* note 65, at 1710 (arguing that although raising rivals' costs is a form of exclusionary conduct, it may also control wasteful investments).

151. Antitrust analysis under the Rule of Reason "includes an efficiency defense." Brodley & Ma, *supra* note 22, at 1204; *see also* National Collegiate Athletic Ass'n v. Board of Regents of the Univ. of Okla., 468 U.S. 85, 113 (1984) (stating that "otherwise unobtainable efficiencies" can justify an arrangement that, in their absence, would violate the antitrust laws; quoting Arizona v. Maricopa County Medical Soc'y, 457 U.S. 332, 365 (1962) (Powell, J., dissenting)).

152. Snyder & Kauper, *supra* note 150, at 591.

153. *Id.* at 596.

154. Judge Easterbrook has been the most prolific Chicagoan on this point. *See, e.g.*, Easterbrook, *The Limits of Antitrust*, *supra* note 17, at 6; Easterbrook, *Workable Antitrust Policy*, *supra* note 65, at 1706; Easterbrook, *Allocating Antitrust Decisionmaking Tasks*, *supra* note 11, at 307 ("Litigation produces false positives and false negatives. The more complex or unusual the conduct, the more false positives and false negatives there will be. In other words, the greater the complexity, the greater the error rate.").

155. *See* Easterbrook, *On Identifying Exclusionary Conduct*, *supra* note 86, at 976 ("The process of litigation . . . does not hold out much promise for finding economic truth.").

156. "The welfare implications of most forms of business conduct are beyond our ken." Easterbrook, *The Limits of Antitrust*, *supra* note 17, at 11.

decisional process, Chicagoans conclude, should make judges wary of condemning arguably uncompetitive practices, lest they mistakenly proscribe arrangements that would otherwise contribute to social welfare.[157]

In some ways the differences between Chicago's simple, low-cost enforcement methodology and post-Chicago's more complicated models reflect their differing approaches to market imperfections. In an important sense, however, these methodological differences embody conflicting notions about the efficacy of government intervention in private markets and the judicial capacity to understand economic data and argument. Above all, however, the sharp procedural and substantive contrasts between the Chicago and post-Chicago Schools demonstrate the heterogeneity within the exclusively economic approach to antitrust. Between them, the competing schools encompass widely divergent opinions about both the efficiency effects of business behavior and the means most appropriate to the efficiency goal.

IV. THE EMPIRICAL STALEMATE IN ANTITRUST ECONOMICS

Scholarly criticism has exposed weaknesses in both schools of economics, but done little to resolve their debate. Predictably, post-Chicago writers fault Chicagoans for discounting the role of market imperfections in antitrust analysis, while Chicagoans insist that post-Chicago methodology is unworkable.[158] Each school claims a more accurate vision of the marketplace and a more effective enforcement policy, and each promotes its vision as the linchpin of competition law. Chicago's streamlined methodology rests on an optimistic vision of the market and a pessimistic view of the judiciary's ability to cope with complex economic data. Post-Chicago sees competition as more fragile, market imperfections as more destructive, and the judicial process as more capable—all of which, in its opinion, warrant a more probing enforcement policy.

Of course, courts and policymakers need not choose in every case between the competing models. Since both schools aspire to

157. *Id.* at 2. According to Chicagoans, the problems wrought by an overly aggressive judiciary are manifold. In addition to the permanent social losses caused by the potentially wrongful condemnation of efficient business practices, other factors—such as the high costs of suit, the cautionary lesson of stare decisis, and the disinclination of litigants to argue openly for the reversal of inefficient rules—tend to provide mistaken decisions with unfortunately long life spans. *Id.* at 2-4.

158. *See supra* notes 144-57 and accompanying text.

maximize consumer welfare, they sometimes reach the same conclusion about particular business practices. As shown above, however, and as *Kodak* demonstrates, in many important areas the Chicago and post-Chicago approaches yield significantly different results.[159] In these areas, the opposing views of the two schools require courts and policymakers to choose between them. Both schools agree, though, that the state of empirical economic evidence is neither sufficiently developed nor sufficiently clear to provide an adequate basis for making the choice.

Though Chicago scholars occasionally claim that their model rests on solid empirical footing,[160] they are quick to admit that even simple economic inquiries "often yield ambiguous answers,"[161] and to acknowledge the inadequacy of the data informing their theory.[162] They defend their model chiefly on the ground that simple but realistic assumptions imbue it with substantial explanatory power.[163] Almost all these assumptions, however, are contestable.[164] Many are counterfactual—that is, their verification requires the evaluation

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159. *See supra* notes 136-43 and accompanying text.

160. *See, e.g.*, Easterbrook, *Workable Antitrust Policy*, *supra* note 65, at 1699 & nn.8-9.

161. *Id.* at 1712. In evident agreement, one federal appeals court has noted that "[a]s a social science built on assumptions and statistics, economics is subject to the disparagement attributed by Mark Twain in his autobiography to Benjamin Disraeli: 'There are three kinds of lies: lies, damned lies, and statistics.' " McGahee v. Northern Propane Gas Co., 858 F.2d 1487, 1496 n.19 (11th Cir. 1988), *cert. denied*, 490 U.S. 1094 (1989).

162. *See, e.g.*, Easterbrook, *Allocating Antitrust Decisionmaking Tasks*, *supra* note 11, at 308-09 (announcing that "[t]he empirical foundation on which much antitrust policy was built has been washed away," and implying that nothing had been erected in its place); Easterbrook, *On Identifying Exclusionary Conduct*, *supra* note 86, at 975.

163. POSNER, ECONOMIC ANALYSIS OF LAW, *supra* note 99, at 17 ("Judged by the test of explanatory power, economic theory is a significant (though only partial) success; so perhaps the assumption that people are rational maximizers of their satisfactions is not so unrealistic."); Easterbrook, *Workable Antitrust Policy*, *supra* note 65, at 1706 ("Any approach to antitrust must simplify; modeling is essential; the best approach is the simplest one *that can cope with the data.*").

164. *See, e.g.*, Eddie Correia, *Antitrust Policy After the Reagan Administration*, 76 GEO. L.J. 329, 331 (1987) (claiming that the empirical evidence for "the most fundamental assumptions" underlying Chicago policy are "often very thin"). The Chicago School has generated a substantial body of empirical work, much of which deals with the relationship between concentration and market performance. *See, e.g.*, Frank H. Easterbrook, *Vertical Arrangements and the Rule of Reason*, 53 ANTITRUST L.J. 135, 151 n.31 (1983). Most scholars agree, however, that this research "do[es] not resolve many of the most basic empirical questions" associated with the Chicago model. William H. Page, *The Chicago School and the Evolution of Antitrust: Characterization, Antitrust Injury, and Evidentiary Sufficiency*, 75 VA. L. REV. 1221, 1242 (1989) [hereinafter Page, *Evolution of Antitrust*].

of facts which do not or cannot appear in real markets—and thus defy any systematic testing efforts.

Take, for example, Judge Easterbrook's oft-cited argument for a cautious policy of antitrust enforcement, an argument that lies at the heart of the Chicago model:

> [U]ntil we know what a durable business practice does, no one should prohibit the use of that practice. The costs of erroneous prohibitions . . . are apt to be greater than the losses involved in waiting for better data and analysis before acting.[165]

Perhaps Judge Easterbrook is correct. Maybe the costs of judicial error exceed the losses entailed in tolerating "durable" practices until we understand them better. But maybe not. The answer depends in part on whether "erroneous" prohibitions can be accurately identified. It depends as well upon whether one can measure with rough accuracy the frequency of such prohibitions, the magnitude of the benefits mistakenly forgone, and the positive external effects produced by erroneous prohibitions, including the incentives created by aggressive enforcement policy for the development of more efficient, noncontroversial business practices. No data exist on these points, though, nor is it likely that any can be gathered. Moreover, the answer demands a comparison of the relative efficiency effects of cautious and interventionist enforcement models, models that cannot exist simultaneously and therefore cannot be properly compared.

The same charge can be leveled against other tenets of Chicago philosophy. As Professor Page has pointed out, Chicago's view that resale price maintenance eliminates free-riding and enhances output remains a matter of intense and voluminous academic debate,[166] largely because "[t]he state of empirical research in the area is inadequate to resolve the dispute."[167] Similarly, despite their expressions of concern for efficiency, Chicagoans have rejected efficiency-based defenses in merger and joint venture cases, partly

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165. Easterbrook, *Workable Antitrust Policy*, *supra* note 65, at 1701.

166. *See, e.g.*, Glen O. Robinson, *Explaining Vertical Agreements: The Colgate Puzzle and Antitrust Method*, 80 VA. L. REV. 577, 579 (1994) ("The subject of vertical restraints probably rivals all other antitrust subjects combined in the volume of commentary it has inspired.").

167. Page, *Evolution of Antitrust*, *supra* note 164, at 1252. Some have attempted to challenge the empirical underpinning of Chicago's view, but the "data" contained in these attempts has been largely anecdotal. *See, e.g.*, Robert L. Steiner, *Manufacturers' Promotional Allowances, Free Riders, and Vertical Restraints*, 36 ANTITRUST BULL. 383, 388 (1991).

because they believe that no data exist on efficiencies generated by these arrangements, and partly because they worry the problems of measuring putative efficiencies would seriously burden the litigation process.[168]

The factual basis of post-Chicago theory is no stronger. One of the most important post-Chicago models is the "raising rivals' costs" thesis, which postulates that under certain conditions, strategizing firms can monopolize their markets by entering exclusionary supply contracts that raise the costs of their rivals' inputs.[169] This thesis has been questioned on empirical grounds, both by Chicagoans claiming that it fails to differentiate between efficient and anticompetitive contracting practices,[170] and by centrist scholars asking whether and how often anticompetitive exclusion actually occurs.[171] Post-Chicago theses regarding the anticompetitive potential of contractual provisions for liquidated damages have attracted similar criticism.[172]

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168. *See, e.g.*, 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 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."). While agreeing that "[m]ost efficiencies are exceptionally difficult to measure," Professor Pitofsky finds it "surprising" that Chicagoans would reject an efficiency defense in merger cases—especially in light of their claim that the Warren Court was "insufficiently sensitive" to efficiency arguments—and suggests that Chicago's position stems in part from the view that an efficiencies defense "would justify more vigorous general antitrust enforcement" and thus undermine Chicago's "conservative approach." Robert Pitofsky, *Proposals for Revised United States Merger Enforcement in a Global Economy*, 81 GEO. L.J. 195, 209-10 (1992).

169. *See* Krattenmaker & Salop, *supra* note 108, at 234. Literature based on this thesis is widespread. *See* Herbert Hovenkamp, *Antitrust Policy, Restricted Distribution, and the Market for Exclusionary Rights*, 71 MINN. L. REV. 1293, 1293 n.2 (1987).

170. Snyder & Kauper, *supra* note 150, at 591.

171. Hovenkamp, *supra* note 169, at 1297 ("[M]any things are not known about the strategies of raising rivals' costs, including whether and how often firms employ such strategies, whether and when the strategies are anticompetitive, and how courts can identify when the strategies are being employed anticompetitively.").

172. Post-Chicago economists argue that when monopolists and their customers are perfectly uncertain about future entry into the monopolists' market, both groups can maximize profits by executing long-term supply contracts requiring the customer to pay exorbitant liquidated damages should it switch suppliers during the contract term. Though privately profitable, these contracts are socially inefficient, since they discourage more efficient firms from entering the monopolist's market and extract economic rents from those few firms that do enter. Aghion & Bolton, *supra* note 22, at 388-404. Post-Chicago legal scholars claim that these penalty contracts constitute commercially important transactions that merit aggressive antitrust scrutiny. Brodley & Ma, *supra* note 22, at 1177. Critics, however, note that "[s]tudies scrutinizing contracts for strategic effect . . . are relatively scarce"; that reported cases involving anticompetitive penalty provisions are rare; and that in those cases, the contractual provisions had sound efficiency rationales. Scott

The post-Chicago School is new. Much of its work consists of developing possibility theorems that refute the conclusions reached with price theoretic models.[173] It has generated so many theorems so quickly that there has been insufficient time to test them all.[174] Moreover, many post-Chicago theories are constructed so restrictively—modeled, for example, on simple market structures or single-period games—that testing them is unproductive.[175] Others depend on speculation about the reputational effects of apparently irrational strategic behavior—predatory pricing, for example[176]—making empirical validation impossible.[177] This is not to say that post-Chicago theory ignores problems of measurement. In some areas, notably the study of market power in concentrated industries, post-Chicago scholars have created new empirical tools.[178] But despite that progress, post-Chicagoans concede that many of their theories have not been verified.[179]

E. Masten & Edward A. Snyder, *The Design and Duration of Contracts: Strategic and Efficiency Considerations*, 52 LAW & CONTEMP. PROBS. 63, 74, 84 (1989).

173. According to the economist Franklin Fisher, a possibility theorem, also called an exemplifying theory,

> does not tell us what *must* happen. Rather it tells us what *can* happen. . . . When well handled, exemplifying theory can be very illuminating indeed, suggestively revealing the possibility of certain phenomena. What such theory lacks, of course, is generality. The very stripping down of the model that makes it easy (or even possible) to see what is going on also prevents us from knowing how the results will stand up in more general settings.

Fisher, *supra* note 106, at 117-18.

174. For example, the application of game theory to the study of oligopoly has generated a large number of postulates about how oligopolists are likely to choose the joint-maximizing solution. According to one prominent economist, "A great many outcomes are known to be possible. . . . [w]ith outcomes depending on what variables the oligopolists use [to predict one another's behavior] and how they form conjectures about each other." *Id.* at 117.

175. *See, e.g.*, Snyder & Kauper, *supra* note 150, at 565.

176. *See, e.g.*, Baker, *supra* note 14, at 649 ("When a firm predates against a few rivals it can create a reputation for irrationality. Other rivals who have not experienced predatory competition will now reasonably fear that if they compete strongly with the crazy firm, it will turn and predate against them. So they back off.").

177. Porter, *supra* note 105, at 561.

178. *See, e.g.*, Baker & Bresnahan, *supra* note 20, at 3-13 (describing new econometric techniques); Timothy F. Bresnahan & Richard Schmalensee, *The Empirical Renaissance in Industrial Economics*, 35 J. INDUS. ECON. 371, 374-76 (1987).

179. *See, e.g.*, Drew Fudenberg & Jean Tirole, *Noncooperative Game Theory for Industrial Organization: An Introduction and Overview*, *in* 1 HANDBOOK OF INDUSTRIAL ORGANIZATION, *supra* note 19, at 259, 323 ("[C]urrent refinements have not yet been tested for a wide class of models."); Shapiro, *supra* note 109, at 409 ("What we are most in need of now are further tests of the empirical validity of these various theories of strategic behavior.").

Consequently, though each school can marshal some empirical support for its position, neither can legitimately claim that the economic evidence resolves the debate in its favor. Economists still know little about the efficiency consequences of most business practices, the effects of firm size on competitive vitality, or the ability of courts to distinguish between harmful and beneficial behavior. Further, as to at least some of these matters, such as those calling for counter-factual comparisons, reliable data may be impossible to gather. From the scientific and rhetorical perspectives, this absence of data prevents each school from disproving the other's theory.[180] From a practical perspective, the inconclusive state of the economic evidence precludes policymakers from accurately comparing the relative merits of Chicago and post-Chicago theory on efficiency grounds.

Some scholars have advocated the use of cost-benefit analysis to break the deadlock between the two theories. While acknowledging that assertions about market efficiency and judicial competence are grounded more in intuition than empiricism, these scholars nevertheless contend that policymakers should accept certain assertions on faith. Because they regard the econometric measures needed to test the efficiency effects of market behaviors and judicial opinions as "expensive as well as potentially indeterminate,"[181] these writers claim that antitrust litigation should forgo factual investigation of those effects.[182] Rather, they contend, the irresolvable empirical uncertainty about the workings of markets and courts argues for a streamlined model of antitrust enforcement, a methodology that would minimize the sum of error and process costs associated with government intervention.[183]

This argument possesses a certain superficial appeal. Antitrust economists regularly consider the effects of transaction costs on

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180. From a philosophical perspective, sizeable amounts of additional data might not end the debate. Data is never fully self-explanatory; and if, as this Essay argues, the formation of economic theory depends in important measure on the theorists' ideological biases, the interpretation of economic evidence may also be subject to ideological bias.

181. Easterbrook, *On Identifying Exclusionary Conduct*, *supra* note 86, at 979.

182. *Id.* at 977-78.

183. *Id.* at 977. A variant of this view, based on the economic theory of the so-called Austrian School, argues that because government is generally less effective than the private sector at gathering accurate information about the market, courts should refrain from intervening in allegedly anticompetitive markets "whenever a cost-benefit analysis of the [proposed] intervention is either not possible *or not reliable*." DeBow, *supra* note 118, at 80.

consumer welfare,[184] and would almost certainly agree that, all things being equal, decisionmakers should choose the least costly enforcement model. Moreover, the Supreme Court has expressly recognized the high cost and uncertainty of antitrust litigation, particularly the judiciary's limitations in coping with complex economic evidence,[185] and it has repeatedly emphasized that "[t]he administrative efficiency interests in antitrust regulation are unusually compelling."[186] The inability of the economic data to provide a firm substantive basis for choosing between Chicago and post-Chicago theories arguably suggests that process concerns should play a primary role in policymaking, and that courts should apply the analytical method that minimizes the administrative costs of antitrust enforcement.

Placing cost-benefit analysis at the center of antitrust policymaking hardly resolves the questions raised by the debate between the Chicago and post-Chicago Schools. It simply recapitulates them in a slightly different format. No method of antitrust enforcement can properly call itself inexpensive, but the fact-intensive nature of post-Chicago's game theoretic approach is concededly more costly than the highly presumptive methodology of the Chicago School.[187] The relative disparity in process costs,

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184. *See, e.g.*, Oliver E. Williamson, *The Economics of Antitrust: Transaction Cost Considerations*, 122 U. PA. L. REV. 1439 (1974). Strictly speaking, the transaction cost approach (1) recognizes that firms and markets are alternative instruments for completing commercially-related transactions, and (2) asks which mode is the more efficient mechanism for doing so, under the circumstances. *Id.* at 1442. Antitrust policymakers arguably face a similar dilemma: choosing between alternative approaches to achieving the efficiency goal. Making this choice requires consideration of the relative costs of the Chicago and post-Chicago models.

185. As Justice Brennan has noted, "[C]ourts are of limited utility in examining difficult economic problems. . . . [They are] ill-equipped and ill-[suited] for such decisionmaking [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." United States v. Topco Assocs., Inc., 405 U.S. 596, 609, 611-12 (1972) (Brennan, J., concurring) (footnote omitted). Courts have long recognized their limitations in the realm of economic fact-finding. For an early example, see the statement of Baron Bramwell in Manchester, Sheffield & Lincolnshire Ry. v. Brown, 8 App. Cas. 703, 716 (1883) ("[H]ere is a contract made by a fishmonger and a carrier of fish who know their business, and whether it is just and reasonable is to be settled by me who am neither fishmonger nor carrier, nor with any knowledge of their business.").

186. FTC v. Superior Court Trial Lawyers Ass'n, 493 U.S. 411, 430 (1990); *see also* Northern Pac. Ry. Co. v. United States, 356 U.S. 1, 5 (1958) (characterizing rule of reason inquiry as "incredibly complicated and prolonged" and "so often wholly fruitless when undertaken").

187. *See supra* notes 144-47 and accompanying text. By replacing the presumptive (but arguably mistaken) certainty of the per se approach with the fact-intensive inquiries

however, results directly from the philosophical differences separating the two schools. Post-Chicago's belief in the distorting effects of market imperfections necessitates the factual investigations and complex assessments that Chicago's perfect-market presumption conscientiously avoids. It is hardly surprising therefore that Chicago offers the lower cost methodology: Its basic assumptions demand a more simplified method. Consequently, a process-driven approach to antitrust analysis is no more, or less, objective than a substance-driven one. Indeed, it disguises a substantive choice by labeling it procedural, but without attempting to resolve the empirical dilemma at the core of the substantive debate.

Moreover, even in its own blinkered terms, the cost-benefit approach to antitrust process is indeterminate. Lower process costs by themselves do not necessarily advance the interests of the legal system. As Judge Easterbrook notes, the system should strive to "minimize the *sum* of error and process costs."[188] Since Chicagoans believe that error costs are most likely to arise from mistaken judicial proscriptions of beneficial business practices, they view their cautious and simplified methodology as an important brake against both error and process costs.[189] From a post-Chicago perspective, however, the cost of judicial restraint—harmful behavior unpunished, anticompetitive tendencies undiminished, and malevolent actors undiscouraged—substantially outweighs the risk of judicial temerity. In their view, the additional efficiencies produced by aggressive enforcement justify, on cost-benefit grounds, the necessary investment in higher process costs.

The narrower debate over transaction costs thus encapsulates the broader theoretical dispute about the efficiency effects of controver-

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demanded by the rule of reason, the Chicago approach has clearly helped raise the cost of antitrust litgation. *See, e.g.*, Thomas C. Arthur, *Farewell to the Sea of Doubt: Jettisoning the Constitutional Sherman Act*, 74 CAL. L. REV. 263, 303 (1986) (stating that the rule of reason "make[s] virtually all data relevant"); Easterbrook, *The Limits of Antitrust*, *supra* note 17, at 12-13 ("Litigation costs are the product of vague rules combined with high stakes, and nowhere is that combination more deadly than in antitrust litigation under the Rule of Reason."). *But see* Hovenkamp, *After Chicago*, *supra* note 1, at 225 (characterizing post-Chicago economics as "both more complex and more ambiguous than the Chicago School model," and indicating that this complexity poses difficulties for enforcement agencies).

188. Easterbrook, *On Identifying Exclusionary Conduct*, *supra* note 86, at 977.

189. *Id.* at 977-78; *see also* Easterbrook, *The Limits of Antitrust*, *supra* note 17, at 15-17 (indicating that the costs of judicial error far exceed the risk of wrongly permitted monopoly); Easterbrook, *Allocating Antitrust Decisionmaking Tasks*, *supra* note 11, at 311-12 (applying the principles of business judgment cases to market power in antitrust cases).

sial business behavior. In each case, exclusively economic models yield markedly different answers to the substantive questions most important to antitrust policy. Similarly, the lack of pertinent data precludes meaningful debate and permits both schools to lay claim to the mantle of greater efficiency. Given the absence of an economics meta-theory,[190] the resulting deadlock effectively prevents policymakers from resolving the debate on economic grounds.

To be sure, the interpretive schism in contemporary antitrust economics does not leave the economic model bereft of explanatory power. Post-Chicagoans would doubtless agree that Chicago's limited enforcement objective—"prosecuting plain vanilla cartels and mergers to monopoly"[191]—marks an appropriate starting point for government intervention. Both schools relegate the issue of anticompetitive intent to a minor role in antitrust doctrine;[192] and, in the absence of meaningful market imperfections, both would tend to attribute novel business arrangements to the efficiency motive.[193] Their doctrinal and methodological differences, though, are more profound than their agreements, and cast new light on the importance of normative choice in the development of antitrust economic theory. Ultimately, in order to resolve this quintessentially economic debate by nonformalistic means,[194] policymakers must import into antitrust discourse the value discussion that economists have long disdained.

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190. Meta-theory either synthesizes the sub-theories that it purports to explain or offers a theoretical basis for evaluating and distinguishing between competing theories. *See, e.g.*, Larry A. Alexander, *Modern Equal Protection Theories: A Metatheoretical Taxonomy and Critique*, 42 OHIO ST. L.J. 3, 3 n.* (1981); *see also* Arthur Leff, *Unspeakable Ethics, Unnatural Law*, 1979 DUKE L.J. 1229, 1230 n.2 (quoting Professor Lipson's remark that "anything you can do, I can do meta").

191. Easterbrook, *Workable Antitrust Policy*, *supra* note 65, at 1701.

192. Professors Brodley and Ma speak for Chicagoans and post-Chicagoans alike, in observing that "intent evidence is generally inferior to objective evidence because competitive and anticompetitive motivations are often indistinguishable." Brodley & Ma, *supra* note 22, at 1201; *see also* 3 AREEDA & TURNER, *supra* note 60, ¶ 714.2c, at 440 (Supp. 1994) (discussing the evidentiary difficulty of distinguishing anticompetitive intent from a lawful intention to compete).

193. *See, e.g.*, Williamson, *Delimiting Antitrust*, *supra* note 7, at 275 ("[E]conomizing remains the main case [in antitrust analysis] to which appropriate strategic qualifications are added.").

194. In cases where Chicago and post-Chicago economists disagree about the efficiency effects of challenged practices, courts could choose between the competing approaches on formal grounds admittedly unrelated to consumer welfare, such as the projected costs of judicial administration (regardless of the magnitude of the welfare benefits associated with the lower cost approach).

V. THE NORMATIVE BASIS OF ANTITRUST ECONOMICS

At bottom, the debate between Chicago and post-Chicago economists implicates contending articles of political faith. Although the disputants fail to acknowledge it, the absence of empirical proof about the efficiency effects of many business practices, the competitive consequences of large firm size, the proclivity of firms to collude, and the efficacy of government intervention has not only retarded the emergence of clear answers to the questions under debate, but has also obscured the very nature of that debate. While on one level the disputes appear intensely factual and seem capable of resolution through proof of how markets and government actually work, the practical impossibility of resolving these fundamental factual questions has effectively disguised an ideological argument as a seemingly scientific one.

On an important normative question, of course, the disputants are in complete agreement. Both schools contend that considerations of allocative efficiency alone should guide antitrust policy. Their debate centers on the answers to subsidiary questions regarding the best means of attaining that agreed-upon end. Thus, to the question of how best to promote allocative efficiency, Chicagoans would suggest very limited government intervention, while post-Chicagoans would encourage more aggressive intervention. To the question of why refrain (or intervene), Chicagoans would claim that, for the most part, markets function efficiently and courts do not. Post-Chicagoans would argue precisely the opposite. When pressed, however, to produce empirical support for their assertions about the workings of markets and government, both sides must acknowledge the lack of definitive support and admit that their theses rest on unproven beliefs about markets and government.

Conceivably, econometrics could fill the factual gaps in the Chicago/post-Chicago debate. Sophisticated measurement tools or complicated cross-national experiments could supply the economic data necessary to resolve the dispute. As a practical matter, though, the necessary information is currently unattainable. Existing mechanisms of economic measurement are incapable of determining the comparative efficiencies associated with different business practices or quantifying the impact of market imperfections on any particular sector of the economy. Many relevant facts are unobservable, while others can be observed—that is, their existence can be noted—but not measured. The durable empirical uncertainty that characterizes the current state of antitrust economics thus invests the

contending statements of economic theory with the kind of ideological quality that Chicagoans found objectionable in the work of their Modern Populist critics. The arguments of Chicagoans and post-Chicagoans alike implicitly rest on a belief in the superiority of the particular ideological visions embodied in the assumptions of their respective models.

The visions that inform this dispute, though not necessarily partisan, are ideological in the sense that they rest on untested ideas and beliefs about the larger culture.[195] Chicagoans believe that, left alone, markets will almost always function competitively, that market imperfections are transitory and largely inconsequential, and that government intervention usually does more harm than good. In contrast, post-Chicagoans believe that imperfections and the private benefits of collusion frequently facilitate the breakdown of competition, that small firms are especially vulnerable to victimization, and that government intervention usually increases social welfare.

These conflicting beliefs reflect differing views about the motivations behind corporate behavior, the explanatory power of economic theory, and the competence of governmental decision-makers. For Chicagoans, the efficiency of the market is assured by the profit motive. On their view, the drive to maximize profit leads firms to compete away market imperfections, cheat on co-conspirators and collaborators,[196] and implement practices that enhance consumer welfare. Under this model, firms behave selfishly and atomistically, but, as theory instructs, with mostly positive effect. The model posits that theory is powerful and that courts, ill-informed and of dubious competence, are highly imperfect laboratories for testing theory, more apt to diminish social welfare than to improve it.

For post-Chicagoans, corporate nature is selfish but not necessarily atomistic. In their view, firms do not inevitably compete away market imperfections; whenever possible, they take anticompetitive

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195. "Ideology" is defined as, among other things, a "set of doctrines or beliefs forming the basis of a political or economic system." THE AMERICAN HERITAGE DICTIONARY OF THE ENGLISH LANGUAGE (3d ed. 1992) 896. The philosopher Raymond Geuss has described this form of ideology as "descriptive," encompassing the "beliefs" held by members of a particular group, "the concepts they use, the attitudes and psychological dispositions they exhibit, their motives, desires, values, predilections, [etc.]." RAYMOND GEUSS, THE IDEA OF A CRITICAL THEORY: HABERMAS AND THE FRANKFURT SCHOOL 4-5 (1981).

196. For example, see the opinions of Judge Posner in FTC v. Elders Grain, Inc., 868 F.2d 901, 905 (7th Cir. 1989); and Hospital Corp. of Am. v. FTC, 807 F.2d 1381, 1391 (7th Cir. 1986), *cert. denied*, 481 U.S. 1038 (1987).

advantage of them. Moreover, imperfections may often make collusion the profit-maximizing strategy, and market structure may facilitate the monitoring and enforcement necessary to keep cartels intact.[197] Post-Chicagoans believe that the power of economic theory depends on accurate factual premises, and that broadly assumptive theories, like Chicago's, cannot adequately explain or predict real-world behavior. Their model implicitly posits that courts can differentiate between efficient and inefficient practices, and encourages government involvement in the marketplace.

In important respects the political differences dividing the Chicago and post-Chicago Schools formed the subject matter of Chicago's earlier debate with its Modern Populist critics. The Modern Populists presaged the post-Chicagoans' concern for market imperfections and competitive process, its suspicion of large firms, and its faith in the promise of government intervention. Indeed, because the debate between the Chicago and Modern Populist Schools expressly concerned itself with the relationship between subjective political values and the goals of antitrust, Chicago's clear victory seemed to signal an end to normative dispute in antitrust discourse.

In the contemporary debate, by contrast, the normative questions do not announce themselves. Instead they lie embedded in technical disagreements over the means most conducive to the agreed-upon goal of consumer welfare. Having successfully established the primacy of economic analysis, moreover, the participants in the current debate may share a professionally understandable reluctance to reopen earlier disagreements which they had endeavored for so long to end. Consequently, the normative differences dividing antitrust economists have thus far escaped explicit acknowledgement and frank discussion. But this absence of frank discussion does not make antitrust economics any less value-laden.

These fundamental differences pose a dilemma for antitrust decisionmakers who favor an exclusively economic analysis. Before the emergence of post-Chicago theory, Chicago's approach provided seemingly coherent answers to all relevant economic questions. Chicagoans could confidently assert, and decisionmakers could comfortably accept, the proposition that antitrust policy based upon the goal of consumer welfare "calls for price theory, and . . . for those rules, and only those rules, that can be justified in terms of price

197. *See, e.g.*, Ayres, *supra* note 113, at 297-98; Baker, *Recent Developments*, *supra* note 14, at 648-49.

theory."[198] In rejecting price theory as the sole mechanism for examining consumer welfare, post-Chicago thought not only casts doubt on the body of law generated by Chicago scholars but also, and more significantly, on their basic assumptions.

Contemporary decision makers should recognize that the "Church of Chicago,"[199] if it ever was canonical, has encountered its own reformative challenge. The emergence of the post-Chicago School has brought in its wake empirical and philosophical uncertainty about the infallibility of Chicago orthodoxy. The uncertainty surrounding the economic aspects of the economists' debate effectively requires courts and policymakers to choose between contending economic approaches on grounds that are essentially political. The nature of this choice has thus far gone unacknowledged, and in important respects the *Kodak* opinion and the ensuing commentary have overlooked it.[200] But because economic criteria afford no basis for distinguishing between Chicago and post-Chicago theory, decisionmakers must resolve this prototypical economic debate by resorting to politically laden judgments about firms, markets, government, and courts.

The general idea that value judgments might shape the formation of economic theory, and that competing theories might therefore reflect competing values, is hardly surprising. In the past twenty years, philosophers of science have reached broad consensus on the view that normative substrata underlie the foundation of scientific theory. Many contend that the development of scientific theory hinges unconsciously, but in significant measure, upon its correspondence with the value system of the theory-builder, and that the acceptance of theory depends upon the social context in which it appears.[201] Others argue that when opportunities for data-gathering

198. Bork, *The Role of the Courts*, *supra* note 58, at 24.

199. *See* Frederick Rowe, *The Decline of Antitrust and the Delusion of Models: The Faustian Pact of Law and Economics*, 72 GEO. L.J. 1511, 1512-13 (1984) ("[T]he rising vogue is economic efficiency taught by an ascendant Chicago School. . . . [A]ntitrust is becoming a religion without a cause.").

200. *See supra* notes 138-47 and accompanying text. This is certainly not to suggest that courts have explicitly recognized the political questions implicated in the antitrust economics debate. To the contrary, though it expressed a clear preference for post-Chicago analysis, the *Kodak* Court offered no explanation for that preference. It is to suggest that the Court's decision to adopt post-Chicago analysis was in essence a political one, and that antitrust jurisprudence would benefit from recognizing this fact and from an ongoing dialogue about the values that should inform judicial analysis.

201. *See, e.g.*, THOMAS S. KUHN, THE STRUCTURE OF SCIENTIFIC REVOLUTIONS 111-35, 171-73 (2d ed. 1970).

are limited, "scientists may have nothing but aesthetics . . . to guide them."[202]

On this view, even when scientists honestly see themselves as pursuing neutral or objective truth, their work is ineradicably colored by social, cultural, and political values.[203] Obviously, the recognition that non-scientific values sometimes define the scientific enterprise does not spell the end of empirical inquiry, or counsel against the continued pursuit of objective knowledge. It does, however, underscore the importance of identifying the evaluative sub-structure of scientific theory and recognizing how it may either enhance or limit the theory's validity. No less than law, science has ceased to be, if it ever was, a collection of autonomous disciplines.[204] The contemporary dispute about how to maximize consumer welfare cannot be resolved on purely scientific grounds. The impasse produced by the inadequacy of empirical proof and the limitations of economic theory effectively force decisionmakers to look past the text of the debate, and to choose between the contending schools on the basis of the relative soundness of the metaphysical assumptions underlying their respective enforcement models.[205]

Reconsider the Supreme Court's recent decision in *Eastman Kodak Co. v. Image Technical Services, Inc.*[206] By adopting the post-Chicago approach to informational imperfections in the face of theoretical and empirical uncertainty about the commercial significance of market imperfections, the *Kodak* majority implicitly embraced post-Chicago's normative assumptions about the workings of markets, the competence of courts, and the wisdom of aggressive antitrust enforcement. The Court weighed in on the side of those

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202. DAVID LINDLEY, THE END OF PHYSICS: THE MYTH OF A UNIFIED THEORY 11 (1993).

203. *See, e.g.*, STEPHEN J. GOULD, THE MISMEASURE OF MAN (1981) (chronicling the history of biological determinism, and concluding that the racial, gender, and ethnic biases that affected the scientific community's approach to human intelligence demonstrate the inescapable influence exerted by values and beliefs on the process of scientific inquiry); *see also* STEWART RICHARDS, PHILOSOPHY AND SOCIOLOGY OF SCIENCE: AN INTRODUCTION 44-70, 202 (2d ed. 1987) (discussing development of scientific methods in the context of individual beliefs and value systems, and the scientific community).

204. *See* Richard A. Posner, *The Decline of Law as an Autonomous Discipline: 1962-1987*, 100 HARV. L. REV. 761, 761 (1987).

205. Forty-five years ago, Felix Cohen observed that "[j]udges and non-judges who denounce metaphysics do not thereby escape metaphysics. Nor do they establish the truth of their own metaphysical assumptions. All they establish is their unawareness of their own basic assumptions." Felix Cohen, *Field Theory and Judicial Logic*, 59 YALE L.J. 238, 260 (1950).

206. 504 U.S. 451 (1992).

who believe that market imperfections can seriously distort competitive balance, that courts can competently resolve the factual questions associated with the investigation of those imperfections, and that the efficiency benefits conferred by judicial scrutiny of those imperfections exceed the costs of that scrutiny.

Though camouflaged by its distinctly economic coloration, the *Kodak* decision turned on the acceptance of assumptions that are essentially political in nature. Indeed, the fact that Justice Blackmun wrote for the "post-Chicago" majority, and that Justice Scalia (joined by Justices Thomas and O'Connor) authored the "Chicago" dissent, indicates that the economic theories expressly at issue in *Kodak* concealed an important normative dispute. It also reveals that the post-Chicago School has effectively replaced the Modern Populist School as the liberal alternative to Chicago. But above all, *Kodak* demonstrates that, far from transcending political discourse, the "exclusively" economic perspective simply shifts the focus of that discourse from ends to means, altering its vocabulary, and thereby dressing an old normative debate in new, technical clothing.

Finally, *Kodak* may also show that the Court remains willing to discuss the ideological underpinnings of antitrust, but only under the guise of performing economic analysis. This development is not entirely unhealthy; an encrypted discussion of policy is better than no discussion at all. Moreover, to the extent that the political values informing the Court's economic analysis remain obscure to the business community and unpredictable in application, they may contribute to uncertainty in business decisionmaking and thus implicitly encourage overcompliance with the antitrust laws.[207] While this may be a pleasant possibility for some, overcompliance is not an unmitigated good, since it may squelch socially beneficial innovations. More importantly, though, because one can only guess at whether the Court intended to create any of these consequences, the discussion in *Kodak* would have been far more productive had it dispelled the illusion, simultaneously perpetuated and revealed by the Chicago/post-Chicago debate, that economics provides objective, nonpolitical answers to the important value questions that underlie antitrust.

Antitrust economists have reached a "core" of consensus about the significance of allocative efficiency and about easy cases of

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207. *See, e.g.*, John E. Calfee & Richard Craswell, *Some Effects of Uncertainty on Compliance with Legal Standards*, 70 VA. L. REV. 965, 967-94 (1984) (arguing that legal rules whose meaning or application is uncertain leads firms to overcomply with the law).

inefficient business behavior. The current intramural debate, however, illuminates a large "periphery" of uncertainty that encompasses all the difficult efficiency questions confronting antitrust. For these hard questions, economics provides no definitive answers. Consequently, decisionmakers facing those questions—no matter how devoutly they may accept the core benefits of the economic approach—must ultimately look for their answers not in science but in ideology.

CONCLUSION

Chicago scholars have insisted for a generation on denying any role to political values in the shaping of antitrust doctrine. Antitrust law, they have claimed, is perfectly suited to an exclusively economic analysis. For them, simple economic rules are not only fully explanatory and easily applied, but permit courts to avoid the indeterminate value debates that plague other doctrinal areas, most notably constitutional law. Their success in this endeavor, however, has proved too short lived. By contesting the empirical basis of Chicago's assumptions about how markets work and by demonstrating, albeit unintentionally, the role of ideological contingency in the formation of economic theory, the post-Chicago School has not only destabilized the previously calm world of antitrust economics. It has at the same time suggested a future in which many schools of economic thought, various and contested, might vie for analytical supremacy. In that world, the expanded range of economic theory available to antitrust decisionmakers would make explicit what is now largely obscure: Choosing between economic theories is as much an act of politics as of science. Antitrust and constitutional law may not be so different after all.

Like other scientists, antitrust economists may wish to deny the subjectivity of their enterprise. In their view, perhaps, the ascendancy of an exclusively economic model, and the self-evident nature of its universal truths, should have brought an end to political discussions in antitrust analysis. The triumph of economics should have ushered in an age of consensus about the goal of antitrust policy, disturbed only by minor disagreements over the means to that end. Because they cannot be resolved either theoretically or empirically, however, the disputes that concern contemporary antitrust economists testify forcefully to the unavailability of a transcendent economic perspective and demonstrate the durability of the ideological questions that economists have sought to banish from antitrust discourse. In this

way, the current age of economic disputation illuminates, as no earlier debates have, the irreducible normative basis of antitrust law.