

I Can See Clearly Now: Lee Benham, Eyeglasses, And The Empirical Analysis Of Advertising And The Effects Of Professional Regulation

By Bruce H. Kobayashi & Timothy J. Muris¹

In his oft quoted dissent in *New State Ice v. Liebmann*, Justice Brandeis noted that “it is one of the happy incidents of the federal system that a single courageous State may, if its citizens choose, serve as a laboratory; and try novel social and economic experiments without risk to the rest of the country.”² An important by-product of the variation in state law produced by these laboratories of democracy is the opportunity for empirical research. Measuring the effect of these different laws, both across states and over time, is now a standard and ubiquitously used methodology in law and economics.³

Lee Benham’s 1972 article, *The Effect of Advertising on the Price of Eyeglasses*,⁴ represents an early, highly influential example of this empirical methodology, where the variation between state laws permits use of legislative “experiments” to study the effects of differing approaches to regulation. Benham found that mean prices of eyeglasses in states that prohibit advertising by optometrists were \$6.70 (25 percent) higher than in states that did not prohibit such advertising.⁵ Cross-section regression analyses⁶ also found significant increases in the price of eyeglasses in states with complete restrictions on advertising, with average prices in such states \$7.48 higher.⁷ Benham’s main result was robust to the inclusion of a variable to control for entry restrictions. He also found that mean prices for eyeglasses in states that only banned price advertising were higher than in states with no restrictions, but lower than in states with complete advertising restrictions.⁸

These striking results challenged the conventional economic wisdom that the costs of advertising raised market prices.⁹ Benham also provided tangible and concrete evidence of both the costs of economic regulation to consumers and the likely beneficiaries of such regulation.¹⁰

While Benham was not the first to exploit variation in state law to measure the effect of regulation,¹¹ the clear and straightforward nature of his methodology and results provided empirical evidence that addressed two important theoretical controversies in economics: the pro-competitive versus anticompetitive effects of advertising, and the public versus private interest theories of the regulation of licensed occupations. Benham’s article appeared when both economic and legal analysis of the effects of advertising and regulation were being revised to incorporate recent advances in the economics of information¹² and the application of public choice theory to regulation.¹³ The article helped create interest in and the subsequent production of a robust empirical literature that measured the effects of professional regulation on both price and quality.¹⁴ Benham’s piece was also a prominent example of the empirical work that transformed regulation in general,¹⁵ and antitrust law in particular.¹⁶ Discussion of the article, its methodology, and its clear results are a staple of popular economics texts in both microeco-

nomics¹⁷ and industrial organization.¹⁸

Benham's article was published shortly before the US Supreme Court's landmark cases that reversed its prior decision denying First Amendment protection for commercial speech, including advertising.¹⁹ In *Virginia State Board of Pharmacy v. Virginia Citizens Consumer Council*, the Court overturned a state ban on advertising drug prices, holding that First Amendment protection applied to commercial speech that was not false or misleading.²⁰ In *Bates v. Arizona State Bar*, the Court applied the First Amendment to allow advertising by a legal clinic.²¹ In both cases, the Court applied a cost-benefit analysis in deciding whether to grant First Amendment protection to advertising.²² The influence of the recent advances in economics of information and advertising was evident in both of these landmark cases, and explicit in *Bates*.²³ Indeed, the *Bates* Court used the empirical results from the Benham article to support its conclusions.²⁴

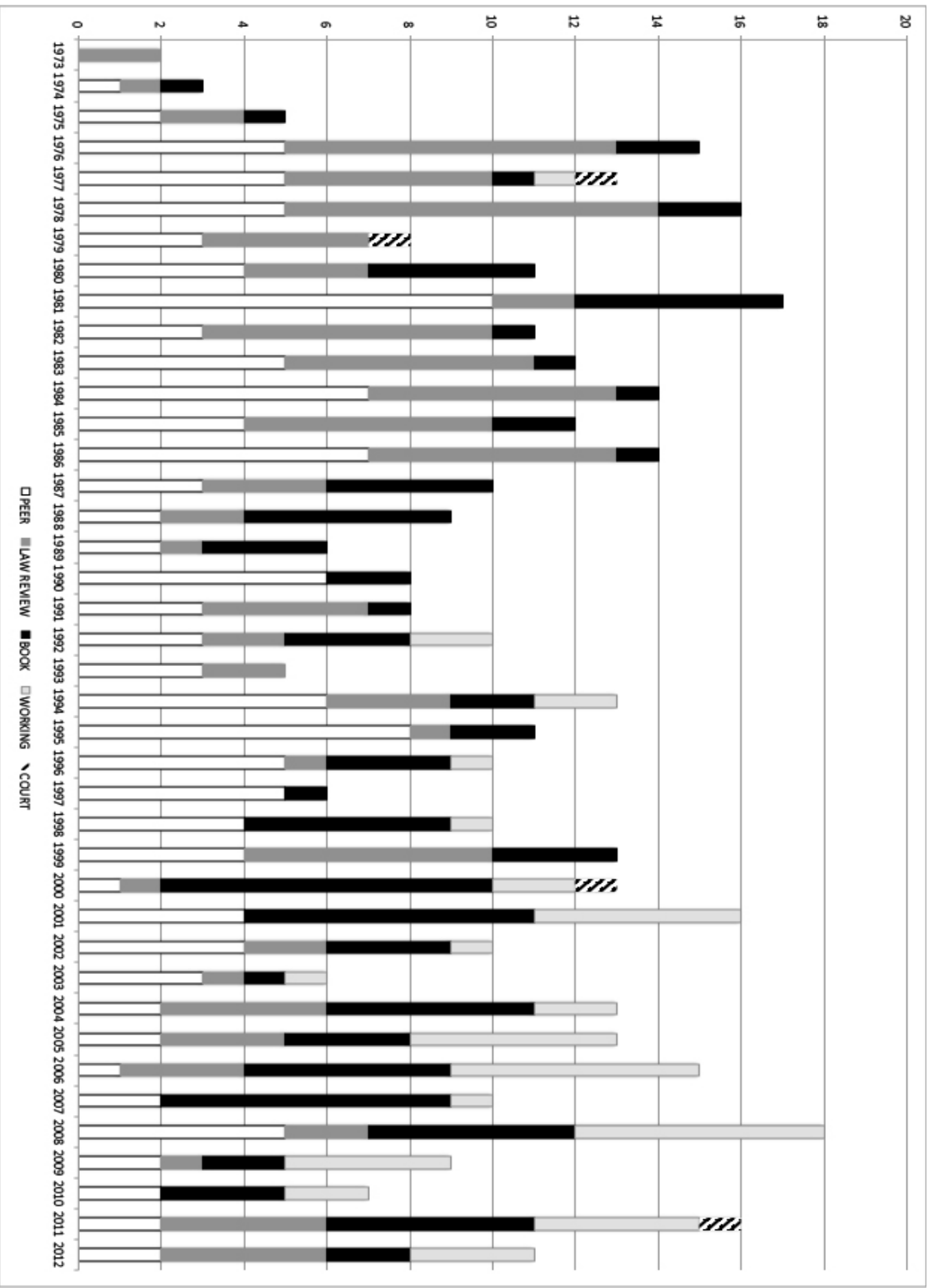
The depth and scope of Benham's influence can be illustrated by examining citations to the article.²⁵ Figure 1 depicts citations to Benham's article by year from 1973 (the year after publication of the article in the *Journal of Law & Economics*) to 2012.²⁶ Over these forty years, our search found more than 400 citations to Benham's article from a diverse set of sources.²⁷ The figure also differentiates the number of citations by source. Specifically, our search found 147 cites in articles published in peer review journals, 117 cites from articles published in law reviews, 112 cites from published books, 49 cites from working or occasional papers, and 4 cites from federal court opinions.²⁸

In addition to the overall volume and diversity of the citations, perhaps the most striking pattern is the relative constancy of the volume of cites over four decades. While citations articles normally peak soon after they are published and quickly decline after a few years, citations to Benham's article remain robust forty years after its publication. Indeed, the highest yearly total, 18, was in 2008, and four of the seven years with citations of 15 or greater have occurred since 2000. Moreover, the large number of recent citations to Benham's article contained in recent unpublished working papers suggests that this trend is likely to continue for some time.

WHILE CITATIONS ARTICLES NORMALLY PEAK SOON AFTER THEY ARE PUBLISHED AND QUICKLY DECLINE AFTER A FEW YEARS, CITATIONS TO BENHAM'S ARTICLE REMAIN ROBUST FORTY YEARS AFTER ITS PUBLICATION.

Benham's work had, and will likely continue to have, a direct and important impact on the agenda of US antitrust agencies. In many regulated professions, regulatory bodies and/or practitioners continue to attempt to restrict advertising, proscribe relationships with commercial firms, prevent consumers from buying related goods and services from non-professionals, and expand the list of services that only professionals can provide. Since the mid-1970s, a combination of court challenges and the Federal Trade Commission and Department of Justice advocacy efforts before regulatory bodies have helped eliminate most barriers to truthful, non-deceptive advertising by professionals. These agencies, like the Court in *Bates*, use the empirical results from Benham's article to support their position.²⁹ And consistent with the results of his empirical analysis, prices have decreased when these barriers were eliminated.³⁰

Figure 1 – Citations to Benham (1972)



Because other barriers to competition remain, the antitrust agencies continue to apply the lessons of Benham's work by attacking anticompetitive restraints in many industries.³¹ One area in which the federal antitrust agencies confront such restraints is in health care, including the professions. The antitrust agencies have acted aggressively to eliminate restraints on advertising, both by bringing cases to lift advertising bans and through advocacy in front of other government bodies (most notably involving restrictions on direct-to-consumer prescription drug advertising). On several recent occasions, agencies also have helped persuade state governments to avoid granting antitrust exemptions that would allow medical professionals to fix prices.³² Indeed, regulatory restrictions that would reduce competition in the sale of eyewear, the industry studied in Benham's article, remain a focus.³³

Finally, Benham's article is an early and important example of a broader empirical literature, instrumental in altering both industrial organization economics and related areas of law. For example, contemporaneous changes in antitrust scholarship and law accompanied the changes in the economic analysis and legal regulation of advertising discussed above.³⁴ Perhaps the most prominent example involved the then-existing consensus, held by most antitrust economists and legal scholars, that industrial concentration itself was a major problem. This consensus was based on the observed positive correlation between industrial concentration and accounting profits, but collapsed after the publication of *Industrial Concentration: The New Learning*, which contained the proceedings of a 1973 conference that included Harold Demsetz's empirical test of the effects of concentration on consumer welfare.³⁵ Demsetz's results supported the hypothesis that the observed correlation between concentration and profits was generated by the efficiency of large firms, and not by the effects of market power.³⁶ Although theoretical flaws were relevant in the debate over the effects of concentration, the de-concentration movement — which sought to break up leading business firms — foundered primarily on empirical evidence, and Demsetz's work was among the most important in revealing the flaws in the existing consensus.³⁷

This new learning soon influenced antitrust law. In 1977, the same year as *Bates*, the Supreme Court concluded that antitrust rules must be based on "demonstrable economic effect."³⁸ Antitrust had moved from an era of competitor protection and de-concentration for its own sake, to one based on an empirical foundation.³⁹ More generally, the economic sophistication of antitrust law, both within the agencies and in court decisions, has improved dramatically in recent decades. Lee Benham's 1972 article played a critical and formative role in that progress.⁴⁰ ◀

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1. Professor of Law, George Mason University School of Law and Foundation Professor of Law, George Mason University School of Law and of Counsel, Kirkland & Ellis. Professor Muris was Chairman of the Federal Trade Commission (2001-2004).

2. 285 US 262, 311 (1932).

3. See P. L. Joskow and N. L. Rose, *The Effects of Economic Regulation*, in HANDBOOK OF INDUSTRIAL

ORGANIZATION, VOL. 2, (Schmalensee & Willig, eds. (1989)), reviewing numerous studies of regulation taking advantage of variation in laws.

4. Lee Benham, *The Effect of Advertising on the Price of Eyeglasses*, 15 J. L. & ECON. 337 (1972).
5. *Id.* at Table 1.
6. Benham discusses, but does not explicitly examine because of data limitations, time series evidence. *Id.* at 346, n. 19. Modern studies of the effect of state regulations often exploit panel (cross section and time series) data and difference-in-difference or triple difference estimates to address endogeneity issues associated with the passage of state laws. See, e.g., J. Klick, et al., *The Effect of Contract Regulation on Franchising* 168 J. INST. THEO. ECON. 38 (2012).
7. Benham, *supra* note 4 at Table 2.
8. *Id.* at Table 3.
9. *Id.* at 315-2, noting poll of University of Chicago professors in which approximately 40 percent of the economists and 100 percent of those in marketing expected prices to be the same or lower where advertising was prohibited.
10. *Id.* at 351, showing evidence consistent with the regulation benefiting optometrists and physicians.
11. Stigler and Friedland used state variation to measure the effects of utility regulation in an article published 10 years earlier. See George J. Stigler and Claire Friedland, *What Can Regulators Regulate? The Case of Electricity*, 5 J. L. & ECON. 1 (1962). See also Sam Peltzman, *George Stigler's Contribution to the Economic Analysis of Regulation*, 101 J. POL. ECON. 818 (1993), discussing the Stigler and Friedland article and its contribution to the literature.
12. George J. Stigler, *The Economics of Information*, 69 J. POL. ECON. 213 (1961); Phillip Nelson, *Information and Consumer Behavior*, 78 J. POL. ECON. 311 (1970).
13. George J. Stigler, *The Theory of Economic Regulation*, 2 Bell J. of Econ & Mgmt. Sci. 3 (1971).
14. See, e.g., J.F. Cady, *An Estimate of the Price Effects on Restrictions on Drug Price Advertising*, 14 ECON. INQ. 490, 504 (1976); Timothy J. Muris and Fred McChesney, *Advertising and the Price and Quality of Legal Services: The Case for Legal Clinics*, 1979 AM. BAR. FOUND. RESEARCH J. 179; R. S. Bond, J. J. Kwoka, J. J. Phelan, and I. T. Whitten, *Effects of Restrictions on Advertising and Commercial Practice in the Professions: The Case of Optometry*, FTC BUREAU OF ECONOMICS STAFF REPORT (1980); William W. Jacobs, Brenda W. Doubrava, Robert P. Weaver, Douglas O. Stewart, and Eric L. Prah, *Improving Customer Access to Legal Services: The Case for Removing Restrictions on Truthful Advertising*, FTC STAFF REPORT (1984); John Kwoka, *Advertising the Price and Quality of Optometric Services*, 74 AM. ECON. REV. 211 (1984); Deborah Haas-Wilson, *The Effect of Commercial Practice Restrictions: The Case of Optometry*, 29 J. L. & ECON. 165 (1986); Deborah Haas-Wilson & Elizabeth Savoca, *Quality and Provider Choice: A Multinomial Logit Least Squares Model With Selectivity*, 24 HEALTH SERVICE RES. 791 (1990); James H. Love, et al., *Spatial Aspects of Competition in the Market for Legal Services*, 26 REG. STUD. 137 (1992); Frank H. Stephen, *Advertising, Consumer Search Costs, and Prices in a Professional Service Market*, 26 APPLIED ECON. 1177 (1994). For a summaries of this literature, see Timothy J. Muris, *California Dental Association v. Federal Trade Commission: The Revenge of Footnote 17*, 8 SUP. CT. ECON. REV. 265 (2000); James H. Love and Jack H Stephen, *Advertising, Price and Quality, in Self-regulating Professions: A Survey*, 3 INTL. J. ECON. BUS. 227(1996); J. Howard Beales & Timothy J. Muris, STATE AND FEDERAL REGULATION OF NATIONAL ADVERTISING 8-9 (1993).
15. See Peltzman, *supra* note 11.
16. See Timothy J. Muris, *GTE Sylvania and the Empirical Foundations of Antitrust*, 68 ANTITRUST L. J. 899,

903 (2001); Bruce H. Kobayashi & Timothy J. Muris, *Chicago, Post-Chicago, and Beyond: Time to Let Go of the 20th Century*, 78 ANTITRUST L. J. 147 (2012); Joshua D. Wright, *Abandoning Antitrust's Chicago Obsession: The Case for Evidence-Based Antitrust*, 78 ANTITRUST L. J. 241 (2012).

17. See, e.g., N. Gregory Mankiw, *PRINCIPLES OF ECONOMICS*, Vol. 1 (2009) at 357 which includes a full page case study on Advertising and the Price of Eyeglasses based on the results of Benham's article.

18. See, e.g., Dennis W. Carlton & Jeffrey M. Perloff, *MODERN INDUSTRIAL ORGANIZATION*, 4th ed. (2005) at 481-2 discussing the results of Benham's article; Jean Tirole, *THE THEORY OF INDUSTRIAL ORGANIZATION* (1988) at 290 discussing this article; Richard A. Posner, *ECONOMIC ANALYSIS OF LAW*, 8th ed. 945 (cited); F. M. Scherer, *INDUSTRIAL MARKET STRUCTURE AND ECONOMIC PERFORMANCE*, 2d. ed. (1980) at 376-7 discussing Behnam's results as a "convincingly documented case" of the benefits of advertising. One can see of the impact of Benham's article by comparing the discussion of advertising contained in Scherer's second edition to that contained in the first edition of his widely adopted book, which was published in 1970 before Behnam's article was published. See , noting only that the benefits of advertising "does not necessarily occur" and that "[w]hat evidence we have is inconclusive".

19. *Valentine v Chrestensen*, 315 US 52 (1942).

20. 425 US 748 (1976).

21. 433 US 350 (1977).

22. As some commentators have noted, the Court's analysis resembles a rule-of-reason analysis under the antitrust laws. See Muris, *supra* note 13 at 280; Fred S. McChesney, *De-Bates and Re-Bates: The Supreme Court's Latest Commercial Speech Cases*, 5 SUP. CT. ECON. REV. 81, 86 (1997). Indeed, *Bates* was in part an antitrust case, but the actions challenged in the antitrust claim were held to be exempt from the antitrust laws under the state action doctrine.

23. See McChesney, *supra* note 19 at 86-7; Frank H. Easterbrook, *Foreward: The Court and the Economic System*, 98 HARV. L. REV. 4, 16 (1984), noting the Court's incorporation of economic reasoning, with the citation of Benham's article by the Court in *Bates* as an early example.

24. 433 US 377, n. 34, noting that "there is revealing evidence with regard to products; where consumers have the benefit of price advertising, retail prices often are dramatically lower than they would be without advertising." As noted by some commentators, these cases may have been the high water mark for the application of economics to First Amendment challenges to advertising restrictions. See Muris, *supra* note 13, McChesney, *supra* note 19.

25. The use of citation analysis is a standard, albeit imperfect, way of measuring the reputation of an author or the influence and impact of an article or judicial decision. See, e.g., Richard A. Posner, *An Economic Analysis of the Use of Citations in the Law*, 2 AM. L. & ECON. REV. 381 (2000).

26. The citation analysis show results from exact matches to the phrase "The Effect of Advertising on the Price of Eyeglasses", using Google Scholar, Google Books, and a search of the TP-ALL and ALLCASES databases on WESTLAW. The computer search was supplemented by a manual search of books in possession of the authors.

27. Entries were counted if the search preview showed citation of the Behnam article, or if a full text search of the individual article revealed a citation to the Benham article. Citations from Books were based on the latest version of a book, and citations from earlier version of the same book were not separately listed. Thus, our search technique attempts to minimize the number of false citations. There are undoubtedly a higher number of missed citations to Benham's article because of misspellings and the limits of the coverage of the databases searched.

28. These include two Supreme Court cases, and two Federal Courts of Appeal cases. The Supreme Court cases are *Bates*, *supra* note 21, and *Friedman v. Rogers*, 440 US 1, 22 (1979). The Federal Appellate Court cases

are *California Dental Association v. Federal Trade Commission*, 224 F.3d 942 (9th Cir. 2000), and *Loomis v. Exelon Corp.* 658 F. 3d 667 (7th Circuit, 2011).

29. See, e.g., *California Dental*, *supra* note 28, noting FTC's reliance on a number of scholarly articles, including Benham's 1972 article; *Friedman*, *supra* note 28, noting Federal Trade Commission's statement of basis and purpose in its Eyeglasses I Rule, 43 Fed. Reg. 24006 (1978), characterizing Benham's study as "reliable".

30. See remarks of Timothy J. Muris, Chairman, Federal Trade Commission, *Creating a Culture of Competition: The Essential Role of Competition Advocacy*, before the International Competition Network Panel on Competition Advocacy and Antitrust Authorities, Naples, Italy, September 28, 2002, available at <http://www.ftc.gov/speeches/muris/020928naples.shtm>.

31. *Id.* For example, the agencies have opposed rules in some states that only allow funeral directors can sell caskets, and rules in several states that require home buyers to hire an attorney to handle real estate and mortgage closings.

32. *Id.*

33. See *id.*, discussing the FTC staff filing comments before a Connecticut state optical board considering whether to force out-of-state contact lens vendors to obtain a license if they want to ship lenses to customers in Connecticut. The broad antitrust agenda regarding health care is summarized in the agencies' 2004 joint report. See *Improving Health Care: A Dose of Competition*, A REPORT BY THE FEDERAL TRADE COMMISSION AND THE DEPARTMENT OF JUSTICE, July 2004, available at <http://www.ftc.gov/reports/healthcare/040723healthcarerpt.pdf>.

34. See *Muris*, *supra* note 16.

35. Harold Demsetz, *Two Systems of Belief About Monopoly*, in *INDUSTRIAL CONCENTRATION: THE NEW LEARNING* (Harvey Goldschmid et al. eds., 1974) at 164-84.

36. *Id.* To test the impact of concentration on consumer welfare, Demsetz assumed, arguendo, that large firms in concentrated industries earned higher rates of return. Under the market power hypothesis, these higher profits resulted from an increase in prices, and thus smaller firms in concentrated industries should benefit from the lack of competition and earn higher rates of return than smaller firms in unconcentrated industries. Under the efficiency hypothesis, larger firms in concentrated industries were more profitable because of lower costs rather than because of market power. Under this hypothesis, smaller firms in concentrated industries, which lack the efficiency of their larger brethren, would not have higher profits than smaller firms in unconcentrated industries. Demsetz found evidence consistent with the latter hypothesis.

37. See *Muris*, *supra* note 16.

38. *Continental TV, Inc. v. GTE Sylvania Inc.*, 433 US 36, 54 (1977).

39. See *Muris*, *supra* note 16.

40. See Richard Schmalensee, *Inter-Industry Studies of Structure and Performance*, in *HANDBOOK OF INDUSTRIAL ORGANIZATION*, VOL. 2, (Schmalensee & Willig, eds. (1989)) at 983, 988 (citing both the Demsetz and Benham articles as containing "strong results supporting" empirical regularities that have been uncovered in inter-industry research).