GOOGLE SEARCH AND ANTITRUST'S REMEDIAL GOALS

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ABSTRACT

A successful antitrust remedy must undo the effects of any antitrust violation that served to increase prices, reduce market output, or restrain innovation. The equity statute authorizes the Antitrust Division to request the court to "prevent and restrain" any proven antitrust violation. This requires a causal relationship between the violation and any remedy. That is, the remedy cannot simply be a disembodied attempt to restructure a market without tying it to the particular harm that violated the antitrust laws.

The government's proposed structural remedy in Google Search *was that Google divest itself of its Chrome browser. That divestiture of a complementary product would not have broken up the search monopoly, although it allegedly would take away a lever that Google used to create or perpetuate it. The court found this unsupported by the record.*

The monopolized product in Google Search *is digital. One feature of most digital assets is that they cannot readily be broken into pieces, at least without doing significant operational damage. As a result, structural breakups are rarely able to make a market perform better. However, digital products can be shared, ordinarily by a nonexclusive license. Such licenses are potentially far better than breakups because they can give each licensee the ability to compete fully with the defendant. Very few monopolization remedies have accomplished that. Instead, they do things like change the market from a national monopoly to a group of regional monopolies (e.g.,* Standard Oil *or* Grinnell*), or to individual firms that can offer only a subset of the products that the dominant firm offered.*

Sharing remedies by nonexclusive licensing must be carefully devised. If they are too narrow, they will not enable the licensees to become competitively equivalent to the dominant firm. If they are too broad, they end up doing nothing more than turning the licensees into mere selling agents for a product that the dominant firm supplies. Neither of these extremes is conducive to greater competition.

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INTRODUCTION

The Supreme Court has stated the goals of the antitrust laws consistently since the Sherman Act[1] was passed. Antitrust should bring us lower prices that are reasonably close to the competitive level, competitive rates of market output, and unrestrained innovation.[2] Many people identify this set of goals with a "consumer welfare" principle, but the federal courts articulated it long before it acquired that label.[3]

In 1911, Chief Justice White's opinion for the Supreme Court in *Standard Oil Co. v. United States*[4] made an influential statement about antitrust's goals. The government's indictment in the massive case was brought under both Section 1 and Section 2 of the Sherman Act.[5] It alleged that Standard Oil had unlawfully fixed "the price of crude and refined oil and . . . limit[ed] the production thereof, . . . thereby restraining trade and commerce."[6] The Supreme Court agreed, articulating the three-legged stool that became the modern consumer welfare standard:

> The evils which led to the public outcry against monopolies and to the final denial of the power to make them may be thus summarily stated: (1) The power which the monopoly gave to the one who enjoyed it, to fix the price and thereby injure the public; (2) The power which it engendered of enabling a limitation on production; and (3) The danger of deterioration in quality of the monopolized article which it was deemed was the inevitable resultant of the monopolistic control over its production and sale.[7]

More than a century later, the Seventh Circuit described antitrust's goals as including "higher output, improved product quality, energetic market penetration, successful research and development, cost-reducing innovations, and the like."[8] A 2025 decision against Google defined harm to competition as

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[1] Act to Protect Trade and Commerce Against Unlawful Restraints and Monopolies, Pub. L. No. 51-190, 26 Stat. 209 (codified at 15 U.S.C. §§ 1-7).

[2] *Mission*, ANTITRUST DIV., U.S. DOJ, https://www.justice.gov/atr/mission [https://perma.cc/GD56-WQ7P] (last visited Mar. 12, 2026) (highlighting antitrust allows firms to compete on price, quality, innovation, and wages, and gives consumers better quality, choice, and innovation).

[3] For cases since the 1890s, see generally Herbert Hovenkamp, Antitrust's Goals in the Federal Courts (May 28, 2024) (unpublished manuscript), https:// papers.ssrn.com/ sol3/ papers.cfm?abstract_id=4519993.

[4] 221 U.S. 1 (1911).

[5] *See id.* at 49-51 (outlining differences between Sherman Act § 1 and Sherman Act § 2 and exploring common law origins).

[6] *Id.* at 32.

[7] *Id.* at 52.

[8] Viamedia, Inc. v. Comcast Corp., 951 F.3d 429, 478 (7th Cir. 2020) (quoting PHILLIP E. AREEDA & HERBERT HOVENKAMP, ANTITRUST LAW: AN ANALYSIS OF ANTITRUST PRINCIPLES AND THEIR APPLICATION ¶ 651d, at 119 (4th ed. 2015)); *see also* McWane, Inc. v. FTC, 783

depriving consumers and advertisers of "improved quality, greater transparency, greater innovation, increased output, and lower prices."[9] These goals apply equally to antitrust remedies.

Not everyone agrees, however. Antitrust officials in the Biden Administration initially disparaged consumer welfare, leading to a debate that was fierce but brief. Some participants declared the consumer welfare standard to be superior to all others.[10] Others stated that it was either "profound nonsense" or else "too tainted" to be of use.[11] Jonathan Kanter, head of the Antitrust Division of the Department of Justice ("Antitrust Division") during the Biden Administration, spoke against it.[12] One of the problems he cited was that "the phrase 'consumer welfare standard' does not appear in any statute, legislative history, or common-law precedents."[13] Another was the consumer welfare standard's susceptibility to multiple meanings—"if you ask five antitrust experts what the consumer welfare standard means, you will often get six different answers."[14]

As the Administration wore on, however, both the Antitrust Division and the FTC relied increasingly on harm to consumers in high profile antitrust complaints, apparently realizing that this is how cases are won. For example, the government's monopolization complaint against Apple, filed in 2024, stated that "Apple's moat building has not resulted in lower prices, higher output, improved

F.3d 814, 827 (11th Cir. 2015) (expressing concerns exclusive dealing arrangements may increase prices, restrict output, or reduce quality, inter alia).

[9] Texas v. Google LLC, 764 F. Supp. 3d 500, 523 (E.D. Tex. 2025).

[10] *See, e.g.*, Nicolas Petit & Lazar Radic, *The Superiority of the Consumer Welfare Standard* 29 (Eur. Univ. Inst. Dep't L. Working Paper, Paper No. 2024/20, 2024), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=5065469 ("[U]nless the Courts and Congress abandon reading the Sherman Act as a 'basic charter of economic freedom' and its construction as a common law device of economic policy, all present and future attacks on the [consumer welfare standard] are set to fail."); Tom Campbell, *The Economics Case for the Consumer Welfare Standard in Antitrust*, 38 ANTITRUST 36, 39 (2024) (supporting consumer welfare standard due to its precision and ease of application).

[11] *See* Sandeep Vaheesan, *The Profound Nonsense of Consumer Welfare Antitrust*, 64 ANTITRUST BULL. 479, 479 (2019) (arguing consumer welfare standard is built on false history, false conception of market, and false assumptions); Tim Wu, *The Consumer Welfare Standard Is Too Tainted*, PROMARKET (Apr. 19, 2023), https://www.promarket.org/2023/04/19/the-consumer-welfare-standard-is-too-tainted [https://perma.cc/NVP6-HPG8] (contending consumer welfare standard is flawed and tries governing each case on ad hoc basis).

[12] *See* Jonathan Kanter, Assistant Att'y Gen., Antitrust Div., U.S. DOJ, Remarks at New York City Bar Association's Milton Handler Lecture (May 18, 2022) (transcript available at https://www.justice.gov/opa/speech/assistant-attorney-general-jonathan-kanter-delivers-remarks-new-york-city-bar-association [https://perma.cc/M39J-RNK8]) (advancing view that consumer welfare standard is "catch phrase, not a standard").

[13] Jonathan Kanter, Assistant Att'y Gen., Antitrust Div., U.S. DOJ, Keynote at the University of Chicago Stigler Center (Apr. 21, 2022) (transcript available at https://www.justice.gov/opa/speech/assistant-attorney-general-jonathan-kanter-delivers-keynote-university-chicago-stigler [https://perma.cc/3RRP-DPVA]).

[14] Kanter, *supra* note 12.

innovation, or a better user experience for smartphone users."[15] Someone asked to write a brief statement of the consumer welfare principle could not do much better than that. The FTC did the same in a 2024 complaint against Amazon, alleging that "Amazon's conduct interrupts, impedes, and distorts the normal give-and-take of a healthy market by blocking off every major avenue of competition—including price, product selection, quality, and innovation."[16]

Kanter was partially right about the multiple definitions. The term "consumer welfare" has two quite distinct meanings—one that was popularized by Robert Bork and prominent in the 1980s and 1990s, and a quite different one that is used by nearly everyone today.[17] The Bork version looked at net efficiency effects of a challenged practice.[18] For example, a practice that reduced output and increased price should, in Bork's view, be lawful if it produces offsetting productive efficiencies that are larger than the losses from higher prices.[19]

Bork's definition was inconsistent with the antitrust concern about maintaining low prices, as well as the text of the Sherman Act, which prohibits practices "in restraint of trade," or those that limit market output.[20] While Bork's version of the consumer welfare standard was very influential in some antitrust circles,[21] neither the Supreme Court nor any lower federal court has ever adopted

[15] First Amended Complaint at 56, United States v. Apple Inc., No. 2:24-CV-04055 (D.N.J. June 11, 2024).

[16] Second Amended Complaint at 131, FTC v. Amazon.com, Inc., No. 2:23-CV-01495 (W.D. Wash. Oct. 31, 2024).

[17] *See generally* ROBERT H. BORK, THE ANTITRUST PARADOX: A POLICY AT WAR WITH ITSELF (1978) (outlining Bork's view of consumer welfare and role it should play in antitrust policy).

[18] *See id.* at 112.

[19] *See id.* at 107-08 (comparing deadweight loss to gains all consumers receive from merger's cost reductions); *see also infra* text accompanying notes 145-47 (describing Supreme Court holding stressing necessity of determining conduct's capacity to reduce output and increase price).

[20] 15 U.S.C. § 1; *see* HERBERT HOVENKAMP, ANTITRUST POLICY DESIGN ch. 1 (MIT Press forthcoming 2026) (describing Supreme Court's long-held focus on price-increasing and output-decreasing practices, both of which define consumer welfare); Leah Samuel & Fiona Scott Morton, *What Economists Mean When They Say "Consumer Welfare Standard,"* PROMARKET (Feb. 16, 2022), https://www.promarket.org/2022/02/16/consumer-welfare-standard-antitrust-economists [https://perma.cc/K5Z6-S8CV] ("Price, quality, and innovation are all part of the demand curve and all form the basis for the standard academic definition of consumer welfare."). Also making this argument is former FTC Commissioner Christine Wilson. *See* Christine S. Wilson, Comm'r, U.S. FTC, Luncheon Keynote Address at George Mason Law Review 22nd Annual Antitrust Symposium: Antitrust at the Crossroads? (Feb. 15, 2019) (transcript available at https://www.ftc.gov/system/files/documents/public_statements/ 1455663/ welfare_standard_speech_-_cmr-wilson.pdf [https://perma.cc/ U3TX-HB26]) (detailing simplest version of consumer welfare standard as one where harm to consumers resulting from reduced output or higher prices trumps offsetting gains to producers).

[21] *See, e.g.*, Joshua D. Wright, Elyse Dorsey, Jonathan Klick & Jan M. Rybnicek, *Requiem for a Paradox: The Dubious Rise and Inevitable Fall of Hipster Antitrust*, 51 ARIZ. ST. L.J.

it in an antitrust case. No U.S. court has ever held that a practice found to increase price and reduce market output was nevertheless lawful because it yielded compensating production efficiencies.

The other version of consumer welfare, which is the one commonly accepted today, looks explicitly at the welfare of consumers and labor, who are almost always benefited by lower prices, higher output, or unrestrained innovation.[22] Interests that are vertically related to a market benefit as a market becomes more competitive. That is also the standard that best protects labor, which benefits from competitive rates of output and price.[23]

This set of antitrust goals never developed as an economic "welfare" standard at all. Rather, it was driven by common-law views held consistently for centuries prior to the Sherman Act about the value of lower prices and unrestrained market movement, including innovation. The common law was obsessed with conduct that raised prices. As corporate law scholar Samuel C.T. Dodd observed in 1893, "The great fear of our English ancestors for some centuries was an increase of prices."[24] Terms such as "monopolizing" were used at common law to refer to attempts "outside the due course of trade" to increase prices.[25] The Supreme

293, 304 (2019) (describing first "unifying theme" from rise of body of scholarship with which Bork is affiliated was "both economists and courts ultimately settled upon the same basic premise that antitrust laws are designed to promote consumer welfare"); Elyse Dorsey, Geoffrey A. Manne, Jan M. Rybnicek, Kristian Stout & Joshua D. Wright, *Consumer Welfare & the Rule of Law: The Case Against the New Populist Antitrust Movement*, 47 PEPP. L. REV. 861, 863 (2020) (arguing for time-tested effectiveness of consumer welfare standard and cautioning against "abandoning decades of experience and economic learning that would turn back the hands of time and return us to an era where antitrust enforcement was incoherent and deleterious").

[22] *See* Steven C. Salop, *Question: What Is the Real and Proper Antitrust Welfare Standard? Answer: The* True *Consumer Welfare Standard*, 22 LOY. CONSUMER L. REV. 336, 340 (2010) (concluding increased price and reduced output signal consumers are harmed and conduct is anticompetitive); Herbert Hovenkamp & Fiona Scott Morton, *The Life of Antitrust's Consumer Welfare Model*, PROMARKET (Apr. 10, 2023), https://www.promarket.org/2023/04/10/the-life-of-antitrusts-consumer-welfare-model [https://perma.cc/E34D-F3B4] (contrasting today's commonly accepted consumer welfare with Bork's, whose model welfare could increase even as output decreased, or vice versa).

[23] *See* Press Release, U.S. FTC, FTC Announces Rule Banning Noncompetes (Apr. 23, 2024), https:// www.ftc.gov/ news-events/ news/ press-releases/ 2024/ 04/ ftc-announces-rule- banning- noncompetes [https:// perma.cc/ 4BPS-RTCF] (identifying noncompetes as anticompetitive due to potential for higher prices, reduced job mobility, and reduced innovation).

[24] S.C.T. Dodd, *The Present Legal Status of Trusts*, 7 HARV. L. REV. 157, 159 (1893).

[25] *See* Edward A. Adler, *Monopolizing at Common Law and Under Section Two of the Sherman Act*, 31 HARV. L. REV. 246, 260-61 (1917) (describing practices such as common-law offenses of forestalling, regrating, and engrossing as attempts to elevate prices, and noting offense of "monopolizing" was "synonymous with the manipulation of prices by practices outside the due course of trade"). Later English legal historians agreed. *See, e.g.*, William L. Letwin, *The English Common Law Concerning Monopolies*, 21 U. CHI. L. REV. 355, 367

Court declared in 1940 that price is the "central nervous system" of the economy and expressed deep skepticism about price-fixing agreements.[26]

One feature of this output-maximizing and price-minimizing goal is that it is resistant to excessive antitrust enforcement just as much as it is to underenforcement.[27] More is not always better. For example, an overly aggressive policy toward mergers or dominant firms, or needless per se rules against vertical practices, can result in higher prices or lower output just as much as underenforcement can.[28] Antitrust initiatives such as efforts to reinvigorate the Robinson-Patman Act[29] do the same thing.[30]

The same calculus applies to antitrust remedies. Remedies that are too modest leave too much monopoly on the table. However, overly aggressive remedies can do more harm than good, particularly when they hobble a firm in ways that lead to the wrong results: higher prices, lower market output, or less innovation. Here, forced divestitures, or breakups, have been especially problematic. They have many unpredictable consequences and a low success rate.[31] As developed

(1954) ("Throughout these early monopoly cases the complaint is made that practices are objectionable because they tend to raise prices."); Donald Dewey, *The Common-Law Background of Antitrust Policy*, 41 VA. L. REV. 759, 781 (1955) (highlighting case from 1880 where contract did not "unduly raise prices, [or] cause a monopoly").

[26] United States v. Socony-Vacuum Oil Co., 310 U.S. 150, 226 n.59 (1940) (noting price-fixing agreements are all banned, regardless of whatever economic justifications they may be thought to have); FTC v. Superior Ct. Trial Laws. Ass'n, 493 U.S. 411, 436 (1990) ("Conspirators need not achieve the dimensions of a monopoly, or even a degree of market power any greater than that already disclosed by this record, to warrant condemnation under the antitrust laws."); Arizona v. Maricopa Cnty. Med. Soc'y, 457 U.S. 332, 351 (1982) ("The anticompetitive potential inherent in all price-fixing agreements justifies their facial invalidation even if procompetitive justifications are offered for some.").

[27] Antitrust scholars have examined overenforcement and underenforcement through the lens of error-cost frameworks. On such frameworks and the tradeoff between the benefits and costs of enforcement generally, see, for example, Kevin A. Bryan & Erik Hovenkamp, *Startup Acquisitions, Error Costs, and Antitrust Policy*, 87 U. CHI. L. REV. 331 (2020); and Frank H. Easterbrook, *The Limits of Antitrust*, 63 TEX. L. REV. 1 (1984). *But see* Herbert Hovenkamp, *Antitrust Error Costs*, 24 U. PA. J. BUS. L. 293, 302 (2022) (describing how under imperfect competition, economic case for error cost bias against antitrust enforcement falls apart).

[28] *See* HOVENKAMP, *supra* note 20, at ch. 4 (pointing to government's aggressive antitrust case against IBM as disastrous example of government's ignorance of overenforcement in innovation-intensive markets).

[29] Anti-Price Discrimination Act, Pub. L. No. 74-692, 49 Stat. 1526 (1936) (codified as amended at 15 U.S.C. § 13(a)). For more on the FTC's recent efforts to reinvigorate the Robinson-Patman Act, see JAY B. SYKES, CONG. RSCH. SERV., LSB11257, FTC REVIVES ENFORCEMENT OF THE ROBINSON-PATMAN ACT (2025), https://www.congress.gov/crs_external_products/LSB/PDF/LSB11257/LSB11257.1.pdf.

[30] *See* HOVENKAMP, *supra* note 20, at ch. 5 (asserting flawed antitrust policy can arise from reliance on outdated judicial decisions rather than on empirical research).

[31] For a survey of the cases, see generally Robert W. Crandall, *The Failure of Structural Remedies in Sherman Act Monopolization Cases*, 80 OR. L. REV. 109 (2001).

below, the court in *United States v. Google LLC* ("*Google Search*")[32] was worried about the harmful and unknowable consequences that might result from a forced breakup of an innovative firm.[33]

The equitable powers of the federal courts are broad, but in antitrust cases they must be guided by the same principles as antitrust doctrine generally. Remedying antitrust violations is corrective in the sense that a court assumes that status quo prices are too high, output too low, or innovation unnecessarily restrained. The goal of a remedy is to right this imbalance.

This Article begins by examining the way that antitrust's substantive goals have been articulated and then considers how they should be used to fashion antitrust remedies in cases that involve dominant firms. It then gives a close look at the remedies decision in *Google Search*. A central point is that nonexclusive licensing of assets capable of being licensed is usually better at facilitating new competition than are conventional asset divestitures.[34] Often divestitures do not break up the monopoly at all.[35] Instead, they create multiple monopolies that do not compete very much with each other and provide no greater competition with other firms. As a result, prices are unlikely to come down, and output and innovation will not increase. By contrast, properly designed nonexclusive licenses can facilitate close head-to-head competition among licensees for the very asset that gave rise to the defendant's monopoly.

I. ANTITRUST POLICY'S SUBSTANTIVE GOALS

The members of Congress who drafted the text of the principal antitrust statutes, the Sherman and Clayton Acts, revealed no knowledge of welfare economics. Vilfredo Pareto, founder of the Pareto Principle, had not published anything associated with economic welfare prior to 1890, although he had by the time the Clayton Act[36] was passed in 1914.[37] Nothing in the legislative

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32 803 F. Supp. 3d 18 (D.D.C. 2025).

33 *See* discussion *infra* Part III.

34 *See* Jennifer E. Sturiale, *Compulsory Licensing of Intellectual Property as Merger Remedy: A Decision-Theoretic Approach*, 72 LA. L. REV. 605, 628 (2012) (discussing how forced licensing of intellectual property alters market dynamics and, in turn, incentives to innovate).

35 *See* Robert W. Crandall, *If It Ain't Broke, Don't Break It Up*, BROOKINGS INST. (June 14, 2000), https:// www.brookings.edu/ articles/ if-it-aint-broke-dont-break-it-up [https://perma.cc/7NJB-Q36N] (detailing how imposed divestitures against Standard Oil and American Tobacco in 1911 had no measurable effects on oil production and oil prices, and tobacco prices, respectively).

36 Pub. L. No. 63-212, ch. 323, 38 Stat. 730 (1914) (current version at 15 U.S.C. § 18).

37 Some of Pareto's seminal works include VILFREDO PARETO, MANUAL OF POLITICAL ECONOMY (Ann S. Schwier & Alfred N. Page eds., Ann S. Schwier trans., Augustus M. Kelley 1971) (1906); 1 VILFREDO PARETO, COURSE OF POLITICAL ECONOMY (1896); and 2 VILFREDO PARETO, COURSE OF POLITICAL ECONOMY (1897).

history of the antitrust laws or collateral sources suggests that anything Pareto wrote was relevant to the congressional debates.

Nearly all the development of modern economics of welfare occurred after the antitrust statutes were enacted. As a result, Kanter's critique noted above—that a consumer welfare standard did "not appear in any statute, legislative history, or common-law precedents"—is historically nonsequential.[38] No one would have expected it to, because the argument gets the timeline backwards. "Consumer welfare" became part of antitrust rhetoric in the late 1970s and 1980s.[39] The goals that it articulated, however—low prices, high market output, and unrestrained innovation—were there all along.

Subsequent to Pareto, Arthur C. Pigou of Cambridge University wrote extensively on economics and welfare, including in *Wealth and Welfare* in 1912,[40] and its greatly expanded fourth edition, published in 1932 as *The Economics of Welfare*.[41] In the 1920s, economists began developing the idea of consumer "surplus," or the difference between a consumer's willingness to pay or accept and actual payment or receipt, as a metric for welfare.[42] Writing mainly in the 1930s, John Hicks and Nicholas Kaldor developed principles intended to make welfare assessments more practical by considering the trading off of gains and losses.[43] The outcome, called "Kaldor-Hicks" efficiency, has retained a prominent spot in antitrust scholarship,[44] but almost none in the antitrust case

[38] Kanter, *supra* note 13.

[39] *See infra* Section I.A.

[40] *See generally* ARTHUR C. PIGOU, WEALTH AND WELFARE (1912) (examining multiple dimensions of economic theory, including distribution and variability of national dividend).

[41] *See generally* ARTHUR C. PIGOU, THE ECONOMICS OF WELFARE (4th ed. 1932) (arguing economic welfare increases with both size of national dividend and share accruing to poor, and analyzing forces affecting national income, labor, and distributional tradeoffs).

[42] *See, e.g.*, Harry E. Miller, *Utility Curves, Total Utility, and Consumer's Surplus*, 41 Q.J. ECON. 292, 295 (1927) (defining consumer surplus as comparison between pleasure one enjoys and price one paid for product); Paul A. Samuelson, *Welfare Economics and International Trade*, 28 AM. ECON. REV. 261, 263 n.3 (1938) (grappling with attempts to measure consumer surplus); *see also* Jacob Viner, *The Doctrine of Comparative Costs*, 36 WELTWIRTSCHAFTLICHES ARCHIV. 356, 359 (1932) (surveying viewpoints about use of consumer surplus as metric in international trade context).

[43] *See* John R. Hicks, *The Foundations of Welfare Economics*, 49 ECON. J. 696, 711-12 (1939) ("Every simple economic reform inflicts a loss upon some people; the reforms we have studied are marked out by the characteristic that they will allow of compensation to balance that loss, and they will still show a net advantage."); Nicholas Kaldor, *Welfare Propositions of Economics and Interpersonal Comparisons of Utility*, 49 ECON. J. 549, 549-50 (1939) ("It is only as a result of this consequential change in the distribution of income that there can be any loss of satisfactions to certain individuals, and hence any need to compare the gains of some with the losses of others.").

[44] *See, e.g.*, Richard A. Posner, *Cost-Benefit Analysis: Definition, Justification, and Comment on Conference Papers*, 29 J. LEGAL STUD. 1153, 1153-55 (2000) (defending Kaldor-Hicks approach to antitrust); John Shepard Wiley, Jr., *A Capture Theory of Antitrust Federalism*, 99 HARV. L. REV. 713, 749 n.167 (1986) (same).

law.[45] In the 1950s, Arnold Harberger developed the concept of the deadweight loss of monopoly, including the deadweight loss "triangle" that is associated with his name.[46] By one view, that triangle measures the social cost of monopoly.[47]

A more complete integration of welfare economics and antitrust policy awaited Oliver Williamson's treatment of value tradeoffs in an important article in 1968.[48] In the Williamson model, a practice such as a merger or joint venture simultaneously produces market power with its attendant higher prices and reduced output, but also cost savings, or efficiencies that accrue to producers.[49] Williamson believed that effective antitrust policy required trading these gains and losses against each other.[50] He attempted to incorporate this balancing of gains and losses that had become conventional in welfare economics into a theory of antitrust harm.

Under this test, Williamson suggested that even relatively modest gains in productive efficiency should lead the courts to tolerate significant price increases.[51] Speaking mainly in reference to mergers, he concluded that:

> [I]t is evident that a relatively modest cost reduction is usually sufficient to offset relatively large price increases . . . . The naive model thus supports the following proposition: *a merger which yields nontrivial real economies must produce substantial market power and result in relatively large price increases for the net allocative effects to be negative*.[52]

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[45] It has been mentioned once, in a dissenting opinion in a case that was subsequently reversed. *See In re* Asbestos Litig., 134 F.3d 668, 679 n.28 (5th Cir. 1998) (Smith, J., dissenting), *rev'd sub nom.*, Ortiz v. Fibreboard Corp., 527 U.S. 815 (1999).

[46] *See* Arnold C. Harberger, *Monopoly and Resource Allocation*, 44 AM. ECON. REV. 77, 78 (1954) (illustrating deadweight-loss triangle as welfare loss area created under monopoly); *see also* James R. Hines, Jr., *Three Sides of Harberger Triangles*, 13 J. ECON. PERSPS. 167, 167-68 (1999) ("Deadweight loss triangles became known as 'Harberger triangles' due to the broad influence of Harberger's papers on subsequent research.").

[47] *See, e.g.*, ANDREU MAS-COLELL, MICHAEL D. WHINSTON & JERRY R. GREEN, MICROECONOMIC THEORY 385-86 (1995) (explaining how to calculate deadweight loss and illustrating it in diagram).

[48] *See generally* Oliver E. Williamson, *Economies as an Antitrust Defense: The Welfare Tradeoffs*, 58 AM. ECON. REV. 18 (1968) (introducing formal welfare-tradeoff model for antitrust analysis which balances efficiency gains from mergers against potential losses from increased market power).

[49] *See id.* at 21-24 (explaining "merger that yields economies but extends market power" can be evaluated through partial equilibrium model).

[50] *See id.* at 18-19 ("[A] rational treatment of the merger question requires that an effort be made to establish the allocative implications of the scale economy and market power effects associated with the merger.").

[51] *See id.* at 34.

[52] *Id.* at 22-23 (emphasis added).

Williamson did not acknowledge that this tradeoff model was flatly inconsistent with antitrust goals that the courts had articulated for many decades, under which price increases were simply bad regardless of any offsetting efficiencies.

A few years later Bork adopted Williamson's proposal as a statement of goals for antitrust.[53] While Williamson accurately referred to his model as a "welfare tradeoff," consistent with the metrics that it offered, Bork renamed it "consumer welfare."[54] Bork's use of that term was cynical because he was referring to practices that harmed consumers as often as they benefited them. Even today, a few people continue to associate the term "consumer welfare" with Bork.[55]

Long before this welfare debate occurred, antitrust courts had developed their own statement of antitrust goals, in which economic "welfare" never explicitly played a part.[56] The statement, driven by common-law values rather than any understanding of welfare economics, is that antitrust should target practices that increase prices, limit market output, or restrain innovation.[57] That is precisely what Chief Justice White declared in his 1911 *Standard Oil* opinion noted above.[58] When the phrase "consumer welfare" entered the antitrust lexicon, it did not change the Court's understanding of appropriate antitrust goals.

A. *Congressional Purpose*

The members of Congress who debated the antitrust laws had diverse concerns, and those interpreting the debates have reflected differences as well. In 1966, Bork argued that Congress's ultimate goal was to protect some vision of economic efficiency.[59] That argument has not held up well. Robert Lande made a more convincing argument in 1982 that Congress's principal concern was with high prices, which he described as "wealth transfers" from consumers

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53 *See* BORK, *supra* note 17, at 107.

54 *See id.* at 110.

55 *See, e.g.*, William Markham, *The Consumer-Welfare Standard Should Cease to Be the North Star of Antitrust*, 31 COMPETITION J. 1, 3 (2021) (opining that since late 1970s, U.S. antitrust law has been reshaped and weakened by consumer-welfare framework, first advanced by neoclassical price theorists, and later adopted by Robert Bork and other conservative jurists).

56 *See, e.g.*, Standard Oil Co. v. United States, 221 U.S. 1, 58 (1911) (remarking on legislative intent behind Sherman Act, namely desire to prevent "evils" such as enhancement of prices).

57 *See, e.g.*, *id.* at 58.

58 *See id.* at 58 (articulating Sherman Act incorporated common-law principles by condemning monopolistic conduct that unreasonably restricted competition, restrained trade, or harmed public through higher prices).

59 Robert H. Bork, *Legislative Intent and the Policy of the Sherman Act*, 9 J.L. & ECON. 7, 12 (1966) ("Congress was very concerned that the law should not interfere with business efficiency. This concern, which was repeatedly stressed, was so strong that it led Congress to agree that monopoly itself was lawful if it was gained and maintained only by superior efficiency."). Bork largely restated these views in BORK, *supra* note 17.

to producers.[60] That position is a more accurate summary of Congress's concerns, and it comes much closer to the position taken by the courts. Judicial decisions have consistently associated antitrust's principal concerns with avoiding unreasonably high prices or with preventing output from being suppressed below the competitive level.

Section 1 of the Sherman Act condemns contract practices in "restraint of trade," a phrase with a fairly clear meaning in the common law prior to the Sherman Act.[61] It referred to conduct that interfered with the volume or flow of trade.[62] In more economic terms, a restraint of trade is a reduction in market output. That idea provides some support for both the view that Congress was concerned about efficiencies, or cost savings, and with conduct that would serve to reduce output by raising prices.

For example, Bork's "efficiency" argument made a big deal of one discussion in the legislative history between Senators John Kenna from West Virginia and George Edmunds from Vermont. Senator Kenna queried about someone who "by virtue of his superior skill" became "the only one in the United States" able to fill orders for shorthorn cattle from Mexico and thereby held "a monopoly of that trade," and whether the bill would render such a man "a culprit."[63] Senator Edmunds replied that Senator Kenna had nothing to worry about.[64] What Senator Edmunds described was simply someone using his skills "to furnish the commodity for the lowest price."[65] Massachusetts Senator George Hoar then chimed in, asserting that the hypothetical query did not involve something unfair such as "engrossing," or buying up all of the cattle, but rather someone "who merely by superior skill and intelligence . . . got the whole business because nobody could do it as well as he could."[66] Such a person was not in violation of the proposed act.[67] That is, internal development of a dominant position should be treated more favorably than one that was developed by acquisition.

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[60] *See* Robert H. Lande, *Wealth Transfers as the Original and Primary Concern of Antitrust: The Efficiency Interpretation Challenged*, 34 HASTINGS L.J. 65, 68-72, 93-98 (1982) (discussing Congress's principal concern with "unfair" redistributions of wealth from consumers to dominant firms).

[61] 15 U.S.C. § 1; *see* Herbert Hovenkamp, *The Antitrust Text*, 99 IND. L.J. 1063, 1069-73 (2024) (explaining Sherman Act § 1's prohibition on restraints of trade incorporated common-law meaning of phrase, which referred to agreements restricting output or raising prices).

[62] 15 U.S.C. § 1 (prohibiting "[e]very contract, combination in the form of trust or otherwise, or conspiracy, in restraint of trade or commerce among the several States").

[63] 21 CONG. REC. 3151 (1890) (statement of Sen. John Kenna).

[64] *See id.* at 3152 (statement of Sen. George Edmunds) ("He has not done anything but compete with his adversaries in trade, if he had any, to furnish the commodity for the lowest price. So I assure my friend he need not be disturbed upon that subject.").

[65] *Id.*

[66] *Id.* (statement of Sen. George Hoar).

[67] *See id.* ("[T]he courts of the United States would say . . . that a man who merely by superior skill and intelligence . . . got the whole business because nobody could do it as well as he could was not a monopolist . . . .").

This exchange supports both the "efficiency" view of the Sherman Act and the "wealth transfer" view. More precisely, it fails to distinguish between them. Efficiencies tend to improve product quality or reduce costs and thus increase output. The elimination of anticompetitive practices tends to do the same thing. Both benefit consumers, workers, and other suppliers, while both tend to injure competitors who must compete in order to keep up. After well over a century of hindsight we have developed distinctive frameworks for addressing the effects of efficiencies on one hand, and anticompetitive restraints on the other, but not much in the Congressional history itself is very illuminating.

B. *The Antitrust Statutes and the Courts*

1. Prior to "Consumer Welfare"

In contrast to the meandering legislative history, the text of the antitrust statutes is relatively brief. The Sherman Act prohibits contracts "in restraint of trade"[68] and persons from "monopoliz[ing]" or "attempt[ing] to monopolize."[69] The Clayton Act's three substantive provisions condemn differential pricing (called "price discrimination"), exclusive contracts, and mergers with accompanying effects that may "substantially [] lessen competition," or "tend to create a monopoly."[70] The Clayton Act additionally contains an immunity provision for labor organizations,[71] as well as provisions for private treble damages,[72] and equitable (injunctive) relief in both public[73] and private[74] cases.

None of the remedy provisions say anything specific about the injuries that are covered, how damages are to be measured, or the range of other remedies. They say nothing whatsoever about when a "breakup" of a firm is justified. The remedy provision used by the Antitrust Division simply authorizes the government to "prevent and restrain" violations.[75] The provision for private

[68] 15 U.S.C. § 1.

[69] *Id.* § 2.

[70] *See id.* §§ 13-14, 18.

[71] *See id.* § 17 ("Nothing contained in the antitrust laws shall be construed to forbid the existence and operation of labor . . . organizations, instituted for the purposes of mutual help . . . .").

[72] *See id.* § 15 ("[A]ny person who shall be injured in his business or property by reason of anything forbidden in the antitrust laws may sue therefor in any district court . . . and shall recover threefold the damages by him sustained, and the cost of suit, including a reasonable attorney's fee.").

[73] *See id.* § 25 (vesting authority in courts to "prevent and restrain" violations in proceedings instituted by government).

[74] *See id.* § 26 (authorizing private parties to obtain injunctive relief against threatened antitrust harm upon showing of immediate irreparable injury).

[75] *See id.* § 25 ("The several district courts of the United States are invested with jurisdiction to prevent and restrain violations of this Act, and it shall be the duty of the several United States attorneys . . . to institute proceedings . . . [to] restrain such violations.").

plaintiffs authorizes relief against "threatened loss or damage" from antitrust violations.[76]

The equity provisions thus rely on the statutes' substantive criteria for determining whether an antitrust violation has occurred and then provide for equitable relief to "prevent" or "restrain" it. The goal of an antitrust remedy is stated in the same terms as those used to articulate the violation.

Reflecting the common law's concern about price-increasing conduct, the term "restraint of trade" referred to price-fixing or output-restriction agreements, including noncompete clauses that might serve to reduce the volume of commerce, sales, or market opportunities.[77] State courts had long applied this concept in common law and state statutory decisions addressing agreements that threatened higher prices. For example, in 1847, a New York state court condemned a shipping cartel because "the raising of the price of freights for the transportation of merchandise or passengers upon our canals is a matter of public concern."[78] A Pennsylvania state court in 1871 condemned coal producers for agreeing to "limit the supply below the demand in order to enhance the price."[79] In 1880, an Ohio state court condemned an industry association that fixed the price of salt, citing state policy "opposed to monopolies, which tend to advance market prices, to the injury of the general public."[80] In 1888, the California Supreme Court condemned as a "general restraint of trade" an agreement under which competing operators of saw mills took turns shutting down production "in order to limit the supply of lumber . . . for the sole purpose of increasing the price."[81] Even judges in the nineteenth century understood the harmful consequences of reductions in market output and their relationship to high prices. Toward the end of that century, economists such as Alfred Marshall expressed the relationship in more formal terms,[82] but the courts did not require that formality.

Federal judges consistently read these common-law interpretations into the Sherman Act, as some of its proponents intended.[83] From the beginning, antitrust

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[76] *Id.* § 26.

[77] *See* Mitchel v. Reynolds, (1711) 24 Eng. Rep. 347, 349 (Ch) (holding restraint of trade is valid only if reasonable in manner, place, and duration).

[78] Hooker & Woodward v. Vandewater, 4 Denio 349, 353 (N.Y. Sup. Ct. 1847).

[79] Morris Run Coal Co. v. Barclay Coal Co., 68 Pa. 173, 183 (1871); *see also* People v. N. River Sugar Refining Co., 3 N.Y.S. 401, 401 (N.Y. Gen. Term 1889) (condemning sugar trust as "tending to control prices and create a monopoly"), *aff'd*, 24 N.E. 834 (N.Y. 1890). For a discussion of the numerous decisions, see Herbert Hovenkamp, *The Sherman Act and the Classical Theory of Competition*, 74 IOWA L. REV. 1019 (1989).

[80] Cent. Ohio Salt Co. v. Guthrie, 35 Ohio St. 666, 671 (1880).

[81] Santa Clara Val. M. & L. Co. v. Hayes, 76 Cal. 387, 389 (1888).

[82] 1 ALFRED MARSHALL, PRINCIPLES OF ECONOMICS 403 (London, MacMillan & Co. 1961) (1890) (defining law of demand, which posits inverse relationship between output and price).

[83] *See* 21 CONG. REC. 3152 (1890) (statement of Sen. George Hoar) ("The great thing that this bill does, except affording a remedy, is to extend the common-law principles, which protected fair competition in trade in old times in England, to international and interstate

judicial decisions associated antitrust harm with higher prices or reduced output. Judge Taft's 1898 *United States v. Addyston Pipe & Steel Co.*[84] opinion spoke of the cast iron pipe cartel as "restricting competition and maintaining prices" and "restrict[ing] output."[85] Judge Taft concluded that if an agreement's only purpose was to "enhance or maintain prices, it would seem that there was nothing to justify or excuse the restraint."[86] The Supreme Court agreed, concluding that "[t]he higher price would operate as a direct restraint upon the trade."[87]

A few years later, Justice Holmes wrote the Supreme Court's decision awarding a private plaintiff damages against members of that same cartel. The Court held that the appropriate measure was "the difference between the price paid and the market or fair price."[88] This "overcharge"—which identifies the harm with the price increase—has remained the nearly exclusive measure of purchaser damages in antitrust cases ever since.[89]

In *W. W. Montague & Co. v. Lowry*,[90] an early antitrust challenge to a boycott, the Court condemned an association of tile manufacturers that agreed to charge list prices and to do business only with other association members.[91] "By reason of this agreement," Justice Peckham concluded, the market for tile "not only narrowed, but the prices charged by the San Francisco dealers for the unset tile to those not members of the association [] more than doubled."[92]

commerce in the United States."); Harriet Hubbard Ayer, Inc. v. FTC, 15 F.2d 274, 276 (2d Cir. 1926) ("The Sherman Anti-Trust Law . . . was intended to make the common law applicable in federal cases . . . ."); *see also* Adler, *supra* note 25, at 247 (explaining Sherman Act extended common-law rules of monopoly to federal antitrust enforcement).

[84] 85 F. 271 (6th Cir. 1898), *modified and aff'd sub nom.*, 175 U.S. 211 (1899).

[85] *Id.* at 274, 277. In its affirmance, the Supreme Court explained how the cartel members "by controlling two thirds of the output" in the covered territory were "practically able to fix prices." *Addyston Pipe & Steel*, 175 U.S. at 236; *see also* Hitchcock v. Anthony, 83 F. 779, 781 (6th Cir. 1897) (interpreting Michigan antitrust law and stating purpose is to prevent combinations which "restrict the output or enhance the prices"); Columbia Wire Co. v. Freeman Wire Co., 71 F. 302, 306 (E.D. Mo. 1895) (noting combination did not limit or restrict sales or output); Donald Dewey, *The Common-Law Background of Antitrust Policy*, 41 VA. L. REV. 759, 778 (1955) (describing common law's condemnation of agreements for "restricting output").

[86] *Addyston Pipe & Steel*, 85 F. at 282-83.

[87] *Addyston Pipe & Steel*, 175 U.S. at 245.

[88] Chattanooga Foundry & Pipe Works v. City of Atlanta, 203 U.S. 390, 396 (1906).

[89] *See* 2B PHILLIP E. AREEDA & HERBERT HOVENKAMP, ANTITRUST LAW ¶ 395 (5th ed. 2022 & Supp. 2025) (illustrating how overcharges are calculated to determine damages in antitrust cases).

[90] 193 U.S. 38 (1904).

[91] *See id.* at 39.

[92] *Id.* at 45.

In other actions, the government alleged conspiracies that "restrict[ed] the output of the mills, fix[ed] the prices of their products,"[93] and "control[led] and restrict[ed] the output."[94] The 1911 decision against the gunpowder trust cited the defendants for taking actions "to limit the output of the members of the association and to crush competition" by others.[95] The claim in the case against United States Steel was of "restricting output in order to exact unfair prices," in part by "buying up competing plants and dismantling them to needlessly restrict output."[96]

Many Sherman Act decisions used phrases such as "restrict output," "limit the output," or "limit production" of a product or service.[97] The Court continued these formulations throughout the war years. For example, in *Apex Hosiery Co. v. Leader*,[98] the Supreme Court spoke of the duty to eliminate restraints that tend "to restrict production, raise prices or otherwise control the market to the detriment of purchasers or consumers."[99] Other decisions relied on the same idea in Commerce Clause challenges to the constitutionality of the Sherman Act, where the Court considered whether output limitations impeded the "flow" of interstate commerce.[100] In *United States v. Women's Sportswear Manufacturing*

[93] Nelson v. United States, 201 U.S. 92, 100 (1906).

[94] Alexander v. United States, 201 U.S. 117, 119 (1906).

[95] United States v. E. I. du Pont de Nemours & Co., 188 F. 127, 140 (D. Del. 1911).

[96] United States v. U.S. Steel Corp., 223 F. 55 (D.N.J. 1915) (holding Sherman Act reaches actions "dividing territory, limiting output, or fixing prices"), *aff'd*, 251 U.S. 417 (1920). The district court also noted the allegation that the defendant "us[ed] its power to needlessly and unfairly reduce wages." *Id.* at 61.

[97] *See* Wheeler-Stenzel Co. v. Nat'l Window Glass Jobbers' Ass'n, 152 F. 864, 870 (3d Cir. 1907) (finding agreement among competitors to "restrict the output" of glass and fix resale territories violated Sherman Act); State *ex inf.* Att'y Gen. v. Ark. Lumber Co., 169 S.W. 145, 174 (Mo. 1914) (holding under state antitrust law "intent to fix the price and limit the output of lumber" constituted unlawful restraint); United States v. Am. Tobacco Co., 164 F. 700, 726-27 (S.D.N.Y. 1908) (dismissing complaint because none of challenged agreements appeared to limit output), *rev'd*, 221 U.S. 106 (1911); State v. Duluth Bd. of Trade, 121 N.W. 395, 406 (Minn. 1909) (summarizing allegations in another case where defendants "agree[d] upon prices to be adopted by all, and restrain[ed] the output or quantity of meat shipped"); Chi. Wall Paper Mills v. Gen. Paper Co., 147 F. 491, 492 (7th Cir. 1906) (applying Illinois's state antitrust law as making it unlawful to "prevent, restrict or diminish the manufacture or output of any such article"); Ellis v. Inman, Poulsen & Co., 131 F. 182, 183 (9th Cir. 1904) (holding both sections of Sherman Act prohibit combinations "controlling and restricting the output of lumber").

[98] 310 U.S. 469 (1940).

[99] *Id.* at 493.

[100] *See, e.g.*, United States v. Employing Plasterers Ass'n, 347 U.S. 186, 188 (1954) (holding trade restraints adversely affecting "interstate flow" of materials were within Sherman Act jurisdiction); Lorain J. Co. v. United States, 342 U.S. 143, 152-53 (1951) (holding newspaper's refusal to deal scheme unlawfully interfered with interstate flow of advertising in violation of Section 2 of Sherman Act); Mandeville Island Farms, Inc. v. Am. Crystal Sugar Co., 334 U.S. 219, 226 (1948) (holding sugar beet buying cartel interfered with

Ass'n,[101] the Court declared that if "it is interstate commerce that feels the pinch, it does not matter how local the operation which applies the squeeze."[102]

Early cases against dominant firms merged Sherman Act § 1 cartel concerns and Sherman Act § 2 dominant firm concerns, applying "restraint of trade" principles to both. This is understandable, given the development of early dominant firms as "trusts," or coordinated contractual arrangements among multiple firms that existing corporate law did not permit. The common-law trust was neither a "person" under the Sherman Act's definition of personhood nor under state corporate law's definition.[103] It was not authorized by state law, as the antitrust personhood provision required,[104] for states generally found the trust agreements unlawful.[105] As a result, trusts were treated as "combinations" covered by Section 1 of the Sherman Act.[106]

The Clayton Act was passed in 1914, a quarter century after the Sherman Act. With language that deviated more from the common law, its three prohibitions of unlawful price discrimination (actually, price differences), exclusive contracting, and mergers all condemned such practices where "the effect . . . may be substantially to lessen competition, or to tend to create a monopoly."[107] Once again, these were all economic terms. The Clayton Act was intended to broaden the reach of the antitrust laws to actions that might still be

"free and natural flow" of interstate commerce); Associated Press v. United States, 326 U.S. 1, 15-16 (1945) (finding restrictive membership rules for sharing wire-service news violated Sherman Act by impeding interstate flow of news sales).

[101] 336 U.S. 460 (1949).

[102] *Id.* at 464.

[103] *See, e.g.*, State *ex rel.* Att'y Gen. v. Standard Oil Co., 30 N.E. 279 (Ohio 1892) (declaring Standard Oil trust unlawful under Ohio corporate law).

[104] *See* 15 U.S.C. § 7 ("The word 'person', or 'persons' . . . shall be deemed to include corporations and associations existing under or authorized by the laws of either the United States, the laws of any of the Territories, the laws of any State, or the laws of any foreign country.").

[105] *See, e.g.*, State *ex inf.* Att'y Gen. v. Ark. Lumber Co., 169 S.W. 145, 168 (Mo. 1914) (dissolving trust for acting beyond charter powers in addition to restraining trade); People v. N. River Sugar Refin. Co., 3 N.Y.S. 401, 406 (N.Y. Cir. Ct. 1889) (declaring "Sugar Trust" void as unlawful combination in restraint of trade); People *ex rel.* Peabody v. Chi. Gas Tr. Co., 22 N.E. 798, 803 (Ill. 1889) (holding gas trust ultra vires and void as contrary to public policy for monopolizing gas supply); State v. E. Coal Co., 70 A. 1, 6 (R.I. 1908) (finding combinations fixing coal prices were unlawful under common law).

[106] *See, e.g.*, Int'l Harvester Co. of Am. v. Kentucky, 234 U.S. 216, 220 (1914) (treating corporation's conduct as "combination" within meaning of Sherman Act); United States v. Am. Tobacco Co., 221 U.S. 106, 148 (1911) (same, both "combination" and "conspiracy" in restraint of trade); Standard Oil Co. v. United States, 221 U.S. 1, 32-34 (1911) (condemning Standard Oil as "illegal combination" in violation of Sherman Act).

[107] 15 U.S.C. § 18.

in their incipiency but might threaten monopoly down the road.[108] That is, while no monopoly was yet created, the conduct realistically threatened to create one. This incipiency test also embraced the concept of potential competition, which meant a concern about competition that had not yet emerged but that could be created if conditions were more favorable.[109]

The Clayton Act applied only to the "effects" of certain practices. This meant that courts did not apply per se rules but rather required some estimate of competitive consequences. Intent was not even stated to be relevant. Second, however, the language "where the effect may be" entailed that anticompetitive behavior covered under the Clayton Act could be condemned with something less than 100% certainty.[110]

The probabilistic effects test was at least partly the work of Columbia University economist John Bates Clark on potential competition.[111] On this issue, Clark was a moderate. At the right were those who believed that the trusts promised lower prices with no threat of monopoly because potential competition would discipline any attempt to charge high prices.[112] At the left were those who believed that only actual competitors could effectively limit monopoly pricing.[113] John Bates, writing with his son, John Maurice, discussed the

[108] *See, e.g.*, Brown Shoe Co. v. United States, 370 U.S. 294, 317 (1962) (explaining Section 7 of Clayton Act intended to prevent anticompetitive mergers "in their incipiency"); United States v. Phila. Nat'l Bank, 374 U.S. 321, 362 (1963) (reiterating Section 7 of Clayton Act intended to halt anticompetitive mergers in their incipiency).

[109] For more on the potential competition theory and its pitfalls, see KEITH N. HYLTON, ANTITRUST LAW: ECONOMIC THEORY & COMMON LAW EVOLUTION 344-46 (2003).

[110] *See* S. REP. NO. 81-1775, at 6 (1950), *as reprinted in* 1950 U.S.C.C.A.N. 4293, 4298 ("A requirement of certainty and actuality of injury to competition is incompatible with any effort to supplement the Sherman Act by reaching incipient restraints.").

[111] *See* Benjamin J. Klebaner, *Potential Competition and the American Antitrust Legislation of 1914*, 38 BUS. HIST. REV. 163, 169, 180 (1964) (discussing Clark's view that law should proactively protect firms from being "unfairly clubbed out of" fields of business).

[112] *See, e.g.*, Robert Liefmann, *Monopoly or Competition as the Basis of a Government Trust Policy*, 29 Q.J. ECON. 308, 318-20 (1915) (arguing competitive forces guard against abuses of and anticompetitive effects associated with monopoly power); Franklin D. Jones, *Historical Development of the Law of Business Competition*, 36 YALE L.J. 207, 220-33 (1926) (summarizing role of potential competition in several decisions).

[113] *See, e.g.*, JEREMIAH WHIPPLE JENKS & WALTER E. CLARK, THE TRUST PROBLEM 68-72 (1917) (explaining effects of actual competition on pricing, while challenging view that potential competition is sufficient to control prices); O.W. Knauth, *Capital and Monopoly*, 31 POL. SCI. Q. 244, 256 (1916) (noting potential competition "cannot be regarded today as an effective regulator of prices"). The debate between those at the right and those at the left actually extended back to the formation of the Sherman Act. *See* Herbert Hovenkamp, *The Invention of Antitrust*, 96 S. CAL. L. REV. 129, 167-75 (2022) (describing debates over potential competition and entry barriers in early antitrust policy).

potential competition problem at some length, concluding that "potential competition is a real force," but also "a force which can be easily obstructed."[114]

John Bates Clark's own view was that potential competition, or entry by new firms, was a promising way to maintain competition.[115] Further, new entry would ordinarily occur in response to high prices.[116] It could be thwarted, however, by practices that prevented new competition from emerging.[117] Among these were predatory price discrimination, tying arrangements, exclusive dealing, and mergers.[118] As a result, antitrust enforcers should address these practices early, before potential entrants were excluded entirely.

One thing the Clayton Act did not change, however, was the nature of the threatened harm. For example, in *Standard Fashion Co. v. Magrane-Houston Co.*,[119] the Supreme Court applied the Clayton Act to condemn the defendant's exclusive dealing contract that prohibited retailers from dealing in patterns sold by competitors.[120] The Court held that the Clayton Act concern was identical to that of the Sherman Act, which was to reach agreements that "unduly obstruct the free and natural flow of commerce."[121] In this case the exclusive dealing requirement effectively gave the defendant a monopoly in several towns across the country.[122]

The Supreme Court also applied the Clayton Act to a firm's tying of its computation machines to paper data cards that its machine used.[123] The Court suggested that in the absence of the restriction "a competing article of equal or

[114] JOHN BATES CLARK & JOHN MAURICE CLARK, THE CONTROL OF TRUSTS 28 (2d ed. 1912). Clark's sole-authored first edition had been published in 1901.

[115] *See* Hovenkamp, *supra* note 113, at 170 (noting John Bates Clark considered potential competition as "power that holds trusts in check").

[116] *See, e.g.*, MAS-COLELL ET AL., *supra* note 47, at 334 (explaining entry occurs in response to profit opportunities).

[117] *See* Klebaner, *supra* note 111, at 169 (noting Clark thought competition requires government protection from predatory practices); *see also* Hovenkamp, *supra* note 113, at 173 (stating Clark believed anticompetitive practices could forestall competition before it became effective tool against monopolies).

[118] *See* DAVID DALE MARTIN, MERGERS AND THE CLAYTON ACT 3 (1959) (noting Clayton Act provided for prohibitions of "price discrimination, tying contracts, interlocking directorates, and intercorporate stockholding"). On John Bates Clark's contributions, see Klebaner, *supra* note 111, at 164-75, 179.

[119] 258 U.S. 346 (1922).

[120] *See id.* at 357.

[121] *Id.* at 355.

[122] *See id.* at 357 (agreeing with lower court that "[t]he restriction of each merchant to one pattern manufacturer must in hundreds, perhaps in thousands, of small communities amount to giving such single pattern manufacturer a monopoly of the business in such community").

[123] Int'l Bus. Machs. Corp. v. United States, 298 U.S. 131, 138-39 (1936) (declining to accept IBM's argument of use of cards is essential to successful performance of machines).

better quality would be offered at the same or at a lower price."[124] That decision, which identified harm in tying cases as increased prices for the tied product, set off a fifty-year debate about whether the standard should be higher prices in the tied product alone, or the sum of those of the tying and tied products.[125] In all cases, though, tying and exclusive dealing were unlawful when they threatened higher prices.[126]

Merger policy under Section 7 of the Clayton Act followed a similar course except for the Supreme Court's misreading of the amended statute and its legislative history in *Brown Shoe Co. v. United States*,[127] which even suggested that charging lower prices could be an evil that antitrust merger policy forbids.[128] However, the Court quickly righted itself, declaring a year later that the impact of the merger on consumers must be the most important consideration.[129] Then, in two decisions in 1964, the Supreme Court made prices the central focus of merger analysis. First, in *United States v. Continental Can Co.*,[130] the Court condemned a merger that permitted the firms to "rais[e] prices above the competitive level."[131] Next in *United States v. El Paso Natural Gas Co.*,[132] it condemned a merger that eliminated a competing bidder who would have been able to force prices down.[133]

[124] *Id.* at 139 (quoting Carbice Corp. of Am. v. Am. Pats. Dev. Corp., 283 U.S. 27, 32 n.2 (1931)).

[125] *See, e.g.*, Kypta v. McDonald's Corp., 671 F.2d 1282, 1285 (11th Cir. 1982) ("Unless the fair market value of both the tied and tying products are determined and an overcharge in the complete price found, no injury can be claimed; suit, then, would be foreclosed.").

[126] *See, e.g.*, Jefferson Par. Hosp. Dist. No. 2 v. Hyde, 466 U.S. 2, 9, 10 n.15 (1984) (noting some tying arrangements are per se unreasonable, and expressing concern where these kinds of arrangements threaten higher prices); Tampa Elec. Co. v. Nash. Coal Co., 365 U.S. 320, 327 (1961) ("In practical application, even though a contract is found to be an exclusive-dealing arrangement, it does not violate the section unless the court believes it probable that performance of the contract will foreclose competition in a substantial share of the line of commerce affected.").

[127] 370 U.S. 294 (1962).

[128] *See id.* at 372-73 (Harlan, J., concurring in part and dissenting in part) (arguing merger tended to inappropriately lessen competition, at least in part because merger allowed Kinney stores to offer shoes at lower prices); *see also* HOVENKAMP, *supra* note 20, at ch. 5 (highlighting Supreme Court spent decades levying pushback on *Brown Shoe*'s implications).

[129] United States v. Phila. Nat'l Bank, 374 U.S. 321, 367 (1963) (giving great weight to effect of potential monopolies on consumer options).

[130] 378 U.S. 441 (1964).

[131] *Id.* at 465-66.

[132] 376 U.S. 651 (1964).

[133] *See id.* at 662 (ordering divestiture, stating if merger does not violate Section 7 of Clayton Act, "that section has no meaning in the natural gas field").

2. Did "Consumer Welfare" Change Anything?

The Supreme Court first used the term "consumer welfare" in *Reiter v. Sonotone Corp.*,[134] an antitrust case from 1979.[135] In *Reiter*, the Court held that end-user customers had standing to challenge price fixing under Section 1 of the Sherman Act.[136]

While lower courts have used the term many times,[137] the Supreme Court has mentioned "consumer welfare" in only four additional majority opinions.[138] All of them identify it with antitrust policies targeting higher prices or lower output. In *NCAA v. Board of Regents*,[139] the Court identified concerns about consumer welfare in situations when a "price is higher and output lower than they would otherwise be."[140] In *Brooke Group Ltd. v. Brown & Williamson Tobacco Corp.*,[141] a predatory pricing case, the Court identified consumer welfare in association with a price cut that was not followed by monopolistic recoupment through higher prices, thus conferring a benefit on consumers.[142] Then, in *Ohio v. American Express Co.*,[143] the Court observed that vertical restraints can sometimes enhance consumer welfare, and that the duty of the court is to look for "actual detrimental effects," including "reduced output, increased prices, or decreased quality in the relevant market."[144] Most recently, in *NCAA v.*

[134] 442 U.S. 330 (1979).

[135] *Id.* at 343 ("Congress designed the Sherman Act as a 'consumer welfare prescription.'" (quoting BORK, *supra* note 17, at 66)).

[136] *See id.* at 341-43.

[137] *See generally* Hovenkamp, *supra* note 3, at 309-74.

[138] In addition, the Court has used the term in five dissents or concurrences. *See* FTC v. Actavis, Inc., 570 U.S. 136, 161 (2013) (Roberts, C.J., dissenting) (suggesting promoting consumer welfare requires more deference to patent system); Eastman Kodak Co. v. Image Tech. Servs., Inc., 504 U.S. 451, 487 (1992) (Scalia, J., dissenting) (asserting per se rule on tying condemns ties without inquiry into consumer welfare); Atl. Richfield Co. v. USA Petrol. Co., 495 U.S. 328, 360 (1990) (Stevens, J., dissenting) (contending antitrust laws "are designed to safeguard more than efficiency and consumer welfare"); Arizona v. Maricopa Cnty. Med. Soc'y, 457 U.S. 332, 367 (1982) (Powell, J., dissenting) (protesting it was inconsistent with consumer welfare principle to condemn agreement which produced nominally lower prices without knowing very much about it); Jefferson Par. Hosp. Dist. No. 2 v. Hyde, 466 U.S. 2, 45 (1984) (O'Connor, J., concurring) (identifying harm to consumer welfare with exclusive contract which "stifles horizontal competition"); *see also* United States v. Citizens & S. Nat'l Bank, 422 U.S. 86, 131 n.1 (1975) (Brennan, J., dissenting) (suggesting in dicta joint venture might enhance consumer welfare by permitting sharing of education and expertise).

[139] 468 U.S. 85 (1984).

[140] *Id.* at 107.

[141] 509 U.S. 209 (1993).

[142] *See id.* at 224 (noting without recoupment, predatory pricing scheme produces lower aggregate prices and enhances consumer welfare).

[143] 138 S. Ct. 2274 (2018).

[144] *Id.* at 2284.

Alston,[145] the Court opined that markets are often better than judicial power when it "comes to enhancing consumer welfare,"[146] and that an antitrust court must determine a challenged practice's "'actual effect on competition'—especially its capacity to reduce output and increase price."[147]

While embracing "consumer welfare" as an antitrust concern, none of these decisions suggest that the Court deviated from its historical requirements demanding evidence of price-increasing or output-decreasing practices. Numerous other decisions following *Reiter* stated antitrust goals as controlling higher prices, lower market output, or restrained innovation, but did not mention consumer welfare.[148] Whether using the term "consumer welfare" or not, the courts continue to state antitrust goals consistently.

Whatever "consumer welfare" may have added to antitrust law's secondary literature, within antitrust case law it never registered any change in course. The courts kept right on identifying competitive harm as they had for nearly a century. The requirements for demonstrating harm antedated any conceptions drawn from welfare economics. The most compelling case for a point of origin was the law's long-established concerns about practices that raise prices.

II. ANTITRUST'S REMEDIAL GOALS

The goals of an antitrust remedy are driven by the goals of antitrust enforcement generally. The remedial statutes provide little detail, but they do declare that the purpose of a remedy is to undo the effects of a violation. The equity provision vests authority in the Antitrust Division to invoke the court's

[145] 141 S. Ct. 2141 (2021).

[146] *Id.* at 2166.

[147] *Id.* at 2155 (citation omitted).

[148] *See, e.g.*, Bell Atl. Corp. v. Twombly, 550 U.S. 544, 553-54 (2007) (recognizing oligopoly interdependence may threaten anticompetitive price and level of output); Nw. Wholesale Stationers, Inc. v. Pac. Stationery & Printing Co., 472 U.S. 284, 289-90 (1985) (stating per se rule applies when "practice facially appears to be one that would always or almost always tend to restrict competition and decrease output"); Cal. Dental Ass'n v. FTC, 526 U.S. 756, 763-64 (1999) (commenting on lower courts' use of rule of reason to condemn restraint on price or output); FTC v. Superior Ct. Trial Laws. Ass'n, 493 U.S. 411, 423 (1990) (condemning naked restraint on price and output); FTC v. Ind. Fed'n of Dentists, 476 U.S. 447, 460 (1986) (citing authority supporting fact antitrust condemns naked restraints on price or output); Matsushita Elec. Indus. Co. v. Zenith Radio Corp., 475 U.S. 574, 584 (1986) (associating antitrust harm with "restricting output and raising prices above the level that fair competition would produce"); Associated Gen. Contractors v. Cal. State Council of Carpenters, 459 U.S. 519, 539 n.40 (1983) (dismissing complaint on standing grounds because "[t]he allegedly unlawful conduct involves predatory behavior directed at 'certain' parties, rather than a claim that output has been curtailed or prices enhanced throughout an entire competitive market"); Broad. Music, Inc., v. Columbia Broad. Sys., Inc., 441 U.S. 1, 19-20 (1979) (querying whether "practice facially appears to be one that would always or almost always tend to restrict competition and decrease output").

power to "prevent and restrain" a proven antitrust violation.[149] That language clearly covers simple injunctions, which the *Google Search* opinion identified as the "ordinary starting point" for determining a remedy.[150] The courts have also permitted more elaborate relief, including divestiture in some cases.[151] Nevertheless, structural relief in monopolization cases that does not involve the undoing of mergers is relatively uncommon.[152]

In *United States v. International Harvester Co.*,[153] the Supreme Court stated that the purpose of an antitrust remedy is to "restore competitive conditions."[154] The company itself formed twenty-five years earlier by the combination of five independent firms.[155] The decree required the defendant to sell off three of those lines and limited the company to a single dealer in each town where it operated.[156]

In *United States v. United Shoe Machinery Corp.*,[157] the district court stated that the object of an antitrust remedy for unlawful monopolization was "to extirpate practices that have caused or may hereafter cause monopolization, and to restore workable competition in the market."[158] The court did not require a divesture, observing that the firm operated out of a single plant that would be difficult to break up.[159] Instead, it ordered United Shoe Machinery ("USM") to offer its machines for sale on comparable or more favorable terms to the exclusive leasing policies that the court condemned.[160] It also enjoined various lease terms that the court interpreted as discouraging lessees from using non-

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[149] 15 U.S.C. § 25. For a detailed analysis of numerous cases involving structural relief for Sherman Acr § 2 violations, see generally Crandall, *supra* note 31.

[150] United States v. Google LLC, 803 F. Supp. 3d 18, 68 (D.D.C. 2025).

[151] *See* Herbert Hovenkamp, *Structural Antitrust Relief Against Digital Platforms*, 7 J.L. & INNOVATION 57, 69 n.37 (2024) (discussing cases where courts have approved divestiture).

[152] *See id.* at 67 ("Other than undoing mergers, there have been relatively few instances of structural relief against dominant firms.").

[153] 274 U.S. 693 (1927).

[154] *Id.* at 697 (recounting purpose of decree as requiring defendant to sell harvester lines and plants); United States v. Microsoft Corp., 253 F.3d 34, 47 (D.C. Cir. 2001) (noting government's complaint sought relief "to restore competitive conditions in the markets").

[155] *See Int'l Harvester*, 274 U.S. at 705.

[156] *See id.* (noting defendant compelled to sell its Champion, Osborne, and Milwaukee harvesting lines to independent manufacturers of agricultural implements).

[157] 110 F. Supp. 295 (D. Mass. 1953), *aff'd*, 347 U.S. 521 (1954).

[158] *Id.* at 346-47.

[159] *See* CARL KAYSEN, UNITED STATES V. UNITED SHOE MACHINERY CORPORATION: AN ECONOMIC ANALYSIS OF AN ANTI-TRUST CASE 272-75 (1956) (asserting even where smaller plant could be equally efficient, diseconomies of subdividing operating technical unit make such dissolution impracticable).

[160] *United Shoe Mach.*, 110 F. Supp. at 349 (ordering defendant to offer for sale every type of machine which it offers for lease but declining to completely proscribe defendant's leasing practices).

USM machinery and required USM to shorten the duration of its leases.[161] Fifteen years later, the Supreme Court concluded that these provisions were not sufficiently effective and ordered the district court to reevaluate the decree, ultimately resulting in a breakup.[162]

In 2001, the D.C. Circuit's *United States v. Microsoft Corp.*[163] opinion summarized earlier decisions and described the goal of a remedy this way: a remedy "must seek to [1] 'unfetter a market from anticompetitive conduct' . . . [2] 'terminate the illegal monopoly, [3] deny to the defendant the fruits of its statutory violation, and [4] ensure that there remain no practices likely to result in monopolization in the future.'"[164]

The decree that the *Microsoft* court approved did not mandate any divestitures. Mainly, it required that Microsoft's various exclusive licensing deals or agreements that favored its Internet Explorer browser be made nonexclusive.[165] That enabled internet-access providers and other licensees to substitute different browsers.[166]

As these decisions make clear, the goal of an antitrust remedy is identical to that of the antitrust laws generally. Success is measured by the extent to which improper restraints are removed, and the market becomes more competitive. Prices, where relevant, should be lower, market output should be higher, and any unreasonable restraints on firm mobility or innovation should be eliminated.

Structural factors that are not strictly related to performance, such as a change in the dominant firm's market share, can also be relevant metrics.[167] The government's proposed remedy in *Google Search* called for early termination if

[161] *See id.* (eliminating full capacity clause, removing discriminatory commutative charges, and requiring segregation of charges for machines from charges for repair service).

[162] *See United Shoe Mach.*, 391 U.S. at 252 ("[T]he time has come to prescribe other, and if necessary more definitive, means to achieve the result. A decade is enough."); *see also* discussion *infra* Section II.C (discussing court's refusal to order divestiture in *Microsoft* within context of United Shoe's disastrous breakup).

[163] 253 F.3d 34 (D.C. Cir. 2001).

[164] *Id.* at 103 (citations omitted).

[165] New York v. Microsoft Corp., 231 F. Supp. 2d 203, 239 (D.D.C. 2002) (issuing decree approving settlement which prohibited Microsoft from entering into exclusive agreements except where providers and vendors promise at least equal promotion of competing software), *aff'd sub nom.*, Massachusetts v. Microsoft Corp., 373 F.3d 1199 (D.C. Cir. 2004).

[166] *See id.*

[167] *See* United States v. Google LLC, 803 F. Supp. 3d 18, 71 (D.D.C. 2025) ("To justify greater relief, Plaintiffs had to show that Google's market dominance would have declined or that Google would not have enjoyed market advantages 'but for' the exclusive distribution agreements . . . ."). The *Google Search* court also cited a study suggesting that a complete ban on payment would lead to a substantial loss in Google's market share but also "a large reduction in consumer surplus." *Id.* at *106. Finally, the court noted one objection to the imposition of choice screens is that they would have only a very small impact, around 1%, on Google's market share. *Id.* at *143.

the market share of Google's rivals rose to more than 50%.[168] No decision has indicated the need for a breakup simply because a firm is very large, but in a monopolization case, changes in market share are certainly relevant to the evaluation of a remedy's success.[169] A lower market share does not necessarily correlate with lower prices or higher output, however.

Causation of some kind is required.[170] The statutory "prevent and restrain" language indicates that the remedy must be linked to a proven antitrust violation.[171] That is, the court does not have quasi-legislative power to redesign the structure or operations of a firm based on some general idea about appropriate size or operation.[172] No decision has suggested that causation is irrelevant.

A. *"Simple" Equity Relief: Prohibitory Injunctions*

The statutory duty of district courts to "prevent and restrain" proven antitrust violations clearly contemplates prohibitory injunctions. The biggest problem is doubts about whether they are adequate. Too often they amount to closing the barn door after the horses have escaped. That argument was a strong objection in *Google Search* to a simple injunction barring Google's payment to implementers (distribution partners) to make Google Search their default search engine, which was the principal act that the court found unlawful.[173] Google had already developed a search index database that was far larger than that of any rival.[174] Simply enjoining future payments would likely be insufficient to enable rivals to catch up. Even without them, implementers would be strongly motivated to make Google Search their default.[175] As a result, an injunction against the payments might not be expected to "restore competitive conditions,"

[168] *Id.* at *159 (considering opposing proposals for term length of final judgment and settling on six years).

[169] *See* United States v. U.S. Steel Corp., 251 U.S. 417, 418 (1920) ("An industrial combination, short of a monopoly, is not objectionable under the act merely because of its size . . . .").

[170] On causation, see discussion *infra* Section III.A.

[171] 15 U.S.C. § 25.

[172] *See* discussion *infra* Section III.A.

[173] *See infra* Part III (discussing remedies imposed and rejected in *Google Search*).

[174] *See* United States v. Google LLC, 803 F. Supp. 3d 18, 79 (D.D.C. 2025) (explaining how high volume of queries received by Google relative to competitors helped expand its search index and improve its search results).

[175] *See* Erik Hovenkamp, *The Competitive Effects of Search Engine Defaults*, J.L. & ECON. (forthcoming 2026) (manuscript at 21), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4647211 [https://perma.cc/5HWE-FKHZ] (exploring effect of Google's popularity on consumer behavior).

at least if "competitive conditions" referred to a situation in which Google did not have more than 90% of the market share.[176]

The extent to which the effects of monopolizing conduct "linger" after the conduct ends is, of course, an issue of fact. In some cases, such as those involving predatory pricing, leasing practices, or improper infringement of unenforceable patents, anticompetitive effects can dissipate quickly. Removal of the provisions favoring Microsoft's own browser led to fairly quick substitutions and invigorated competition in that market.[177] In other cases, however, the conduct leads to structural advantages that can take a long time to disappear or might persist indefinitely.

One important factor is the ability of rivals to increase their own output in response to the decree. Here, one of a court's most effective tools is the removal of exclusivity provisions. Removing exclusivity mandates in contracts and licenses, which can usually be done with a simple prohibitory injunction, enables competitors to move into a market from which they were excluded. Other practices, such as USM's "full capacity" clauses in its lease agreements, operated in the same way. Those clauses required lessees to use machines to their full capacity before lessees could add additional machines from a competitor.[178] USM had previously brought actions to enforce these clauses against shoe manufacturers.[179]

The removal of exclusivity clauses in *United States v. Microsoft* likely enabled rivals such as Google Chrome to develop and grow.[180] Implementers of devices or software that depended on Windows were no longer required to favor Internet Explorer as a web browser. One important factor determining the effectiveness of such decrees is the ability of rival firms to move into any portion of the market that is freed up.

Removal of exclusivity provisions can work particularly well in digital markets, because existing competitive firms typically can expand digital output readily at very low incremental cost.[181] While the ability of a digital product

[176] *Google*, 803 F. Supp. 3d at 93-96 (stating excising exclusive provisions would do nothing to eliminate consequences of Google's anticompetitive conduct, namely advantages in quality, data volume, and monetization capacity gained from years of market dominance).

[177] *See* Robert W. Crandall, *The Dubious Antitrust Argument for Breaking Up the Internet Giants*, 54 REV. INDUS. ORG. 627, 636-43 (2019) (noting within five years of its introduction, Google's Chrome browser surpassed Microsoft's Internet Explorer in market share).

[178] *See* United States v. United Shoe Mach. Corp., 110 F. Supp. 295, 320 (D. Mass. 1953).

[179] *Id.* at 321 (describing action against Mishawaka Rubber when it began using some of its own machines instead of USM machines).

[180] *See* David A. Heiner, *Microsoft: A Remedial Success?*, 78 ANTITRUST L.J. 329, 361-62 (2012) (arguing behavioral remedies imposed on Microsoft eroded barriers to entry and allowed tech competition to thrive); Crandall, *supra* note 177, at 636 (highlighting surge in tech competition in realms other than personal computing, including operating systems, internet browsers, and mobile computing hardware).

[181] *See* ROLAND FRANK, GREGOR SCHUMACHER & ANDREAS TAMM, *The Road to a Zero Marginal Cost Economy*, *in* CLOUD TRANSFORMATION: THE PUBLIC CLOUD IS CHANGING

such as Google Search or Facebook to add users is not unlimited, growth of purely digital resources is certainly easier than in an old economy market that requires new plants or equipment.

Entry by new firms presents a different issue. While a search engine or social network that is already established can usually add new members quickly, formidable barriers to entry may prevent coming into existence in the first place. Although entry into online commerce is generally easier than entry into traditional markets that require a physical structure, entry can still be quite difficult in markets that are subject to significant intrafirm network effects.[182]

B. *Structural Relief*

No language in the remedy statute under which the Antitrust Division operates indicates a preference for structural relief. It authorizes the United States Attorney to proceed "by way of petition setting forth the case and praying that such violation shall be *enjoined or otherwise prohibited*."[183] That language suggests that the primary remedy is "enjoining" anticompetitive conduct but that other remedies can be applied as well.

The statute does not explicitly authorize breakups except to the extent they fall within the "otherwise prohibited" language.[184] It also says nothing about the types of possible breakups. The popular conception seems to be of a monopoly that must be broken up so that the product is now delivered by multiple competing firms selling the same thing that the monopoly sold.

In fact, that almost never happens, except in some merger cases. Sometimes the breakup separates geographically distinct regions, as in the *Standard Oil* and *United States v. Grinnell Corp.*[185] decisions discussed below.[186] Those simply turn one national monopoly into several regional monopolies, often with little realistic expectation that prices will be any lower or output higher than they were before.

Other cases, including the divestiture sought by the government in *Google Search*, do not even attempt to break up the monopoly. Separating the Chrome

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BUSINESSES 45, 52-53 (2023) ("[T]he marginal costs of companies that rely on digital business models amount to almost zero from the first product or service onwards.").

[182] *See* Filippo Lancieri & Patricia Morita Sakowski, *Competition in Digital Markets: A Review of Expert Reports*, 26 STAN. J.L. BUS. & FIN. 65, 75 (2021) (noting dominant firms in digital markets benefit from high entry barriers due to high coordination costs associated with mass consumer migration); Emilio Calvano & Michele Polo, *Market Power, Competition and Innovation in Digital Markets: A Survey*, 54 INFO. ECON. & POL'Y 1, 15 (2021) (explaining big data confers incumbency advantage and acts as barrier to entry for new, small competitors).

[183] 15 U.S.C. § 25 (emphasis added).

[184] *See id.*

[185] 384 U.S. 563 (1966).

[186] *See* discussion *infra* Section II.C (discussing difficulties of regional breakups and noting potential alternatives that are especially viable in modern digital economies).

browser, as the government requested, would do nothing to the size or unitary ownership of Google's search index database, which was Google Search's principal operating asset.[187] Rather, the theory was more akin to the one asserted for nonstructural remedies: that the breakup would remove a leveraging factor that Google used to create or protect its monopoly. The court found little evidence to support this other than the fact that Google Search was the default search engine on most installations of Chrome, the same as it was on Apple devices or other products.[188] Under the court's decree, Android devices need not require Google Search as the default search engine, although Google may still enter payment agreements of up to one year conditioned on the user's maintenance of Google Search on its devices.[189]

If the goal of the remedy is to create multiple firms selling the monopoly asset in competition, then traditional structural breakups are almost always inferior. At least for digital assets, nonexclusive licenses are a more promising alternative.[190] Someone with an unrestricted, nonexclusive license can do everything that the primary holder can do except exclude others from doing the same thing.[191] As a result, four or five nonexclusive licensees of a product should be able to sell that product in head-to-head competition with one another. They could do it in identical form without any product differentiation under a suitably drafted license.

To the extent the court's decree requires implementers to update their own versions individually, a certain amount of product differentiation will emerge. Thus, the market under nonexclusive licensing will end up looking a bit more like the one for music streaming, where Spotify, Apple Music, Amazon Prime Music—all nonexclusive licensees with substantial investments of their own—compete to provide the same content, but with different pricing schemes, subscription plans, or specific features.[192]

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[187] *See* United States v. Google LLC, 803 F. Supp. 3d 18, 98 (D.D.C. 2025).

[188] *See id.* at 81 (explaining Google Search became entrenched as default search engine on hundreds of millions of devices by paying for exclusive rights to be preloaded on all Apple and Android devices and most third-party browsers). For some of the arguments for divesting Chrome, see DIANA MOSS, PROGRESSIVE POL'Y INST., ANTITRUST REMEDIES AND U.S. V. GOOGLE: PUTTING THE CONSUMER BACK INTO THE "FIX" 8 (2025), https://www.progressivepolicy.org/ antitrust-remedies-and-u-s-v-google-putting-the-consumer-back-into-the-fix [https://perma.cc/C44S-6FVD].

[189] *See Google*, 803 F. Supp. 3d at 37 ("Cutting off payments from Google almost certainly will impose substantial—in some cases, crippling—downstream harms to distribution partners, related markets, and consumers . . . .").

[190] *See* Hovenkamp, *supra* note 151, at 103-04.

[191] *See infra* Section III.B (discussing how nonexclusive licenses may be form of "quasi-structural relief" and implications of this remedy for digital assets).

[192] For a good overview of the way competing music streaming platforms use varying strategies to create distinction and value, see Brian J. Hracs & Jack Webster, *From Selling Songs to Engineering Experiences: Exploring the Competitive Strategies of Music Streaming Platforms*, 14 J. CULTURAL ECON. 240, 244-53 (2021).

C. *Identifying Divestiture Fault Lines*

After some initial enthusiasm for divestitures as an antitrust remedy for structural abuses, the courts have become more reluctant. Divestiture is no longer the preferred remedy for Sherman Act § 2 violations. That change began to occur in the 1940s and 1950s when the Supreme Court approved prohibitory injunctions but declined to require divestiture in decisions such as *Timken Roller Bearing Co. v. United States*[193] and *United States v. National Lead Co.*,[194] discussed below.

Following these decisions, in the 1953 monopolization case of *United Shoe*, Judge Wyzanski refused to order a divestiture and instead issued a conduct decree with a "wait-and-see" provision.[195] United Shoe Machinery itself was created more than forty years prior to the antitrust action through its acquisition of several makers of complementary machines used in the leather shoemaking process. In 1913, the Supreme Court rejected the government's Sherman Act challenge to that merger, holding that a union of noncompeting makers of complementary machines was not in restraint of trade.[196] By the time of the 1953 decision condemning USM under Sherman Act § 2, the company had moved all of its production into a single facility.[197] As the court observed:

> The Government's proposal that the Court dissolve United into three separate manufacturing companies is unrealistic. United conducts all machine manufacture at one plant in Beverly, [Massachusetts,] with one set of jigs and tools, one foundry, one laboratory for machinery problems, one managerial staff, and one labor force. It takes no Solomon to see that this organism cannot be cut into three equal and viable parts.[198]

A decade and a half later the Supreme Court concluded that while some progress was made in making the shoe machinery industry more competitive,[199] it was insufficient.[200] The Court then ordered what proved to be a disastrous breakup, basically requiring USM to bankroll and set up a fully functioning

[193] 341 U.S. 593 (1951).

[194] 332 U.S. 319 (1947).

[195] United States v. United Shoe Mach. Corp., 110 F. Supp. 295, 346-48 (D. Mass. 1953), *aff'd*, 347 U.S. 521 (1954).

[196] *See* United States v. Winslow, 227 U.S. 202, 215-18 (1913) ("[W]e can see no greater objection to one corporation manufacturing 70 per cent of three noncompeting groups of patented machines collectively used for making a single product than to three corporations making the same proportion of one group each.").

[197] *See United Shoe Mach.*, 110 F. Supp. at 348.

[198] *Id.*

[199] For a discussion on USM's loss of market share subsequent to the 1953 order, see Scott E. Masten & Edward A. Snyder, *United States Versus United Shoe Machinery Corporation: On the Merits*, 36 J.L. & ECON. 33, 64-67 (1993).

[200] *See United Shoe Mach.*, 391 U.S. at 251-52.

rival.[201] On this point Judge Wyzanski was correct, and the Supreme Court speaking fifteen years later was wrong.

Relying on the *United Shoe* experience, in *Massachusetts v. Microsoft Corp.*,[202] the D.C. Circuit approved an elaborate conduct decree but declined to approve any divestitures.[203] In particular, the D.C. Circuit noted that Microsoft was not the product of any unlawful mergers or acquisitions.[204] The court's opinion on liability also cited to the *United Shoe* conclusions about the "logistical difficulty" of breaking up a firm with operations conducted out of a single plant.[205] In the case of Microsoft, it operated out of a single facility, with a single sales and market organization, a single research organization, and a single organization for product support, operations, and information technology.[206]

In contrast to the *United Shoe* and *Microsoft* situations, many of the monopolization cases from the first half of the twentieth century involved dominant firms that were created by merger.[207] That included both *Standard Oil* and *International Harvester*. Section 7 of the Clayton Act, the principal statute used against mergers today, makes it unlawful to "acquire" another firm when the effect of the acquisition may be to substantially lessen competition.[208] Because the acquisition itself is declared unlawful, the natural remedy is its undoing. As a result, courts have always been much more willing to authorize divestiture if the asset in question is something that was acquired in the relatively

[201] The details of the breakup that occurred were not specified; however, the government's petition required USM "to submit to the Court a plan, pursuant to which the defendant shall establish an independent full-line shoe machinery manufacturing company capable of competing with the defendant in the shoe machinery market." Brief for the United States at 50 n.24, *United Shoe Mach.*, 391 U.S. 244 (1968) (No. 597), 1968 WL 112831. Moreover, the government requested "such other and further relief as may be necessary to establish workable competition in the shoe machinery market." *Id.* Further, the government proposed compulsory licensing of all existing or future patents for a reasonable period. *See id.* at *50 n.25.

[202] 373 F.3d 1199 (D.C. Cir. 2004).

[203] *See id.* at 1232.

[204] *See id.* ("The district court's omission of any discussion addressed to this objective was particularly troublesome because that court had ordered the break-up of a company that was not the product of mergers or acquisitions . . . much less unlawful mergers or acquisitions.").

[205] *See* United States v. Microsoft Corp., 253 F.3d 34, 106 (D.C. Cir. 2001) (considering whether Microsoft is "unitary company" that "expanded from natural growth" and cannot be split as easily as one that expanded from mergers and acquisitions).

[206] *See id.*

[207] *See* C. Paul Rogers III, *A Concise History of Corporate Mergers and the Antitrust Laws in the United States*, 24 NAT'L L. SCH. INDIA REV. 10, 11-13 (2013) (providing overview of merger law and early monopolization cases in United States).

[208] 15 U.S.C. § 18 (making it unlawful for one firm to "acquire, directly or indirectly, the whole or any part of the stock" of another, where acquisition threatens to lessen competition substantially).

recent past through merger. In its very first merger case, which was brought under both Section 1 and Section 2 of the Sherman Act, the government sought and obtained "dissolution," or divestiture of the acquired firm.[209] Under Section 7 of the Clayton Act, divestiture of unlawfully acquired assets has always been the preferred remedy, and the Supreme Court routinely approved it in merger cases.[210] That remains true today even though most mergers are now challenged before the transaction occurs and the remedy takes the form of a prohibitory injunction.[211]

Monopolization cases are different. For most of them, the business assets in question have either been developed internally, or else there has been so much internal development that the effects of long-past mergers are inconsequential. That was certainly true in *United Shoe*, where the machinery producers acquired some forty years earlier were completely folded into USM's single plant. Indeed, a likely reason that USM rose to dominance was that the union of several providers of complementary machines enabled USM to eliminate double marginalization, which can result in lower output and higher prices when independent producers of complements are unable to coordinate their output.[212]

One practical difference between mergers and monopolization actions against unified firms is that Clayton Act § 7's "acquire" language addressing mergers creates "fault lines" for divestiture purposes. Since the acquisition is what was held to be unlawful, undoing it is a matter of identifying the assets that had been unlawfully acquired. Monopolization cases that do not involve recent mergers do not generally provide such a clear line for division. For example, in a case such as *Google Search*, where the government sought the divestiture of Chrome, the court dealt with two distinctive business assets that were internally developed.[213] Any breakup that actually broke the search index database into

[209] N. Sec. Co. v. United States, 193 U.S. 197, 386 (1904).

[210] *See, e.g.*, Brown Shoe Co. v. United States, 370 U.S. 294, 346 (1962) (affirming lower court's order of divestiture); United States v. Phila. Nat'l Bank, 374 U.S. 321, 363, 367 n.43 (1963) (finding merger resulting in one firm with control over "an undue percentage share of the relevant market" is "inherently likely to lessen competition" and must be enjoined); United States v. El Paso Nat. Gas Co., 376 U.S. 651, 658-59 (1964) (holding merger eliminating potential competitor must be "arrest[ed]" to prevent loss of "the consumer's alternatives," implying only structural remedy like divestiture can restore competition).

[211] *See* D. Daniel Sokol, *Antitrust, Institutions, and Merger Control*, 17 GEO. MASON L. REV. 1055, 1076-77 (2010) ("[The FTC] likely block[s] most deals with a preliminary injunction, or even the threat of preliminary injunction.").

[212] *See* HOVENKAMP, *supra* note 20, at ch. 10 ("By uniting complementary production machines under a single firm, USM was able to offer a turn-key shoe manufacturing system at a lower price than rivals."). On historical development of the concept of double marginalization back to Augustin Cournot in the 1830s, see Laurent Linnemer, *Doubling Back on Double Marginalization*, 61 REV. INDUS. ORG. 1, 9-15 (2022).

[213] United States v. Google LLC, 803 F. Supp. 3d 18, 100 (D.D.C. 2025) (finding order requiring Google to divest "one of its most popular products, one that it has built 'from the ground up'" is outside scope of appropriate remedies).

pieces would have produced disastrous results. The government did not attempt to do that, and rather suggested the divestiture of the Chrome browser, a complementary product.[214]

Since search engines commonly live in browsers, there was in fact a link between the browser and the search engine, but the court did not find that link to be strong enough to make Chrome's spinoff particularly meaningful.[215] After all, Google Search can operate on all browsers, including Apple's Safari and Mozilla.[216] Google Search (at this writing) is also the default browser in Safari.[217]

The Chrome spinoff would have been a breakup that did not break into the search engine monopoly at all; it would have only spun off a complementary product. The government was unable to make a convincing argument that the causal link between spinning off Chrome and preserving the search engine monopoly was any stronger than it would be for any other browser that carried Google Search as its default.[218] As a result, whether or not a breakup might be called for in the *Google Search* case, spinning off Chrome did not produce a suitable fault line that would lead to greater competition in search. Adding to that, breaking Chrome from Google products posed many complexities and risks, threatening the benefits that product complementarity provides.[219] So, the case for Chrome divestiture was weak to nonexistent.

The rhetoric of "breakups" in monopolization cases stands in harsh contrast to the reality. A common image of the nonmerger breakup is of a firm that initially has a very high market share but then is broken into pieces in active competition with one another, and each with a significantly smaller market share.[220] This "break-'em-up" rhetoric often envisions something like a farm that

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[214] *See id.* at 98.

[215] *See id.* at 99 ("Plaintiffs do not satisfy this Circuit's 'clearer indication of a significant causal connection' test for structural remedies." (quoting United States v. Microsoft Corp, 253 F.3d 34, 106 (D.C. Cir. 2001))).

[216] *See Make Google Your Default Search Engine*, GOOGLE SEARCH HELP, https://support.google.com/ websearch/ answer/464 [https://perma.cc/ UVH6-GZBM] (last visited Mar. 12, 2025).

[217] *See* Ayush, *How to Change Default Search Engine in Safari*, IGEEKSBLOG (Sep. 29, 2025), https://www.igeeksblog.com/how-to-change-search-engine-in-safari [https://perma.cc /HYY4-RD73].

[218] *Google*, 803 F. Supp. 3d at 99-100 (finding government failed to meet heightened causal connection requirement, citing "ample evidence" Google maintained monopoly through "lawful conduct" and divestiture of Chrome would not redress challenged conduct).

[219] *See* text accompanying *infra* notes 327-29 (summarizing court's concern and skepticism over Chrome divestiture).

[220] *See generally* ZEPHYR TEACHOUT, BREAK 'EM UP: RECOVERING OUR FREEDOM FROM BIG AG, BIG TECH, AND BIG MONEY (2024) (arguing breaking up monopolies is necessary solution to obtain freedom from concentrated wealth and power); Rory Van Loo, *In Defense of Breakups: Administering a "Radical" Remedy*, 105 CORN. L. REV. 1955 (2020) (acknowledging divestiture has long been preferred remedy to address anticompetitive

can readily be divided among multiple owners. Each piece can then be operated as a smaller business entity, entirely separate but in competition with the other pieces. If the entire farm grew corn prior to the breakup, afterward we would have a number of smaller farms, still growing corn in competition with one another. The court must simply mandate issuance of some deeds and the job is done.

Finding suitable fault lines for breakups is sufficiently hard that even in cases that are nominally characterized as involving monopolization, breakups often proceed along lines that were created by previous acquisitions. That was true in 1911, when the court broke up the Standard Oil trust by mandating that the individual corporations that initially formed the trust be spun off to its stockholders.[221] The original trust was created in 1882, roughly thirty years prior to the breakup decree.[222] The Court made no attempt to ensure that it was breaking up Standard Oil in an economically useful way—for example, by inquiring into how much competition might increase as a result. The general opinion of contemporary economists was quite critical.[223] John Bates and John Maurice Clark observed that under the decree, "any man who had held 8% of the stock of the old company received 8% of the stock of each of the new ones."[224] In other words, while the firms were split apart, they continued to have the same relatively small group of shareholders.[225]

Another problem was the geographic separations created by the breakup. The original formation of the Standard Oil trust was a response to corporate law that restricted corporate operations to the state of incorporation.[226] One consequence was that the broken-up pieces were centered and dominant in mutually exclusive states. Among the firms that emerged from the breakup were ExxonMobil (Texas), Standard of New York (Socony), Standard of California (Chevron),

mergers among judges and scholars due to belief that breakups are "relatively easy to administer").

[221] *See* Standard Oil Co. v. United States, 221 U.S. 1, 78-79 (1911).

[222] *See id.* at 9.

[223] For a survey of opinions, see MERLE RAYMOND THOMPSON, TRUST DISSOLUTION 94-99 (1919). One complaint was that the same small group of shareholders who had dominated ownership of Standard Oil of New Jersey also came to dominate ownership of the individual post-divestiture firms. *See id.* at 95 ("The same little group which owned a majority of the stock before the dissolution, afterwards owned a like majority in each of the 33 companies.").

[224] CLARK & CLARK, *supra* note 114, at 146.

[225] *Id.* at 146-48 ("[T]he principal and characteristic basis of the reorganizations is the dividing of the shares of the subsidiary companies *pro rata* among the stockholders of the holding company.").

[226] *See* Naomi R. Lamoreaux, *The Problem of Bigness: From Standard Oil to Google*, 33 J. ECON. PERSPS. 94, 97-98 (2019) (describing how dissolution of trust by Ohio Supreme Court led Standard Oil to reorganize as holding company in New Jersey to preserve monopoly, which was possible because of New Jersey's newly liberalized corporate law).

Standard of Ohio (Sohio), Standard of Indiana, and Standard of Kentucky.[227] On the customer-facing side, many of these firms did not compete with one another at all; they were simply smaller, regional dominant firms.[228] On the supply side, the breakup had a more substantial effect, including the harmful one of increasing the cost of distribution. The price of gasoline rose substantially from 1913 to 1917, immediately following the antitrust decree.[229] How much of that increase can be attributed to the failure of the Standard Oil decree is hard to say. The price increase was sufficiently alarming, however, that the FTC published a report attempting to provide an explanation.[230]

The breakup in *Grinnell* is another example of breaking up a firm while leaving the monopoly intact.[231] The defendant operated several municipal "central station" security services, which in this pre-wireless era consisted of a hub connected by telephone lines to all of the subscribers in a particular municipality.[232] The technology limited the system's range to twenty-five miles from the hub, so each of these was its own networked market.[233] When an alarm went off, the central station collected the details and sent out police, fire, medical, or other emergency personnel as needed.[234] The divestiture decree required that the defendant divest its operations in some of these cities.[235] But as the dissenters pointed out, that did nothing whatsoever to address the monopoly problem: It simply created a situation in which multiple owners owned a series of local monopolies, rather than one owning all of them.[236] In that case, one

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[227] *See* William F. Shugart II, *Reappraising* Standard Oil, REGULATION, Summer 2025, at 10, 12, https:// www.cato.org/ regulation/ summer-2025/ reappraising-standard-oil [https://perma.cc/E8L5-47JP] (listing "34 successor companies created in the wake of the Court's [dissolution] order").

[228] *See id.* ("All such entities remained vertically integrated and, in fact, after the stocks of Jersey Standard were redistributed to the new companies' shareholders, the successors were owned by the same people who had controlled the original 'trust.'").

[229] *See* Crandall, *supra* note 31, at 126-27 (illustrating spike in gasoline prices following Standard Oil divestiture).

[230] FTC, REPORT ON THE PRICE OF GASOLINE IN 1915, at 1-18 (1917) (summarizing results of investigation into unreasonably high price of gasoline in 1915).

[231] *See* United States v. Grinnell Corp., 384 U.S. 563, 578-79 (1966) (finding simple divestiture inadequate to eliminate monopoly and remanding to lower court to ensure remedies are sufficient to restore competition).

[232] *See id.* at 563 ("Grinnell manufactures plumbing supplies and fire sprinkler systems and its affiliates supply subscribers with fire and burglar alarm services from central stations through automatic alarm systems installed on subscribers' premises.").

[233] *See id.* at 575.

[234] *See id.*

[235] *See id.* at 577 (outlining final decree which ordered firm to adopt plan of divestiture).

[236] The dissent stated:

> Here, there can be no doubt that the correct geographic market is local. The services at issue are intensely local: they can be furnished only locally. The business as it is done is local—not nationwide. If, as might well be the case on this record, defendants were found

could not reasonably expect that output would go up or prices would go down. "Breaking up" the individual networks would have been much better accomplished by interconnection agreements that permitted multiple sellers to operate on the same network. That could even support head-to-head competition. Today's technology more readily permits these agreements, and this market has developed accordingly. In networked markets, sharing remedies often works better than breakup remedies.

The regional breakups that were part of the AT&T consent decree created a similar situation. The decree divided the AT&T local network into seven regional firms, each having a dominant position as the incumbent carrier in its own particular region.[237] Within each of these, the monopoly in local service was as firm as ever. Indeed, because the decree required elaborate interconnection agreements that needed to be managed, that portion of the decree standing alone would have made the situation worse rather than better. Instead of a single national monopoly operating as a unit, there were seven regional monopolies that had to bear the burden of interconnection if they were to function as a single network.[238] As if to confirm that, most of the regional firms subsequently merged back together.[239]

What really saved the AT&T decree was not the regional breakups but rather the expansive interconnection agreements that invited numerous other firms, including wireless providers, to connect into the market, giving us the much more competitive structure that we have today.[240]

> to have violated the Sherman Act in a number of these local areas, a proper decree, directed to those markets, as well as to general corporate features relevant to the condemned practices, could be fashioned. On the other hand, a gross definition of the market as nationwide leads to a gross, nationwide decree which does not address itself to the realities of the market place. That is what happened here . . . .

Id. at 589-90 (Fortas, J., dissenting).

[237] The original seven regional firms were Ameritech, Bell Atlantic, BellSouth, NYNEX, Pacific Telesis, Southwestern Bell, and USWest. *See* Richard A. Epstein, *The AT&T Consent Decree: In Praise of Interconnection Only*, 61 FED. COMMC'NS L.J. 149, 149, 153-54 (2008); Barney Warf, *Mergers and Acquisitions in the Telecommunications Industry*, 34 GROWTH & CHANGE 321, 325-26, 328 (2003).

[238] *See* Epstein, *supra* note 237, at 161.

[239] Southwestern Bell acquired Pacific Telesis (1996) and Ameritech (1999); Bell Atlantic and NYNEX merged (1997) to form Verizon. *See* Warf, *supra* note 237, 325-26, 328 (discussing major telecommunications mergers in U.S. history).

[240] *See* Epstein, *supra* note 237, at 149, 153-54 (describing breaking up of AT&T and related issues with consent decrees).

III. THE GOOGLE SEARCH REMEDY DECISION

In *Google Search*, the district court fashioned a remedy for conduct that it had found unlawful under Section 2 of the Sherman Act a year earlier.[241] That conduct consisted mainly of payments that Google made to various device and program implementers in exchange for their commitment to make Google Search their default search engine.[242] The largest of these was several billion dollars annually to Apple.[243] That practice, the government alleged, served to prevent Apple from selecting a different search engine as its default on Apple devices, and deterred it from developing its own search engine internally.[244] While defaults are often beneficial when used by firms in a competitively structured market, they can harm competition when demanded by dominant firms.[245]

The government requested that the payments be enjoined.[246] It also sought an immediate divestiture of Google's Chrome internet browser and, conditionally, perhaps of its Android operating system for handheld phones.[247] It additionally requested imposition of a "choice screen" so that purchasers of devices could select their own default search engine, and prohibitions on self-preferencing of Google's own search engine on various Google assets such as YouTube.[248] The court rejected these latter requests mainly because they implicated conduct that was not condemned in the prior merits trial.[249] It also found that a proposed prohibition on Google's self-preferencing of its generative artificial intelligence ("GenAI") system Gemini in Chrome or its other products went too far. Such a prohibition would hobble Google's efforts to compete in markets increasingly driven by GenAI.

The court characterized Google's payment agreements as "exclusive dealing," even though the requirement was only a default and not an absolute prohibition on

[241] *See generally* United States v. Google LLC, 747 F. Supp. 3d 1 (D.D.C. 2024) (finding Google violated Section 2 of Sherman Act through unlawfully maintaining monopolies in general search services and general text advertising markets).

[242] *See id.* at 159.

[243] *See id.* at 94.

[244] As a general matter, selecting a single search engine as the default is likely to be harmful to consumers, at least across a wide range of common conditions. *See* Hovenkamp, *supra* note 175 (manuscript at 28).

[245] On the relationship between the competitive effects of defaults and market structure, particularly scale effects when used by dominant firms, see generally Erik Hovenkamp & A. Douglas Melamed, *Antitrust Analysis of Search Engine Defaults*, ANTITRUST L.J. (forthcoming 2026).

[246] *See* United States v. Google LLC, 803 F. Supp. 3d 18, 42 (D.D.C. 2025).

[247] *See id.*

[248] *See id.* at 43.

[249] *See id.* at 141-43, 156-59 (declining to impose choice screen remedy because courts are not positioned to redesign products, forcing Google to redesign its own products is inappropriate given central focus of case on Google's distribution agreements, and choice screens are unlikely to alter competitive conditions).

dealing with competitors.[250] In this case, the upstream requirement imposed on device implementers such as Apple was strict exclusive dealing because it required Apple to make Google Search its default search engine.[251] With respect to customer end users, however, the requirement was merely a default that permitted them to switch away to a different search engine if they wished.

Exclusivity arrangements that operate differently at the distribution and consumer levels are not uncommon. For example, an automobile manufacturer may require a car dealer to sell its full line of models and sell no new cars from competing manufacturers, or to use its repair parts exclusively.[252] For the dealer, these requirements operate as exclusive dealing or ties. Customers, by contrast, are free to get their car from anyone they choose and their parts elsewhere.[253]

One thing that this difference between effects on intermediaries and on consumers indicates is that consumer harm will likely be difficult to prove in a case such as *Google Search*. Difficulty demonstrating consumer harm may in turn frustrate subsequent private consumer actions. For example, a class of iPhone purchasers claiming injury because their phones came with Google Search preinstalled as a default would face the problem of identifying injured users. A substantial majority of users would have chosen Google Search anyway. Second, even for those who preferred a default other than Google Search, how does one assess their incurred harm? Would they have to point to search results that they could receive on their preferred search engine but not on the other, and place a value on the difference? Third, what of the fact that each individual consumer can switch the default in a few seconds? To the extent competitive harm exists, it occurs among competitors but not purchasers.[254]

Similar circumstances frustrated consumer actions against Microsoft, where the courts contrasted the risks to innovation and future progress that the government showed in its enforcement action against the claims of private purchasers who need to prove and quantify future harm.[255] The plaintiffs claimed antitrust damages for

[250] *See id.* at 84("To be clear, default bias and network effects are features of the general search market; they did not arise because of Google's exclusive dealing.").

[251] *See id.* ("[T]he challenged contracts, which blocked rivals' access to key distribution channels and steered half of all U.S.-based queries to Google, ensured that Google would reap the greatest benefit from these market forces.").

[252] *See, e.g.*, M.L. Burstein, *A Theory of Full-Line Forcing*, 55 NW. U. L. REV. 62, 63 (1960).

[253] *See* AREEDA & HOVENKAMP, *supra* note 89, ¶ 1725; *see also* Roy B. Taylor Sales, Inc. v. Hollymatic Corp., 28 F.3d 1379, 1381, 1388 (5th Cir. 1994) (dismissing complaint and noting while restaurant supply distributorship agreement required reseller to stock both defendant's hamburger patty machine and its patty paper, customers were free to purchase one without other), *cert. denied*, 513 U.S. 1103 (1995).

[254] *See* Brown Shoe Co. v. United States, 370 U.S. 294, 320 (1962) ("[T]he legislative history illuminates congressional concern with the protection of *competition*, not *competitors*, and its desire to restrain mergers only to the extent that such combinations may tend to lessen competition.").

[255] Kloth v. Microsoft Corp., 444 F.3d 312, 322, 324 (4th Cir. 2006).

alleged injuries caused by Microsoft's restraints excluding rival browsers and limiting interoperability with non-Microsoft products.[256] The Fourth Circuit observed, quoting the district court:

> "It would be entirely speculative and beyond the competence of a judicial proceeding to create in hindsight a technological universe that never came into existence." The [district] court continued, "It would be even more speculative to determine the relevant benefits and detriments that non-Microsoft products would have brought to the market and the relative monetary value . . . to a diffuse population of end users." While plaintiffs assert that they should be given discovery with respect to these issues, it is readily apparent that discovery would not change or inform the nature of the alleged injuries.[257]

The government as enforcer was not required to prove these things, but only that there was a violation.

In discussing appropriate remedies, the *Google Search* court recognized that the "ordinary starting point" for considering options is an "injunction terminating the anticompetitive conduct."[258] Restoring competitive conditions would require more, yet the court refused to order any immediate divestitures.[259] It did not ban the payments categorically but did impose restrictions on them, including one that limited their duration to one year.[260] The court also refused to mandate the use of choice screens so that users could select their own default search engines, and rejected any categorical ban on self-preferencing.[261] It did, however, require Google to share certain search index data with "Qualified Competitors" that could use the data to improve the quality of their own search products.[262]

The court clearly regarded the recent development of GenAI products as a major competitive event that was largely undeveloped in the trial record.[263] It gave a lengthy presentation on the subject of GenAI and its potential effects.[264] Unlike traditional search, which Google dominated, the GenAI market was "highly

[256] *See id.* at 317-18.

[257] *Id.* at 324 (citations omitted).

[258] United States v. Google LLC, 803 F. Supp. 3d 18, 68 (D.D.C. 2025) (citing Ford Motor Co. v. United States, 405 U.S. 562, 575 (1972)).

[259] *See id.* at 37 ("Google will not be required to divest Chrome; nor will the court include a contingent divestiture of the Android operating system in the final judgment. Plaintiffs overreached in seeking forced divesture of these key assets, which Google did not use to effect any illegal restraints.").

[260] *See id.*

[261] *See id.* at 38.

[262] *See id.* at 37-38.

[263] *See id.* at 36 ("The emergence of GenAI changed the course of this case. No witness at the liability trial testified that GenAI products posed a near-term threat to [general search engenines].").

[264] *See id.* at 57-61.

competitive,"[265] and Google had several significant rivals in the development of AI tools of various kinds. There were also "numerous new market entrants."[266] Some of these, such as Grok, were able to go from zero to a ranking in the top ten AI products in just a few months.[267] Hence, there was a "constant jockeying for a lead in quality" among these products.[268] At the time of the liability decision, however, the impact of GenAI on traditional search volume was still relatively small.[269] The result was to cast uncertainty on both conclusions about the durability of market power as well as the determination of optimal remedies. For example, while it now seemed possible that artificial intelligence ("AI") products could completely upend the market structure of search, the liability trial had not entertained any testimony on that question.

The court observed that an appropriate remedy "restor[es] conditions in which the competitive process is revived."[270] That requirement, it noted, compelled it to go beyond a narrowly focused injunction forbidding or limiting the payments for search default.[271] Rather, the remedy should eliminate or at least limit exclusivity requirements that hindered the growth of rivals to that point.[272]

However, the court declined to order a divestiture of Google's Chrome browser, finding lack of a clear "indication of a significant causal connection" between Google's ownership of Chrome and the Google Search monopoly:

> After two complete trials, this court cannot find that Google's market dominance is sufficiently attributable to its illegal conduct to justify divestiture. Because the record does not support the requisite heightened causal connection, "wisdom counsels against adopting radical structural relief."[273]

On the question of payment for default, the court's opinion was quite nuanced. It observed that one possible effect of Google's very high payment to Apple was

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[265] *Id.* at 37, 57, 107, 111, 123, 158.

[266] *Id.* at 58.

[267] *See id.* at 56, 58.

[268] *Id.* at 58; *see also Top Generative AI Chatbots by Market Share—November 2025*, SEO BLOG (Nov. 7, 2025), https:// web.archive.org/web/20251116080741/https://firstpagesage.co m/ reports/ top- generative- ai- chatbots (reporting market shares of leading AI chatbots in November 2025 as follows: ChatGPT, 61.0%; Microsoft Copilot, 14.1%; Google Gemini, 13.4%; Perplexity, 6.4%).

[269] *See Google*, 803 F. Supp. 3d at 59 ("GenAI products may be having some impact on GSE usage. But GenAI products have not eliminated the need for [general search engines]." (citations omitted)).

[270] *Id.* at 68 (quoting Massachusetts v. Microsoft Corp., 373 F.3d 1199, 1231 (D.C. Cir. 2004)).

[271] *See id.* at 94-97.

[272] *See id.* at 95 ("[A]n injunction that opens up participant choice can serve to diminish monopoly power significantly." (quoting Hovenkamp, *supra* note 151, at 101)).

[273] *Id.* at 100 (quoting United States v. Microsoft Corp., 253 F.3d 34, 80 (D.C. Cir. 2001)).

to deter Apple from developing its own search engine.[274] On the other hand, the loss of revenue would likely result in Apple reducing innovation in new products. It could even result in some firms, such as Mozilla, for whom Google's payments were its largest source of revenue, exiting from the market.[275] Therefore, the court declined to categorically prevent Google from paying for defaults, although it did limit the duration of any such agreements to one year.[276] The court's language about payments in its September 2025 decision is somewhat ambiguous.

The court predicted that "because Google is the best search provider, [implementers] likely will maintain it as the default" even without a contractual requirement that they do so.[277] Otherwise, they would risk "alienating their customers."[278] The court also acknowledged that, largely because of developments in AI, the case for an absolute prohibition on payments was not as strong as it was at the liability phase:

> [A]llowing Google to continue making payments is more palatable now than when the liability phase concluded. Then, venture funding in "Internet search" was considered Silicon Valley's "biggest no fly zone." Today, established technology companies are making, and start-ups are receiving, hundreds of billions of dollars in capital to develop GenAI products that pose a threat to the primacy of traditional internet search . . . . These companies already are in a better position, both financially and technologically, to compete with Google than any traditional search company has been in decades (except perhaps Microsoft). They also are moving towards monetizing on commercial queries. These new realities give the court hope that Google will not simply outbid competitors for distribution if superior products emerge. It also weighs in favor of "caution" before disadvantaging Google in this highly competitive space.[279]

The court did compel Google to share data with a group of "Qualified Competitors."[280] This obligation was justified by the significant advantage that Google's exclusive distribution agreements had on rivals, which denied them effective scale in the form of "access to user queries . . . needed to effectively

[274] *See id.* at 80.

[275] *See id.* at 104-05 (concerning Mozilla's fear lower revenue share payments could "potentially start a downward spiral of usage . . . [which] could at the end of the day put Firefox out of business").

[276] *Id.* at 37 ("Google shall not enter or maintain any agreement that . . . conditions the receipt of revenue share payments . . . for more than one year . . . .").

[277] *Id.* at 103.

[278] *Id.* On this point, see Hovenkamp, *supra* note 175, at 15.

[279] *Google*, 803 F. Supp. 3d at 107 (citations omitted).

[280] *See id.* at 37-38.

compete."[281] The court found these obligations to be "directly tied to the theory of liability."[282]

The sharing requirement pertained to Google's "search index" database of "publicly available web pages that can be returned in response to a user query."[283] The court addressed various objections that such a duty would deprive both Google and rival search engines of adequate investment incentives. It pared down the government's request by excluding Google's own proprietary ranking technologies in the sharing obligation.[284] One feature of the data to be shared is that it included relatively little of Google's own proprietary information. Further, the order pertained to a "one-time snapshot" of the relevant data at the time the recipients were certified as Qualified Competitors.[285] From that point on, Qualified Competitors would be required to update and perfect their search data on their own. In order to be competitive, such search data had to be continuously updated, and this updating was the responsibility of each individual licensee.[286]

The court justified these limits by observing that "[f]or Qualified Competitors to compete, they must innovate and differentiate their product from Google's rather than simply feeding off Google's work."[287] Further, the search index data were not to be given away but rather transferred at marginal cost. The court concluded that this single sale at marginal cost would not involve the court too heavily in ongoing regulation of prices.[288] The marginal cost requirement was likely driven by the D.C. Circuit's conclusion in *Microsoft* that royalty-free licensing of Microsoft's intellectual property would be confiscatory.[289] By contrast, a price of marginal cost is equal to the provider's incremental expenditure for that asset and is consistent with the competitive price.[290]

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281 *Id.* at 79, 108 (quoting United States v. Google LLC, 747 F. Supp. 3d 1, 159 (D.D.C. 2024)).

282 *Id.* at 110.

283 *Id.* at 112.

284 *See id.* at 111-12.

285 *Id.* at 117-18.

286 *See id.* at 160 ("Technological advancement and product differentiation are what will change market dynamics, not a decade-long judicial decree.").

287 *Id.* at 118.

288 *See id.* ("The court thus would bear responsibility for the 'ongoing supervision . . . necessary to regulate the price and nonprice terms' of the data transactions." (quoting AREEDA & HOVENKAMP, *supra* note 89, ¶ 653b2)).

289 *See* Massachusetts v. Microsoft Corp., 373 F.3d 1199, 1230-31 (D.C. Cir. 2004) ("Although Microsoft could continue to use its intellectual property under the open-source IE proposal, the 'royalty-free, non-exclusive perpetual right' of others to use it as well would confiscate much of the value of Microsoft's investment . . . .").

290 *See Google*, 803 F. Supp. 3d at 118 (defining "marginal cost" as "the direct total production cost of producing an additional unit of a good or service . . . determined by calculating the change in direct total production cost resulting from Google [] providing the additional unit(s) or services").

If what the court had in mind was short-run marginal cost, then this price could be very low, consisting of little more than the cost of packaging and transmitting the data to Qualified Competitors. It should also be a cost that is relatively easy to verify, although there could be disputes about whether certain costs should be characterized as fixed or variable. Only the latter go into marginal cost.[291]

The court rejected the government's proposed ban on choice screens as interfering too much with product design.[292] A choice screen typically operates as an additional screen in a startup sequence, where the user of a new device has an opportunity to select a default from a posted list, or perhaps enter a link to an alternative.[293] Because the court had no jurisdiction over non-Google implementers, it could not accomplish this directly, but it might require Google itself to create incentives to adopt such a screen. The court quoted from one of the *Microsoft* opinions observing that "it is not a proper task for the Court to undertake to redesign products."[294]

This reluctance about choice screens may partially have been the consequence of the rather elaborate request that the government made, which required Google to submit choice screen proposals to be approved by a "Technical Committee" appointed to review Google's compliance.[295] Further, the Committee was to consult with a behavioral scientist in order to get an opinion about a particular screen's effectiveness.[296] One might reasonably see these requirements as crossing a line into management of product design. Whether a simpler choice screen proposal that left the design up to Google would have passed muster is hard to say. In any event, "[t]his case was always about Google's distribution agreements with third parties, not its product design."[297] The court also noted that a similar choice screen order by the European Commission was not all that

[291] *See, e.g.*, PAUL BELLEFLAMME & MARTIN PEITZ, INDUSTRIAL ORGANIZATION: MARKETS AND STRATEGIES 14-15 (2015) (distinguishing marginal costs from fixed costs).

[292] *See Google*, 803 F. Supp. 3d at 142 ("[A] compelled product design is not an appropriate use of the court's equitable powers.").

[293] *See About the Choice Screen*, GOOGLE CHROME (Dec. 2, 2025), https://www.google.co m/ chrome/ choicescreen/ msca [https://perma.cc/ RZ42-MNCR] (describing choice screens and instructing consumers on use).

[294] *Google*, 803 F. Supp. 3d at 142 (quoting New York v. Microsoft Corp., 224 F. Supp. 2d 76, 158 (D.D.C. 2002)).

[295] *See id.* at 141 (explaining Plaintiffs' proposed choice screen remedies).

[296] *See id.* at 142 ("The Technical Committee in turn would 'consult[] with a behavioral scientist'—presumably to promote optimal choice-screen architecture and implementation—and therefore advise Plaintiffs on Google's technical compliance.").

[297] *Id.*

effective.[298] It cited expert testimony that the use of choice screens would likely shift market share by less than one percent.[299]

A. *Causation and the Scope of the Remedy*

Unlike a private plaintiff seeking an injunction, in a government equity suit, the plaintiff need not show that the defendant's conduct caused or threatened to cause harm.[300] However, it does have to show both an antitrust violation and a causal connection between that violation and the remedy that is sought. That is, the remedy must be reasonably tailored to "prevent and restrain" the antitrust violation, as the statute demands. In such cases the government is empowered to request that the antitrust violation be "enjoined or otherwise prohibited."[301] The statute thus expressly authorizes injunctions. While it also permits more aggressive relief, including divestitures, nothing in the statutory language suggests that divestitures are preferred to other remedies.[302]

The causation issue boils down to determining the link that the government must show between the proposed relief and its ability to prevent or restrain the violation. Must this be "but for" causation, which would require a showing that the monopoly would not have occurred but for the conduct or structure sought to be remedied? Or can it be less, such as a "substantial contributing factor," or perhaps even a "possibly contributing factor," or a "likely result" of certain conduct? Or could it be no more than *Microsoft*'s "reasonably capable of

[298] *Id.* at 143 ("The European Commission has mandated the display of choice screens on Android devices since 2020, yet there has been little shift in market share away from Google."); *see* Francesco Decarolis, Muxin Li & Filippo Paternollo, *Competition and Defaults in Online Search*, 17 AM. ECON. J.: MICROECONOMICS 369, 371 (2025) (noting minor market share effect in Europe, although larger in Russia and Turkey); Hovenkamp, *supra* note 175 (manuscript at 26) (predicting small effects); Omar Vásquez Duque, *The Magical Number 2 (Minus Two): An Empirical Analysis on the Efficacy of Choice Screens to Increase Competition in Digital Markets* 18 (May 22, 2025) (unpublished manuscript), https:// papers.ssrn.com/ sol3/ papers.cfm?abstract_id=5264993 (finding choice screens produce less than 2% increase in market share).

[299] *Google*, 803 F. Supp. 3d at 143. The court also cited a report finding that merely 1.3% of users would switch to Bing if provided an active choice screen. *See* Hunt Allcott, Juan Camilo Castillo, Matthew Gentzkow, Leon Musolff & Tobias Salz, *The Sources of Market Power in Web Search: Evidence from a Field Experiment* (Nat'l Bureau of Econ. Rsch., Working Paper No. 33410, 2025), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=5122 128; *see also* Duque, *supra* note 298, at 18 (indicating less than 2%).

[300] *See* 15 U.S.C. § 26.

[301] *See id.* § 25.

[302] *See* United States v. Paramount Pictures, 334 U.S. 131, 140 (1948) (holding district court must reconsider divestiture on remand and emphasizing equitable relief may take multiple forms); California v. Am. Stores Co., 495 U.S. 271, 279-81 (1990) (authorizing divestiture in private plaintiff case by relying on "prevent and restrain" language of statute governing actions by attorney general).

contributing significantly" requirement?[303] Because these orders are equitable in nature, the district court has considerable discretion in formulating them.

The *Google Search* court rejected any requirement of "but for" causation, noting that *Microsoft* did not require it either.[304] The range of possible orders is large. Further, the courts have long held that the simple fact that some kind of relief is needed does not necessarily justify a divestiture, which often comes with harmful side effects.[305] Here, borrowing from *Microsoft*, the court accepted a balancing test of sorts that considered the "proportionality between the strength of the evidence of the causal connection and the severity of the remedy."[306]

The Supreme Court itself has been clear since the 1940s that not every case that entitles the plaintiff to an injunction also justifies divestiture. In its 1947 *National Lead* decision, the Court granted the government an injunction but declined a divestiture because the proven conduct was an anticompetitive agreement, not the acquisition or use of certain assets beyond the anticompetitive agreement.[307] In *Timken*, a divided Court declined to order a divestiture in a case that was also mainly about anticompetitive agreements.[308] Three Justices favored divestiture, which they believed would be necessary to restrain further violations in the future.[309] The remaining Justices were divided. Two believed that no divestiture was warranted for what they interpreted to be civil violations of Section 1 of the Sherman Act.[310] They cited the fact that this case, unlike *Standard Oil* and *American Tobacco Co. v. United States*,[311] was one in which the defendant had grown to its current size naturally.[312]

The *Microsoft* decision elaborated on the range of remedies and the proof of causation required for divestiture. The government requested that Microsoft be broken up, but the D.C. Circuit declined. It held that, for purposes of an injunction, the relevant proof of causation must determine:

[303] United States v. Microsoft Corp., 253 F.3d 34, 79 (D.C. Cir. 2001).

[304] *See Google*, 803 F. Supp. 3d at 73 ("[T]he government suitor need not show that competition is in fact less than it would be in some alternative universe in which the challenged conduct had not occurred. It is enough to show that anticompetitive consequences are a naturally-to-be-expected outcome of the challenged conduct." (quoting AREEDA & HOVENKAMP, *supra* note 89, ¶ 657a2)).

[305] *See, e.g.*, *Paramount*, 334 U.S. at 140; *Am. Stores Co.*, 495 U.S. at 279-81.

[306] *Google*, 803 F. Supp. 3d at 76 (quoting New York v. Microsoft Corp., 224 F. Supp. 2d 76, 102 (D.D.C. 2002)).

[307] *See* United States v. Nat'l Lead Co., 332 U.S. 319, 351-53 (1947).

[308] *See* Timken Roller Bearing Co. v. United States, 341 U.S. 593, 601 (1951).

[309] *See id.* at 600.

[310] *See id.* at 602-03 (Reed, J., & Vinson, C.J., concurring) ("There are no specific statutory provisions authorizing courts to employ the harsh remedy of divestiture in civil proceedings to restrain violations of the Sherman Act.").

[311] 328 U.S. 781 (1946).

[312] *Timken Roller Bearing*, 341 U.S. at 604-05 (Reed, J., & Vinson, C.J., concurring) (explaining, unlike circumstances of *Standard Oil* and *American Tobacco*, "there was, of course, no occasion for the lower court to order any splitting up of a consolidated entity").

> (1) whether as a general matter the exclusion of nascent threats is the type of conduct that is reasonably capable of contributing significantly to a defendant's continued monopoly power and (2) whether Java and Navigator reasonably constituted nascent threats at the time Microsoft engaged in the anticompetitive conduct at issue.[313]

That is certainly not "but for" causation, but merely a determination that the conduct of rivals seemed capable to an objective observer of being a threat, and whether Microsoft responded accordingly. However, the court then spoke more strongly in reference to structural relief:

> Microsoft's concerns over causation have more purchase in connection with the appropriate remedy issue, i.e., whether the court should impose a structural remedy or merely enjoin the offensive conduct at issue. . . . [D]ivestiture is a remedy that is imposed only with great caution, in part because its long-term efficacy is rarely certain. Absent some measure of confidence that there has been an actual loss to competition that needs to be restored, wisdom counsels against adopting radical structural relief.[314]

In this case the *Google Search* court did not need to invoke *Microsoft*'s heightened causation standard for divestiture of Chrome. Rather, it found little evidence of causation of any kind.

In *Microsoft*, the D.C. Circuit required what amounts to a cost-benefit analysis of favorable and unfavorable consequences.[315] Certain remedies, including some breakups, might be able to remedy the monopoly very quickly, but they might also impose other burdens that could harm the firm and its stockholders or employees, or perhaps make the market perform worse overall.[316] A simple injunction might not destroy the monopoly immediately, though it might not have these harmful side effects either.

What the *Google Search* decision made clear is that not all breakup remedies function in the same way. The idea that a breakup immediately destroys the monopoly is based on an imagined scenario such as the corn farm illustrated above, where a firm's production capacity is divided into two or more units that compete with each other in such a way so as to redistribute the defendant's

[313] United States v. Microsoft Corp., 253 F.3d 34, 79 (D.C. Cir. 2001).

[314] *Id.* at 80 (citations omitted). For a critique of this position, see KATHLEEN BRADISH, AM. ANTITRUST INST., UNREALISTIC CAUSATION STANDARDS PUT EFFECTIVE MONOPOLIZATION REMEDIES AT RISK (2025), https://www.antitrustinstitute.org/wp-content/uploads/ 2025/ 08/ AAI-Google-Remedies-White-Paper_Final.pdf [https://perma.cc/BL75-H6YJ].

[315] *See Microsoft Corp.*, 253 F.3d at 94 (remanding issue of Microsoft's tying arrangement to be reviewed under rule of reason analysis to account for costs and benefits to consumers).

[316] *See* Hovenkamp, *supra* note 151, at 98-99 (pointing to Microsoft and AT&T antitrust cases as evidence "broadly-worded conduct remedy can dissipate a firm's power, often without undermining its ability to provide goods for its consumers, workers, and other constituents").

market share immediately among multiple firms.[317] Dividing the farm into pieces requires little more than the drafting of a deed.

But the proposed Chrome divestiture did not divide up assets this way. That divestiture would have left the search engine assets, principally the search index database, entirely intact.[318] Chrome is not part of the search engine but a complementary product that allegedly contributed to Google's search engine dominance. Divestiture of Chrome would not in any sense "break up" Google Search.

When the proposed divestiture is of a complementary product rather than the division of the monopolized product itself, then the "prevent and restrain" standard requires evidence of some causal link other than immediate increases in incumbent competition or reduction in market share.[319] For example, breaking a firm with 90% market share into three head-to-head competitors with 30% each intuitively restrains monopoly. Breaking off a product that is not part of the monopoly does not do so unless some other link exists between that product and the creation or maintenance of monopoly. Further, as the divestiture itself is more disruptive, the balance of equities tilts against it.

Here, the court found insufficient causal connection. The principal contribution that the court found was that Chrome had many users and Google Search was the default search engine for most of them. Roughly 20% of searches conducted in the United States involved Chrome as the access point to the browser.[320] But that was no different than the default status that Google obtained for Apple iPhones or other devices.[321] Moreover, the court referred to its own fact findings that "lawful conduct played an important role in Google's maintenance of its monopoly," particularly its "best-in-class search quality."[322] The court also observed:

> The remedy also extends beyond the conduct Plaintiffs seek to redress. It was Google's control of the Chrome default, not its ownership of Chrome as a whole, that the court highlighted in its liability finding. Ordering Google to sell one of its most popular products, one that it has built "from the ground up" and in which it has invested (and continues to invest) billions of dollars, in the hope of opening a single channel of distribution to competition—and not even one that was unlawfully foreclosed by the

[317] *See supra* Section II.C (illustrating how common "break-'em-up" rhetoric does not comport with complexities of breakups).

[318] *See* United States v. Google LLC, 803 F. Supp. 3d 18, 98 (D.D.C. 2025) (remarking divestiture of Chrome would not eliminate Google's monopoly, with reference to expert opinion).

[319] *See* Howard A. Shelanski & J. Gregory Sidak, *Antitrust Divestiture in Network Industries*, 68 U. CHI. L. REV. 1, 82 (2001) (analyzing remedy in *Microsoft* to indicate court must account for comparative costs and benefits of court-ordered vertical divestiture).

[320] *Google*, 803 F. Supp. 3d at 98.

[321] *See id.*; United States v. Google LLC, 747 F. Supp. 3d 1, 44-45 (D.D.C. 2024).

[322] *Google*, 803 F. Supp. 3d at 99.

> challenged contracts—cannot reasonably be described as a remedy "tailored to fit the wrong creating the occasion for the remedy."[323]

In addition, the court responded to the government's quotation of the Supreme Court's decision in *United States v. E. I. du Pont de Nemours & Co.*;[324] which proclaimed divestiture to be a more natural remedy by distinguishing *du Pont* as a Clayton Act § 7 challenge to a merger, where divestitures of unlawfully acquired assets are preferred.[325] In this case, by contrast, Chrome was entirely Google's internal creation.[326]

Finally, the court noted, a Chrome divestiture "would be incredibly messy and highly risky."[327] The court was "highly skeptical that a Chrome divestiture would not come at the expense of substantial product degradation and a loss of consumer welfare."[328] The court explained:

> Chrome does not run as a standalone business. At the most basic level, it depends on Google for a host of administrative functions, such as finance, marketing, and human resources. . . . [T]here are the host of Google's private APIs that Chrome is dependent upon and that are critical to its product performance and functionality. These include safe browsing, price tracking, translation, and automatic updates, to name a few. Chrome would be a shell of the product that it is today without access to those APIs.[329]

This observation highlights one made above, which is that the idea that divestitures are single "one-and-done" deals that do not involve the court in substantial issues of management and product design are largely imaginary, at least in cases that are more complex than dividing up a single-product farm.

B. *"Quasi-Structural" Relief on Digital Markets*

By refusing the request to divest Chrome but compelling sharing of search index data, did the court in fact reject "structural" relief? One important feature of digital assets is that in most situations they cannot be broken up, but they can be shared. In other words, if you want to move a digital asset from one to many competing sellers, the way to do it is not to break it into pieces but rather to use compulsory, nonexclusive licensing. A nonexclusive license gives the licensee the right to do everything the original owner can do, assuming that the license

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[323] *Id.* at 100 (citations omitted) (quoting United States v. Microsoft Corp., 253 F.3d 34, 107 (D.C. Cir. 2001)).

[324] 366 U.S. 316 (1961).

[325] *Google*, 803 F. Supp. 3d at 100 (acknowledging case does not involve Clayton Act § 7 or monopoly created through anticompetitive mergers).

[326] *See id.* (recognizing Google's construction of Chrome "from the ground up" and continuous investments of billions of dollars in product).

[327] *Id.*

[328] *Id.* at 101.

[329] *Id.* 100-01 (citations omitted).

itself does not state limits, and it does not give the licensee the right to exclude others.[330]

The quality of the Google Search engine is driven mainly by the size and quality of its search index, which is a very large database of all of the pages that Google Search has scanned.[331] When a user conducts a search on Google, the query is run through this index rather than the original web pages across the entire internet. The index is updated continuously. A larger index provides better results than a smaller index of equal quality.[332] Size of the index becomes more important as a search becomes more idiosyncratic or requires more minute detail. The court spoke of these as "[l]ong-tail queries" that involve "less common, more distinctive phrases."[333] Individually, such queries are less common, but in the aggregate their impact is substantial, and the size of Google's database gave it a distinctive advantage. In addition, the court described less common "local" queries, where the information was exclusive to a particular location, and also "fresh" queries that were of recent events.[334] For all of these, Google was "better equipped to handle" them "because it simply sees more of them."[335]

As of July 2025, the Google Search index included roughly fifty billion web pages, while Microsoft Bing's index, likely the second largest, contained twelve billion web pages.[336] This size advantage is what made Google's Search index database so valuable.[337] However, for most common searches the size difference may not matter all that much. Both Google's index and Bing's smaller index were likely to cover these types of searches. The superiority of the Google Search index was more likely to show up in these long-tail, local, and fresh

[330] For a discussion of the use of nonexclusive licensing as an antitrust digital divestiture remedy, see Hovenkamp, *supra* note 151, at 74-79. For an exploration of the costs and benefits of compulsory licenses as a remedy for mergers, see generally Sturiale, *supra* note 34.

[331] *See How Google Search Organizes Information*, GOOGLE, https://www.google.com/intl/en_us/search/howsearchworks/how-search-works/organizing-information [https://perma.cc/B6Y7-R3HM] (last visited Mar. 12, 2026) ("The Google Search index covers hundreds of billions of webpages and is well over 100,000,000 gigabytes in size."); Daisuke Wakabayashi, *Google Dominates Thanks to an Unrivaled View of the Web*, N.Y. TIMES (Dec. 14, 2020), https:// www.nytimes.com/ 2020/ 12/ 14/ technology/how-google-dominates.html (estimating Google's index includes between five hundred billion and six hundred billion webpages).

[332] *See Google*, 803 F. Supp. 3d at 108 (addressing how Google's "sizeable scale advantage" over its rivals hindered rivals' ability to compete).

[333] *Id.* at 85.

[334] *See id.* at 86 ("Local queries . . . are limited in geographic scope and 'deal[] with information or locations in the real world' . . . . Fresh queries ask about trending topics or recent events.").

[335] *Id.* (citing United States v. Google LLC, 747 F. Supp. 3d 1, 49-50 (D.D.C. 2024)).

[336] *See* Robert A. Lee, *Bing vs. Google Statistics 2025: Market Share, AI, and User Trends*, SQ MAG. (Oct. 1, 2025), https://sqmagazine.co.uk/bing-vs-google-statistics [https://perma.cc/7UAU-WGNN].

[337] *See Google*, 803 F. Supp. 3d at 86-87.

searches.[338] The court cited evidence that if Bing had access to Google's long-tail data, the quality of its searches would improve.[339] Nevertheless, its market share would grow by only a small amount, because such searches were a relatively small percentage of searches generally.[340]

Because the quality of the index is so heavily driven by its size, the index cannot be "broken up" without seriously impairing its functionality. However, it can readily be copied and shared because its content is entirely digital. Between the remedies of creating two competitors by cutting the index in half or creating two competitors by giving a second firm a nonexclusive license, the latter is far superior. Notably, there is no technical limit on the number of firms who can share the index, although competitive constraints most likely make a fairly small number optimal. By contrast, breaking up this database would ruin its performance.

Similar structural logic governs other digital assets as well. For example, if Facebook, Meta's principal asset, were subjected to a structural remedy, the worst way to go about it would be to divide up its features, with one user getting the ability to post videos while another got the ability to post still photos. Equally bad would be a division by user identity—perhaps boys on one version and girls on the other, or the northern hemisphere on one version and the southern hemisphere on the other. Such contemplated divisions would make Meta much less valuable than it is now, so much so that it would likely go bankrupt, injuring users in the process.

For this reason, the use of nonexclusive licenses to generate competition on digital assets is superior to traditional breakups in old economy markets. These include the division of Standard Oil, Grinnell, or United Shoe Machinery. As noted above, one deficiency of those decrees is that many of them did not actually break into the monopoly at all or did so only in a much more limited fashion than intended.[341] Mainly, they created smaller territorial monopolies that did not compete with one another and retained considerable power in their newly assigned markets.[342]

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338 *See id.* at 85 ("Google's scale advantage is particularly pronounced with respect to long-tail, local, and fresh queries.").

339 *See id.* at 109 n.15 (pointing to study which "estimated that with access to Google's long-tail data Bing's quality on desktop would improve, as measured by click-through rate, i.e., the ratio of users who click on a specific link or ad as compared to the number of total users who view it").

340 *See id.* (noting estimates of 1% change in Bing's market share in response to search quality improvements).

341 *See supra* Section II.C (discussing difficulties of finding suitable fault lines for breakups).

342 *See* Michael Reksulak, William F. Shughart II, Robert D. Tollison & Atin Basuchoudhary, *Titan Agonistes: The Wealth Effects of the Standard Oil (N.J.) Case*, *in* 21 ANTITRUST LAW & ECONOMICS: RESEARCH IN LAW & ECONOMICS 63, 66 (John B. Kirkwood ed., 2004) ("By respecting each other's Court-created territorial monopolies, by continuing to

Even in settings that are thought to be more amenable to traditional structural relief, such as multistore retailers or airlines, breakups are far from perfect.[343] For example, while a large grocer such as Kroger has thousands of stores, a breakup requiring divestiture of some of them would have different competitive effects in different markets. In a few markets with two Kroger stores in close proximity and no alternatives, the breakup would increase competition. In others, however, the two stores would be further apart and there could be other third-party stores in the same area. Accordingly, the impact on competition would be substantially less.

By contrast, nonexclusive licensing of a digital asset such as the Google Search index would yield multiple firms with access to the same asset, undiminished, and in a position to compete head-to-head across the entire market. They could decide whether to differentiate their product based on their choice of competitive strategy.

As noted earlier, few structural divestitures in old economy markets actually break into the monopoly. Sometimes they change one large monopoly into several smaller ones. Sometimes they leave the monopoly asset intact but break off a complementary product. That was true of the requested relief in *Google Search*, requiring Google to spin off the Chrome browser.[344]

The best way to view compulsory licensing of a digital product is as a form of "quasi-structural" relief, with many of the attributes of a physical division of assets. In two critical senses, licensing can perform better than a breakup. First, it can leave an entire search engine intact, without impairing the economies of scale or scope that a larger index is able to provide. Second, it creates multiple individual suppliers who can compete head-to-head, or not, depending on individual incentives to differentiate. Breakups of physical assets in nonmerger cases rarely do that.

The court's principal task for digital assets should be determining the scope and anticipated effectiveness of a nonexclusive license. If too little is shared, we cannot expect effective competition to emerge. On the other hand, sharing too much may eliminate the incentives of licensees to develop and differentiate their own products. The goal should not be simply to create a number of "agents" who function as mere resellers of a product that an entrepreneurial firm created. For example, you do not increase airline competition by increasing the number of travel agents. Effective competition requires a differentiated market in which each seller provides a product that reflects a significant individual contribution.

collude with the railroads, or both, the newly formed regional 'Baby Oils' may have transformed the government's victory . . . into a Pyrrhic one.").

[343] *See, e.g.*, FTC v. Staples, Inc., 970 F. Supp. 1066, 1091 (D.D.C. 1997) (discussing infeasibility of "[u]nscrambling the eggs" if merger between Staples and Office Depot were to proceed).

[344] *See Google*, 803 F. Supp. 3d at 42 (outlining government's proposal of immediate divestiture of Chrome).

C. *Natural Monopoly*, *Product Differentiation and the Impact of GenAI*

One problem in turning search into a more competitive market is determining the effects and range of economies of scale. One possibility is that search is a natural monopoly, or a product whose costs decline (or value improves, in the case of networks) continuously as it becomes larger, all the way to the point that the entire market is saturated.[345] In that case no long-run equilibrium will accommodate more than a single firm. Creating more competitors might be a hopeless task and the conventional solution would be recognition of monopoly status plus regulation of prices, such as we do for retail electricity.

It is unlikely that simple nonexclusive licensing without product differentiation would address this problem because the multiple licensees would go on selling identical products independently, and under natural monopoly conditions this would be better accomplished by a single firm.

Neither of the Google opinions made conclusive fact findings on the natural monopoly issue. One question has to do strictly with scale of an undifferentiated product. Over a significant range, a larger search index has advantages over a smaller one. These advantages might remain theoretically relevant as the size of the index is larger, but the advantages will pertain to an even lower percentage of extreme searches, as the court found in this case.[346] Suppose once the index gets to a certain point these advantages are barely noticeable. In that case, increased competition among multiple firms would force them to hold markups close to their costs, and this might outweigh the advantages of a superior index that could perform better. Indeed, Bing has been operating profitably for years even though it has only the second-largest search index.[347]

Product differentiation can disrupt natural monopoly—something that Judge Mehta seemingly appreciated in devising his remedy in *Google Search*. Indeed, the principal reason that Google Search acquired and maintained the monopoly that it did was that search historically has not successfully experienced a great deal of product differentiation. GenAI is thus an important wild card. One serious possibility is that GenAI will differentiate search sufficiently such that it will no longer be a natural monopoly, assuming that it was one.[348]

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[345] *See* Richard A. Posner, *Natural Monopoly and Its Regulation*, 21 STAN. L. REV. 548, 548 (1969) ("If the entire demand within a relevant market can be satisfied at lowest cost by one firm rather than by two or more, the market is a natural monopoly . . . . [and] [c]ompetition is thus not a viable regulatory mechanism . . . .").

[346] On long-tail and other idiosyncratic searches, see *supra* Section III.B.

[347] *See* Brian Dean, *Microsoft Bing Usage and Revenue Stats (New Data)*, BACKLINKO (Sep. 25, 2025), https://web.archive.org/web/20251104114128/https://backlinko.com/bing-users.

[348] On the importance of product differentiation in maintaining digital competition, see Herbert Hovenkamp, *Antitrust and Platform Monopoly*, 130 YALE L.J. 1953, 1996-2001 (2021). Indeed, commentators have recognized that the principal benefit of AI is increased innovation. *See, e.g.*, Robert G. Cooper, *The AI Transformation of Product Innovation*, 119 INDUS. MKTG. MGMT. 62, 62 (2024).

Traditional models of natural monopoly rest on two assumptions. One is that global economies of scale persist until market demand is saturated.[349] For that reason, any larger firm has cost advantages over a smaller one and the equilibrium number of firms in the market is one. The second assumption, however, is that all of the relevant firms face the same demand curve.[350] Traditionally, most recognized natural monopolies have been in markets such as public utilities where product offerings are largely undifferentiated.[351] The same thing was true of the pre-breakup telephone system. Users were hardwired to one another, and product differentiation was minimal, so the system was widely regarded as a natural monopoly.[352]

The *Google Search* opinion devoted a great deal of discussion to GenAI's impact on the search market. That was critical for a couple of reasons. First, the trial record contained very little evidence about the entry, rapid expansion, and expected market impact of AI, even though the trial had occurred only a year earlier. That in itself poses a significant problem for awarding aggressive relief in a rapidly changing market. Google Search's future looked much different in August 2025 than it had a year earlier. As the court observed, while GenAI was "not yet close to replacing" general search engines ("GSEs"), "the industry expects that developers will continue to add features to GenAI products to perform more like GSEs."[353] In this case, not a single witness testified at the liability phase that GenAI products were a significant threat to GSEs.[354] The Court noted that "[t]he very first witness at the remedies hearing, by contrast, placed GenAI front and center as a nascent competitive threat."[355] Many of the plaintiffs' proposed remedies reflected these objectives.[356]

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[349] *See* ROBERT COOTER & THOMAS ULEN, LAW & ECONOMICS 29 (6th ed. 2012) (asserting natural monopoly "owes its existence to economies of scale").

[350] In a true natural monopoly, the demand curve facing the monopolist is the entire industry's demand curve. *See id.* at 31.

[351] *See* Posner, *supra* note 345, at 548 (discussing direct controls typically applied to public utility regulation because, as natural monopolies, competition is ineffective regulatory mechanism).

[352] With particular reference to AI models, see JON SCHMID, TOBIAS SYTSMA & ANTON SHENK, EVALUATING NATURAL MONOPOLY CONDITIONS IN THE AI FOUNDATION MARKET MODEL 8 (2024), https://www.rand.org/content/dam/rand/pubs/research_reports/RRA3400/RRA3415-1/RAND_RRA3415-1.pdf ("[T]he more homogeneous (i.e., less differentiated) the products under consideration are, the stronger will be the case for natural monopoly.").

[353] United States v. Google LLC, 803 F. Supp. 3d 18, 36 (D.D.C. 2025).

[354] At the liability phase the court did discuss GenAI, although mainly in reference to its use in improving search results. *See* United States v. Google LLC, 747 F. Supp. 3d 1, 52-54 (D.D.C. 2024). However, it concluded: "Despite these recent advances, AI has not supplanted the traditional ingredients that define general search." *Id.* at 53.

[355] *Google*, 803 F. Supp. 3d at 36.

[356] *See id.* (explaining how "[m]any of Plaintiffs' proposed remedies are crafted with" objective of "ensuring that Google's dominance in search does not carry over into the GenAI space").

Second, the intense jockeying for AI position in the incorporation of GenAI into search means that Google's continued dominance is no longer a foregone conclusion. It is too early to say how that battle will end, and Google is certainly a powerful player. Nevertheless, the market contains other powerful players as well and much more innovation and product development lies in the future. As of November 2025, ChatGPT, which partners mainly with Microsoft and Apple, has a market share of roughly 81% among AI chatbots, whereas Google Gemini's share, which is currently incorporated into Google Search, has just over 3%.[357] But these numbers are changing continuously. One possibility is a future of AI-enhanced search in which Google is no longer the dominant player, or merely shares its position with other search engines of similar size.

AI incorporation into search promises significantly greater amounts of product differentiation, the importance of which is difficult to exaggerate in digital markets. The winner-take-all (or winner-take-most) status of digital search rests on a premise that effective product differentiation is difficult to attain.[358] Accordingly, customers tend to flock to a single "best" product, which in search translates into the largest database.

That is not the case for other digital platforms, such as social networks, dating sites, games, and periodicals. Internally, any one of these platforms exhibits economies of scale in production or consumption that favor larger platforms.[359] Once they attain a certain volume, however, scale as such counts for less and product distinctiveness counts for more.[360] Therefore, these sites can survive in a competitive equilibrium that includes multiple competitors in the same market.

As Judge Mehta observed, "undifferentiated entry seems almost impossible" for a firm contemplating competition against a large established network such as Facebook.[361] By contrast, under product differentiation, each firm faces somewhat different demand, and natural monopoly becomes less likely.[362] Thus, the prospects for entry with unique, or differentiated products, are much higher. For example, digital video games are marketed on digital platforms where

357 *AI Chatbot Market Share Worldwide*, STATCOUNTER (Nov. 2025), https://web.archive.org/web/20251212234136/https://gs.statcounter.com/ai-chatbot-market-share (depicting per platform global market share for AI chatbots).

358 *See* Hovenkamp, *supra* note 348, at 1996-97 (discussing dating apps as example of product differentiation in digital platforms).

359 *See* Rebecca Kirk Fair, Rebecca Scott & Kristof Zetenyi, *Platform Mergers in the Digital Age: Economics, Regulation, and Enforcement*, ANTITRUST MAG., Apr. 21, 2025, at 46, 47 ("[A] digital platform's value to its users often increase[s] with the size of its user base, [and] its average costs often *decline* as its user base grows.").

360 *See* SCHMID ET AL., *supra* note 352, at 9 (highlighting product differentiation as one key for digital products to succeed in competitive market).

361 *See Google*, 803 F. Supp. 3d at 111 (quoting AREEDA & HOVENKAMP, *supra* note 89, ¶ 421h).

362 *See* SCHMID ET AL., *supra* note 352, at 8 (considering how differentiated products are "imperfect substitutes for each other and thus compete, at least in part, to satisfy the same market demand").

economies of scale are very substantial. That is, per-use costs of provision go down as the number of paying users increases. However, digital video games are also significantly differentiated and appeal to different consumer tastes. As a result, there is room for many of them in the market.[363] The same thing is true of digital periodicals, dating sites, and other types of networked digital business. Indeed, product differentiation and new entry undermined the FTC's case against Facebook (Meta).[364] Relatively recent entrants such as TikTok needed to be included in the relevant market, making Facebook's market share too low for the monopolization offense.[365]

One feature of AI in particular is the opportunities it creates for differentiated search.[366] Under effective differentiation, it may very well be unnecessary to solve the natural monopoly problem. At this writing, much of that development is in the future, but facilitating differentiation could be significant in contravening natural monopoly, and the potential for AI to neutralize monopoly is reflected in Judge Mehta's decision to pursue remedies conservatively. Currently, as Judge Mehta observed, there is a great deal of jockeying for position in AI and AI-search-related markets.[367] Presumably that will stabilize at some point in the future, but it remains to be seen how many firms will survive and how differentiated they will be. Google's emergence at the top is hardly a foregone conclusion. One thing that seems likely, however, is that search will

[363] *See id.* at 9 (highlighting nature of consumers to use multiple video games without incurring much loss). For a continuously updated listing and ranking of streamed video games, which number in the thousands, see *The Most Popular Games on Twitch, November 2025*, TWITCHMETRICS, https:// www.twitchmetrics.net/games/popularity [https:// perma.cc/K3KV-67Y9] (last visited Mar. 12, 2025) (for listings and rankings used in this piece reference perma).

[364] FTC v. Meta Platforms, Inc., No. 20-3590, 2025 WL 3458822 (D.D.C. Dec. 2, 2025).

[365] *See id.* at *23-24 (finding TikTok appropriately belongs in relevant market because it exerts enough competitive pressure on Google to restrain monopoly power); *see also* United States v. Grinnell Corp., 384 U.S. 563, 570-71 (1966) (asserting possession of monopoly power in relevant market is required for monopolization offense).

[366] *See* SCHMID ET AL., *supra* note 352, at 42-45 (outlining scenario in which AI could assist in differentiation); *Google*, 803 F. Supp. 3d at 109 (citing AREEDA & HOVENKAMP, *supra* note 89, ¶ 653i2) (stating in shared market subject to non-exclusive licensing, competitive advantage of each firm "will have to come from innovation and differentiating their search services from Google's"). Judge Mehta characterized Dr. Kevin Murphy's testimony on competitors as "driving product differentiation and ultimately enhancing consumer welfare." *Id.* at 111; *see also* AREEDA & HOVENKAMP, *supra* note 89, ¶ 421h ("If network[] [effects] are significant, providing ever increasing returns to firms as users on one or both sides of a platform increase, then undifferentiated entry seems almost impossible.").

[367] *See Google*, 803 F. Supp. 3d at 58.

be significantly more differentiated, and thus structurally more competitive, than it has been in the past.[368]

D. *Facilities-Based Licensing*

Another feature of the court's search index sharing remedy is limitations on the number of implementers who are permitted to share the search index database, as well as on the nature and frequency of sharing.[369] The obligation to share search index data was extended to "Qualified Competitors," a currently undetermined list of firms.[370] In order to qualify, a competitor must meet security standards as set by a supervisory committee and also agree to regular audits.[371] Further, it must have a "plan to invest and compete" in the search market.[372]

Additionally, Google's duty under the decree was to provide a "one-time snapshot of the relevant data contained in Google's Search Index at or around the time they are so certified."[373] From that point the expectation is that Qualified Competitors would "build their own search indexes" in order to fill out their customers' needs.[374] As the court stated, "[f]or Qualified Competitors to compete, they must innovate and differentiate their product from Google's rather than simply feeding off Google's work."[375] This limitation on the data served two purposes. First, it limited the number of licensees to a small number of firms who have or are capable of making their own significant investments in search. Second, to the extent that each licensee would unilaterally develop its own finished product, the result would be a more differentiated search market.

The point of limiting Google's responsibility to providing a "one-time snapshot" of search index data, as the court observed, was to ensure that Qualified Competitors did not unreasonably benefit from more information than what is reasonable and relevant for competition.[376] Excessive provision of data "would encourage market entry by 'white label' GSEs in the short term—that

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[368] For a good summary of the current state of AI-driven search differentiation, see Sofianna Ng, *Best AI Search Engines to Use in 2025 (Top 15 Picks)*, ADDLLY (June 10, 2025), https://addlly.ai/blog/best-ai-search-engines [https://perma.cc/TB2V-BCFV].

[369] *See Google*, 803 F. Supp. 3d at 115 (outlining court's process of limiting remedy to include "data shared only to what is contained in Google's web search index").

[370] *See id.* at 114 (identifying "Qualified Competitors" as target beneficiary of search index sharing remedy).

[371] *See id.* at 93 (describing proposed definition of "Qualified Competitor" and standards each firm must satisfy).

[372] *Id.*

[373] *Id.* at 117-18.

[374] *Id.* at 118.

[375] *Id.*

[376] *Id.* (stating "one-time disclosure of Google's current Search Index data" is sufficient to allow Qualified Competitors to compete).

is, a GSE that would seek simply to present Google search results under a different brand name."[377]

In *Microsoft*, the D.C. Circuit rejected one particular proposal made by the states:[378] that Microsoft's Internet Explorer browser be transformed into an open source program that could be used royalty free by competitors.[379] The court treated this expansive sharing obligation as no different in principle from a divestiture, noting that it would "confiscate much of the value of Microsoft's investment."[380]

The sharing obligation in Google Search was significantly less. First, it left Google itself as the major player in the search market, but with the prospect that its Qualified Competitor licensees would begin catching up to its position. Second, the order contemplated a relatively small number of recipients rather than the very large number that might result from simply dedicating the search database to the public through something like an open-source commitment. Third, the duty to share was not at no cost, but rather stated to be at marginal cost.[381] Significantly, however, that duty ran only to the one-time snapshot of Google's index data, creating no obligation to supply data on an ongoing basis. For right now this appears to be a reasonable and intelligent guess at the right size and scope of the licensed data.

E. *Dealing Duties and the Court's Supervisory Role*

One traditional argument favoring structural relief was that it can be one-and-done, with no obligation for the court to engage in ongoing supervision of a regulatory decree. That argument seems quite unrealistic today, particularly in complex markets with significant intellectual property or a digital component. For example, separating the various components of the Bell System in the AT&T consent decree required numerous agreements for licensing of intellectual property, to say nothing of monitoring the interconnection agreements that ultimately increased competition in the telephone system considerably.[382] No

[377] *Id.* at 133. The court also observed that "[s]uch entrants could exist for years at nominal cost and will lack the incentive to differentiate and invest for the long term." *Id.*

[378] The federal government had approved the district court's remedy decree, but some participating states, including Massachusetts and New York, objected. *See* New York v. Microsoft Corp., 224 F. Supp. 2d 76, 87 (D.D.C. 2002).

[379] *See* Massachusetts v. Microsoft Corp., 373 F.3d 1199, 1230 (D.C. Cir. 2004) (rejecting states' proposal of allowing competitors to use Internet Explorer royaltyfree because remedy would be too expansive).

[380] *Id.*

[381] *See Google*, 803 F. Supp. 3d at 118 (clarifying "making Google's Search Index data available at marginal cost" as part of court's remedy guards against Google selling dataset at unreasonably high prices).

[382] *See* Maham Usman, *Breaking Up Big Tech: Lessons from AT&T*, 170 U. PA. L. REV. 523, 539-40 (2022) (suggesting "monitoring and regulation" of "post-divestiture interactions" between two large networks is essential to ensure successful breakup).

one could believe that disentangling Google Search from the Chrome browser, as the Antitrust Division requested in *Google Search*, would involve anything as simple as drafting an intellectual property transfer or executing a stock sale. Judge Mehta's opinion made clear that the divestiture would be both "messy and highly risky" to the viability of other Google assets.[383]

"Nonstructural" decrees of the kind that the *Microsoft* decision approved do require some ongoing supervision, but if the decrees are designed well, the supervision need not be excessive. These decrees often involve dealing obligations. Here, it is important to distinguish duties to deal as a doctrine of antitrust liability, which the Supreme Court severely limited in *Verizon Communications Inc. v. Law Offices of Curtis V. Trinko, LLP*,[384] and dealing duties that are part of a remedy for other types of antitrust conduct found to be unlawful. The Ninth Circuit noted the distinction in *In re Google Play Store Antitrust Litigation*:[385]

> Google's reliance on the Supreme Court's *Trinko* decision for the proposition that "forced sharing" creates "tension with the underlying purpose of antitrust law" is misplaced. That case addressed the question of whether a unilateral refusal to deal with rivals violates Section 2 of the Sherman Act—*not* the legality of compelling a defendant already found liable under that statute to deal with its competitors. . . . [I]t is well established that antitrust remedies can and often must proscribe otherwise lawful conduct to unwind and further prevent violators' anticompetitive activity.[386]

At the same time, when addressing the decree against the NCAA in *Alston*, the Supreme Court cited *Trinko* in a warning against "highly detailed" decrees that would require "continuing supervision."[387] It also warned that the "[c]osts associated with ensuring compliance with judicial decrees may exceed efficiencies gained," and that "the decrees themselves may unintentionally suppress procompetitive innovation and even facilitate collusion."[388] However, it then went on to approve a decree that limited student compensation for non-education-related activities and prohibited students from receiving compensation for other activities.[389]

The *Google Search* remedy required a single transfer of a predetermined asset at a price equal to marginal cost. That term is subject to interpretation, and of

383 *See Google*, 803 F. Supp. 3d at 100.

384 540 U.S. 398 (2004).

385 147 F.4th 917 (9th Cir. 2025).

386 *Id.* at 948 (citation omitted).

387 *See* NCAA v. Alston, 141 S. Ct. 2141, 2163 (2021) (quoting *Trinko*, 540 U.S. at 415) (discussing importance of using caution when assigning strict remedies that will require supervision in changing market).

388 *Id.*

389 *See id.* at 2164 (finding remedy enjoining "only restraints on education-related benefits" was limited enough such that court would be able to adequately supervise).

course the court may later be required to intervene if the parties cannot agree on the number. Whether a significant dispute emerges about the precise scope of the data that must be shared remains to be seen. But in the world of remedial decrees, this one does not appear to be prohibitively complex.

F. *Permitting Prohibited Conduct*

One controversial part of the *Google Search* remedial order was that it refused to terminate all of the payments that Google had made to implementers, and even suggested that contracts for one year or less that contemplated the installation of Google Search as a default could be permitted.[390] The court was clearly aware of arguments such as the one made by Mozilla that its survival very likely depended on Google's continued payments.[391] At the same time, these payments, which the court characterized as a "joint venture, partnership, or collaboration," would certainly be expected to cease if Mozilla dropped Google Search as its default search engine and switched to another.[392]

On this point the *Google Search* decision seems to track one aspect of the *Microsoft* decision. The *Microsoft* merits decision condemned Microsoft's "commingling" of the Internet Explorer browser code into its Windows operating system so as to make effectively a single product.[393] However, the remedy that the court subsequently approved permitted the commingling, although it did allow computer manufacturers to "disable" user access to Internet Explorer, which apparently none have done.[394] The decree also permitted users to remove the Internet Explorer icon from the desktop.[395] The D.C. Circuit followed the district court's conclusion that "paramount significance" must be attached to "the exclusionary effect of the commingling, rather than the mere conduct which gives rise to the effect."[396] The court agreed that focusing on the effect of the commingling would "avoid[] the drawbacks of the States' proposal requiring Microsoft to redesign its software," which would have negatively affected the quality of complementary software.[397] Further, because the lower

390 *See* United States v. Google LLC, 803 F. Supp. 3d 18, 37 (D.D.C. 2025) (preventing Google from entering into exclusive contracts with implementers longer than one year).

391 *See supra* note 275 and accompanying text (discussing negative implications of cutting Google's revenue for Mozilla, which receives its largest source of income from Google).

392 *See Google*, 803 F. Supp. 3d at 155 (stating Google would have to report to plaintiffs if it chose to invest in other large firms).

393 *See* United States v. Microsoft Corp., 253 F.3d 34, 66-67 (D.C. Cir. 2001).

394 *See* Massachusetts v. Microsoft Corp., 373 F.3d 1199, 1238 (D.C. Cir. 2004) (allowing original equipment manufacturers "to disable end-user access to IE, and thereby to avoid the costs of having to support both IE and a rival browser").

395 *See id.* (indicating remedy included giving users "ability to remove IE icons" from their desktops).

396 *Id.* at 1208.

397 *See id.* at 1209 (describing how remedy implemented by district court effectively avoids "costs associated with supporting more than one internet browser").

court's remedy avoided the difficulty of distinguishing between "operating system" code and "non-operating system" code, which would have been required had the court adopted the states' proposed remedy, the D.C. Circuit found the remedy appropriate.[398] Today, Windows desktop computers are sold with Edge preinstalled.[399] However, at the time of this writing, Windows is used on 69% of desktops,[400] while Edge is used on 10%, indicating that most Windows users switch away from the default.[401]

The remedies in *Google Search* could have been clearer, because some language in the opinion seemed to permit the very conduct that the decision on liability condemned, but without the justifications that were offered in *Microsoft*.[402] One distinction is that the remedy order limited Google's ability to form exclusive distribution agreements for more than one year.[403] Short duration can suggest the legality of exclusive dealing cases generally, and a duration of one year or less frequently saves exclusive dealing agreements from liability.[404] One doubts that this modification, standing alone, would move the needle very much, but it must be read together with the court's other remedies. Eventually, one suspects, more clarity will be needed concerning when payments are allowed and when they can be conditioned on default status.

CONCLUSION

The goal of an antitrust remedy is the same as the goal that courts employ in identifying an antitrust violation. The remedy will be evaluated by determining whether the decree brings prices down (where relevant), boosts output, or removes any restraints on product development or innovation. At the same time,

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398 *See id.* at 1208 (agreeing with district court that states' "technologically impossible" proposed task of requiring "Microsoft to remove Windows software code" was unfeasible).

399 *See Why Is Microsoft Edge on My Computer?*, UMATECHNOLOGY (Jan. 20, 2025), https:// umatechnology.org/why-is-microsoft-edge-on-my-computer [https://perma.cc/5ACX-7PVG].

400 *Desktop Operating System Market Share Worldwide*, STATCOUNTER, https://gs.statcounter.com/os-market-share/desktop/worldwide [https:// perma.cc/ETH6- NZBS] (last visited Mar. 12, 2026).

401 *Desktop Browser Market Share Worldwide*, STATCOUNTER, https://gs.statcounter.com/browser-market-share/desktop/worldwide [https://perma.cc/UT84-WHE9] (last visited Mar. 12, 2026).

402 On this point, see Erik Hovenkamp & Douglas Melamed, *Appraising the Google Search Antitrust Remedies*, PROMARKET (Sep. 23, 2025), https://www.promarket.org/2025/09/23/appraising-the-google-search-antitrust-remedies [https://perma.cc/AQX7-BUC9].

403 The court's order barred Google from entering any exclusive contract that "conditions the receipt of revenue share payments on maintaining Google Search, Chrome, Google Assistant, or the Gemini app on any device, browser, or search access point for more than one year." United States v. Google LLC, 803 F. Supp. 3d 18, 37 (D.D.C. 2025).

404 *See* AREEDA & HOVENKAMP, *supra* note 89, ¶ 1802g (stating "contract duration is one of many factors that guide the inquiry" into whether contract is anticompetitive, with short contract terms less likely to harm competition).

every remedy involves tradeoffs. The more complex the market situation, the more tradeoffs are likely to emerge.

Judge Mehta's decree in *Google Search* is an exemplary effort in balancing the goal of an antitrust remedy with a specific remedy's tradeoffs. Reasonable and knowledgeable people may certainly quibble about the details of the decision and undoubtedly will for some time. Predicting how a market will respond is a hazardous exercise, even in circumstances that are much simpler than *Google Search* presents. That makes the identification of appropriate antitrust remedies against single-firm misconduct about the most difficult thing that antitrust judges do.