Antitrust Law's Breakup Obsession

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I. INTRODUCTION

Calls to "break up" big tech have been numerous, persistent, and loud.[1] Recent antitrust decisions in the federal courts have generally not been supportive. One court has condemned Google's monopolization of computer search but declined the Government's request for a breakup.[2] In another case involving Google ad technology the court found unlawful monopolization,[3] but declined the Government's request for a breakup.[4] A third

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1. *See, e.g.*, ZEPHYR TEACHOUT, BREAK 'EM UP: RECOVERING OUR FREEDOM FROM BIG AG, BIG TECH, AND BIG MONEY 10 (2020) ("No democracy can survive for long once a few corporations have amassed governmental power"); Tim Wu, *Tech Dominance and the Policeman at the Elbow*, *in* AFTER THE DIGITAL TORNADO: NETWORKS, ALGORITHMS, HUMANITY 81–99 (Kevin Werbach ed., 2020); Josh Hawley, *Sen. Hawley: Break Up Big Tech Behemoths to Reclaim American Freedom*, N.Y. POST (Apr. 30, 2025), https://nypost.com/2025/04/30/opinion/sen-hawley-break-up-big-tech-to-reclaim-american-freedom/ [https://perma.cc/GNX2-9ML3]; Kyle Broadfoot, Comment, *Elizabeth Warren Wants to Break Up Big Tech. Can She?*, 1 CORP. & BUS. L.J. 1, 2 (2020); Daniel A. Hanley, *Antitrust Liability Obligates Structural Change*, THE SLING (Aug. 17, 2025), https://www.thesling.org/antitrust-liability-obligates-structural-change/ [https://perma.cc/9VDA-2TAV]; *see also* Senator Elizabeth Warren, What's Next For Big Tech, Keynote Speech at RemedyFest Conference (Feb. 27, 2024), https://www.warren.senate.gov/wp-content/uploads/media/doc/Senator%20Warren%20-%20RemedyFest%20speech.pdf [https://perma.cc/8GBJ-34P8] (explaining that in relation to breaking up big tech "[w]e're just getting started"). For pushback and alternatives, see Herbert Hovenkamp, *Antitrust and Platform Monopoly*, 130 YALE L.J. 1952, 2050 (2001); *see also* Herbert Hovenkamp, *Antitrust Interoperability Remedies*, 123 COLUM. L. REV. F. 1, 7 (2023) (critiquing arguments calling for the breakup of big tech).

2. United States v. Google LLC, 803 F. Supp. 3d 18, 98–99 (D.D.C. 2025).

3. United States v. Google, LLC, 778 F. Supp. 3d 797, 873 (E.D. Va. 2025).

4. United States v. Google LLC, No. 1:23-CV-108, 2026 WL 2754741, at *47 (E.D. Va. Sep. 2, 2026).

decision dismissed a monopolization claim against Meta (Facebook).[5] The government antitrust agencies had requested breakups in all three cases.

The *Google* decisions reflect what has become a pattern since the *Microsoft* decision in 2001: even when Government enforcers win on the merits and request a breakup, the courts disfavor structural relief in monopolization cases against big tech.[6] So far, no court has ordered a breakup remedy in a big tech monopolization case. Are the courts being excessively conservative or cautious? Is the government simply making unrealistic requests?[7] Or is breaking up big tech simply not in the public interest?

The antitrust law of remedies for anticompetitive conduct by dominant firms has been driven by two goals that are often in conflict. One of them reflects a theme that the Supreme Court has expressed for a century: that the purpose of an antitrust remedy is to "restore competitive conditions."[8] The second is that antitrust should break up unlawful monopolies.

These goals conflict because structural breakups of single firms for nonmerger conduct rarely result in more competitive market performance. After some early use, court-ordered divestitures in Sherman Act § 2 cases have become rare. One reason is that it is nearly impossible to look back and identify divestiture remedies for nonmerger conduct that actually resulted in increased competitive performance. At worst, they can destroy the firm in question, but at best they do very little to yield lower prices, higher output, or other indicia of greater competition. If a remedy is successful, the market should perform better by these metrics once the remedy has taken effect.

The Supreme Court's statement that a remedy should "restore competitive conditions" came in the *International Harvester* (IH) decision and specifically referred to the ability of an antitrust judgment to bring prices down.[9] The Government brought that case in response to a 1918 Senate Resolution that instructed the Federal Trade Commission to investigate the cause of "the high prices of agricultural implements."[10] The FTC's investigation covered the period 1912–1918 and blamed the higher prices on Harvester's consolidation of the industry.[11] Most of the challenged conduct was mergers that brought five original companies within IH. The decree dissolved some of these acquisitions and required the

5. Fed. Trade Comm'n v. Meta Platforms, Inc., 811 F. Supp. 3d 67, 123 (D.D.C. 2025), *appeal docketed*, No. 26-5028 (D.C. Cir. Jan. 26, 2026).

6. United States v. Microsoft Corp., 253 F.3d 34, 52, 80 (D.C. Cir. 2001) (finding monopolization but declining government's request for divestiture); Massachusetts v. Microsoft Corp., 373 F.3d 1199, 1231, 1248 (D.C. Cir. 2004) (approving consent decree with no divestiture requirements, rejecting challenge by some states that preferred a divestiture remedy).

7. On the urge to break up dominant firms, see Carl Shapiro, *Antitrust: What Went Wrong and How to Fix It*, 35 ANTITRUST 33 (2021) (explaining how antitrust is not a "cure-all" for economic problems in the U.S.); William E. Kovacic, *Failed Expectations: The Troubled Past and Uncertain Future of the Sherman Act as a Tool for Deconcentration*, 74 IOWA L. REV. 1105, 1150 (1989).

8. United States v. Int'l Harvester Co., 274 U.S. 693, 697 (1927).

9. *Id.* at 699–700.

10. *Id.* at 699.

11. *Id.*; *see* FED. TRADE COMM'N, REPORT OF THE FEDERAL TRADE COMMISSION ON THE CAUSES OF THE HIGH PRICES OF FARM IMPLEMENTS 29 (1920) ("The large increase in the prices and profits of manufacturers in 1917 and 1918 was due in part to price understandings or agreements among manufacturers."). The Report includes a detailed discussion of the International Harvester's pre-litigation conduct and the impact of the dissolution. *See id.* at 653–74; *see also* MERLE RAYMOND THOMPSON, TRUST DISSOLUTION 207–20 (1919) (detailing discussion of price impact of International Harvester's prelitigation merger activity).

divestiture of three product lines.[12] It also prohibited exclusive contracts with local farm implement dealers.[13]

In speaking of the remedy a decade later, the Court concluded that "the purpose of preventing undue restraint of trade is to prevent unreasonably high prices to the purchasers and users."[14] It concluded that the antitrust consent decree was doing its job. International Harvester was no longer in a position to dictate market prices, and its own prices "have decreased and are low."[15] It also found that IH's market share had declined under the decree.[16]

A "break-up"—more technically a divestiture—is an antitrust judgment that forces a firm to relinquish one or more productive assets. It could be one or more subsidiaries or divisions, or simply individual stores or plants. In e-commerce, it can be particular digital products, such as Google's Chrome browser. The asset to be divested can also be intellectual property rights, such as patents or copyrights.[17] "Restoring competitive conditions," as in the *International Harvester* case, can mean bringing prices back down, although it can also refer to remedies that restore output back up to the competitive level or that remove any restraints limiting product quality or innovation.

The breakup metaphor, which many people appear to accept uncritically, is that a dominant firm is like a potato farm. It can be broken up simply by selling off pieces. Once that happens, the broken parts continue to sell potatoes in head-to-head competition with one another, and the market becomes competitive. In reality, it almost never happens that way.

Divestiture is only one among many equitable remedies available in monopolization cases. The antitrust statutes explicitly mention injunctions that either prohibit a firm from engaging in certain conduct or else require it to do something.[18] For example, a remedy might prohibit a firm from placing exclusivity provisions in its contracts or licensing agreements or require it to abandon tying requirements.[19] Compulsory licensing of IP rights is

12. United States v. Int'l Harvester Co., 274 U.S. 693, 696–97 (1927) (noting the divestiture of IH's Osborne, Milwaukee, and Champion lines); Thomas A. Thacher, *The Sherman Act and the Harvester Case*, 20 VA. L. REG. 801, 801 (1915) (describing the consolidation and the price increases that followed).

13. United States v. Int'l Harvester Co., 274 U.S. 693, 805–06 (1927). The decree also prohibited IH from having more than one dealer in a town. Under it, multiple dealers were permitted to sell IH equipment. *Id.* at 806 n.6.

14. *Int'l Harvester Co.*, 274 U.S. at 701.

15. *Id.*; *see also id.* at 704 (adding that "competitive conditions in the trade in harvesting machines have been established in compliance with the requirements of the consent decree."). The fact findings in the lower court, concluded that prices were coming down under the decree. *See* United States v. Int'l Harvester Co., 10 F.2d 827, 828–29 (D. Minn. 1926).

16. *Int'l Harvester Co.*, 274 U.S. at 709 (showing a decline from 77% when the original complaint was filed to 64.1%).

17. On intellectual property rights as assets governed by § 7 of the Clayton Act, see PHILLIP E. AREEDA, HERBERT HOVENKAMP & ERIK HOVENKAMP, ANTITRUST LAW: AN ANALYSIS OF ANTITRUST PRINCIPLES AND THEIR APPLICATION ¶ 1202f (5th ed. 2026).

18. *See infra* notes 27–30 and accompanying text (authorizing the government to request injunctions that may include divestitures).

19. *See, e.g.*, United States v. Dentsply Int'l, Inc., 399 F.3d 181, 184 (3d Cir. 2005) (enjoining defendant's exclusive dealing requirements under § 2 of the Sherman Act); *see also* United States v. Microsoft Corp., 253 F.3d 34 (D.C. Cir. 2001) (enjoining exclusivity or tying-like license provisions that favored Microsoft's Internet Explorer browser and disfavored or excluded rival browsers).

also an available nonstructural remedy. Compulsory licensing is not a divestiture because the firm retains ownership of the right but is simply required to share it with one or more others. A good example is Judge Mehta's order requiring Google to share its search index database a single time with a group of qualified rivals.[20]

Divestitures are more common in merger cases than in monopolization cases.[21] That result follows naturally from the language of the merger statute itself, which makes it unlawful for one firm to "acquire" another firm when the statute's competitive conditions are satisfied.[22] The natural remedy is reversal of the unlawful acquisition. Another reason is that acquisitions create fault lines that give a clear picture of what a firm looked like prior to and after an acquisition. Single-firm conduct rarely does that. The effects of internal development are more gradual and holistic, and it is much more difficult to describe a firm's "but for" structure absent the challenged conduct. It can also be much more difficult to distinguish expansion that results from legitimate pricing and innovation efforts from that which results from anticompetitive conduct. For example, in the *Google* (search) case, the court was unable to determine how much of Google's dominant position resulted from innovation and internal development, and how much from exclusionary practices.[23] One complicating factor is that many monopolization cases ranging from *Standard Oil* in 1911 to *Meta* (Facebook) in 2025 involve at least some merger activity as a portion of the monopolization claim.

Further, as a practical matter of enforcement, the problem of merger remedies has been made much less severe by passage of the Hart-Scott-Rodino (HSR) Act and the rise of pre-acquisition challenges.[24] Today most court decisions condemning mergers are made before the merger occurs and can be remedied by a simple prospective injunction against the merger.[25] Even a post-acquisition spinoff, however, is not as complex as determining what would have to be spun off when the assets in question were internally developed.

A. Breakups and Antitrust Law's Remedial Statutes

The antitrust statutes themselves are not very helpful for identifying the appropriate remedy for anticompetitive conduct by dominant firms. They do not state any preference for divestitures or other structural relief. The statute that the Antitrust Division uses grants federal district courts authority to "prevent and restrain" antitrust violations of all types,

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20. United States v. Google, LLC, 803 F. Supp. 3d 18, 117–19 (D. D. C. 2025) (remedies opinion); *see also* United States v. Google, LLC, 2025 U.S. Dist. LEXIS 251831, at *1 (D.D.C. Dec. 5, 2025) (final decree).

21. Post-acquisition divestitures approved by the Supreme Court include, among others, Ford Motor Co. v. United States, 405 U.S. 562, 563 (1972); United States v. Greater Buffalo Press, Inc., 402 U.S. 549, 549–50 (1971); Utah Pub. Serv. Comm'n v. El Paso Nat. Gas Co., 395 U.S. 464, 464 (1969); United States v. Pabst Brewing Co., 384 U.S. 546, 546 (1966); United States v. Von's Grocery Co., 384 U.S. 270, 270 (1966); United States v. Cont'l Can, 378 U.S. 441, 441 (1964); Brown Shoe Co. v. United States, 370 U.S. 294, 294 (1962).

22. 15 U.S.C. § 18 (making it unlawful for one firm to "acquire" the stock or assets of another where the effect may be substantially to lessen competition or tend to create a monopoly).

23. *Google*, 803 F. Supp. 3d at 72–73.

24. 15 U.S.C. § 18a (2026); *see also* Herbert Hovenkamp, *HSR and the Quality of Merger Policy*, REV. INDUS. ORG. (forthcoming 2027), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=6977058 [https://perma.cc/5SC9-6345] (explaining that the Hart-Scott-Rodino Act "required premerger notification and review of certain proposed transactions.").

25. Hovenkamp, *supra* note 24, at 5–7; *see, e.g.*, Fed. Trade Comm'n v. Kroger, Inc., 2024 WL 5053016 (D. Or. Dec. 10, 2024) (issuing injunction against proposed merger of two large grocery chains).

without distinguishing among them.[26] It then authorizes the government to request that "such violation shall be enjoined or otherwise prohibited."[27] That language clearly authorizes injunctions.

In its *American Stores* decision, the Supreme Court held that, at least in a merger case, the term "injunction" could also cover divestitures.[28] If the feared effect of a merger is higher prices, as in that case, then a divestiture of unlawfully acquired assets may be the only way to remedy the harm. Beyond that, the Supreme Court observed, the "otherwise prohibited" language of the statute included divestitures.[29] The Court then went through a lengthy recitation of the legislative history, all of which was directed toward the breaking up of "combinations."[30] A simple injunction against a joint venture of multiple firms would amount to the same thing. The Court did not address the propriety of a divestiture of a single firm that was not being treated as a combination.

The Federal Trade Commission Act's basic enforcement provision explicitly authorizes only injunctions and temporary restraining orders.[31] Further, the Supreme Court's *AMG Capital* decision held that this language does not even include compelled restitution of unlawful gains.[32] Some earlier Supreme Court case law did find that the FTC has the authority to obtain divestiture in cases that included monopolistic practices.[33] The status of such decisions in light of the Supreme Court's more recent *AMG Capital* decision is unclear.

In its 2025 *Meta Platforms* (Facebook) decision, the court did not categorically deny that the FTC had the authority to obtain divestiture in a Sherman Act challenge to a merger, although it did limit its power to conduct that is currently violating or about to violate the statute.[34] As a result, it was not enough to show that Facebook's acquisition of Instagram may have been unlawful 13 years earlier when it occurred. The court then found market power lacking and dismissed the complaint, which at the time of this writing is on appeal. In any event, there is Supreme Court precedent for the view that a current monopolist's acquisition of a competitor is unlawful and can be remedied by reversing the acquisition.[35]

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26. *See* 15 U.S.C.§ 25 (2026).

27. *Id.*

28. California v. Am. Stores Co., 495 U.S. 271, 289 (1990).

29. *Id.* at 280–81.

30. *Id.* at 288–90.

31. 15 U.S.C. § 53(b)(2): Upon a proper showing that, weighing the equities and considering the Commission's likelihood of ultimate success, such action would be in the public interest, and after notice to the defendant, a temporary restraining order or a preliminary injunction may be granted.

32. *See* AMG Cap. Mgmt., LLC v. Fed. Trade Comm'n, 593 U.S. 67, 78 (2021) (distinguishing between prospective injunctive relief, which the statute authorizes, and retrospective monetary relief, which it does not).

33. *See* Pan Am. World Airways, Inc. v. United States, 371 U.S. 296, 307, 312–13 (1963) (illustrating FTC power in divestures); *see also* L.G. Balfour Co. v. Fed. Trade Comm'n, 442 F.2d 1, 23 (7th Cir. 1971).

34. Fed. Trade Comm'n v. Meta Platforms, Inc., 811 F. Supp. 3d 67, 88 (D. D. C. 2025), *appeal docketed*, No. 26-5028 (D.C. Cir. Jan. 26, 2026) (interpreting 15 U.S.C. § 53(b) (2026), which authorizes the Commission to obtain a temporary restraining order or a "preliminary injunction" against conduct that "is violating, or is about to violate" any statute enforced by the FTC).

35. *E.g.*, N. Sec. Co. v. United States, 193 U.S. 197, 386 (1904) (dissolving merger of two large railroads).

In sum, the relevant statutes permit divestitures, but do not state a preference for them. Further, the decisions that have approved them have been mainly merger decisions or others that involved some kind of "intercorporate combination and control."[36]

Historically, the government routinely sought divestiture as a remedy for unlawful monopolization. In the 1911 *Standard Oil* decision, the court complied.[37] Later they become more reluctant. Already, in 1916, a federal court declined to order a breakup in the government's otherwise successful case against the American Can Company.[38] The court took note not only of the defendant's numerous mergers and alleged predatory pricing but also its very significant improvement in both the quality and distribution of cans. "I am frankly reluctant to destroy so finely adjusted an industrial machine as the record shows defendant to be," the judge concluded.[39] Further, "[i]n this can industry it is absolutely impossible to put things back where they were . . . and, if it were possible, probably highly undesirable."[40]

Subsequent Supreme Court decisions followed. For example, *National Lead* (1947) was a complex case brought under both §§ 1 & 2 of the Sherman Act for a series of anticompetitive patent abuses as well as unlawful information exchanges and participation in a national cartel.[41] A divided Court declined the Government's request for divestiture of certain of the defendant's plants, observing that they had not been unlawfully acquired.[42] It did the same thing four years later in the *Timken* decision.[43] One message of these decisions is that a divestiture remedy must undo a specific unlawful act, such as an improper acquisition.[44]

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36. *See* California v. Am. Stores Co., 495 U.S. 271, 281 (1990) (quoting United States v. E.I. du Pont de Nemours & Co., 366 U.S. 316, 329–31 (1961)) ("Divestiture or dissolution has traditionally been the remedy for Sherman Act violations whose heart is intercorporate combination and control, and it is reasonable to think immediately of the same remedy when § 7 of the Clayton Act, which particularizes the Sherman Act standard of illegality, is involved.").

37. Standard Oil Co. of N.J. v. United States, 221 U.S. 1, 78–79 (1911); *see also* discussion *infra* notes 58–62 and accompanying text.

38. *See generally* United States v. Am. Can Co., 230 F. 859, 904 (D. Md. 1916) (holding that dissolution was inappropriate).

39. *Id.* at 903.

40. *Id.*

41. United States v. Nat'l Lead Co., 332 U.S. 319, 343 (1947).

42. *Id.* at 352–54.

43. Timken Roller Bearing Co. v. United States, 341 U.S. 593, 601 (1951) (citing a divided court rejecting the district court's order of divestiture).

44. *See id.* at 601–02 (Reed, J., concurring) (defending the majority's refusal to order divestiture, explaining that although the defendant was a monopolist, the real gravamen of its conduct was a territorial division agreement that could be remedied by an injunction); *see also id.* at 604 (Reed, J., concurring) (citations omitted) (arguing that "[a]n injunction was entered by the District Court to prohibit the continuation of the objectionable contracts. Violation of that injunction would threaten the appellant and its officers with civil and criminal contempt. The paucity of cases dealing with contempt of Sherman Act injunctions is, I think, an indication of how carefully the decrees are obeyed. The injunction is a far stronger sanction against further violation than the Sherman Act alone . . . Furthermore this case remains on the docket for the purpose of 'enforcement of compliance' and 'punishment of violations.' This provision should leave power in the court to enforce divestiture, if the injunction alone fails. Prompt and full compliance with the decree should be anticipated.").

B. The Troublesome History of § 2 Breakups

The history of breakups in antitrust monopolization cases provides little reason to have confidence in them. Often the problem lies in design. Too often the court breaks a firm up in the wrong way, without paying sufficient attention to how competition would subsequently work. Nevertheless, the history also raises serious questions about whether better ways were even available. For most cases there was no obvious, practical way to break up the monopoly in a manner that would lead to lower prices, higher output, or other measures of increased competition. At most, such a remedy satisfies some urge to punish large firms, but detached from any useful conception of monopoly power or the remedial (rather than punitive) goals of civil antitrust enforcement.

The first major breakup in a § 2 case was in the 1911 *Standard Oil* decision. The "trust" form of business organization that inspired the antitrust movement largely resulted from production and distribution problems that Standard confronted in the late nineteenth century. That period witnessed the rise of the multistate corporation, which employed emerging manufacturing and distribution technologies to produce products in high volume and low cost.[45] While contemporaries acknowledged that the trusts usually offered lower prices,[46] they were also deeply suspicious of corporate power and attempted to limit it. Throughout the nineteenth century, most state-chartered corporations were prevented from owning productive assets outside the state of incorporation.[47] Further, only Maryland and, a little later, New Jersey permitted holding companies, or one corporation's ownership of the shares of another corporation, whether from inside or outside the parent state.[48] Under those limitations, it was legally impossible to set up a single state-chartered multistate corporation.

John D. Rockefeller's Standard Oil Co. attempted to evade these legal limitations by developing the stock transfer "trust" form of organization as an alternative to the corporation.[49] The cooperating shareholders of each of several companies across the country transferred their shares to a single board of trustees, who then issued each of these shareholders "trust certificates" proportioned pro rata to the value of their holdings in the individual

45. Prior to that, only the railroads had grown to such size. *See* ALFRED D. CHANDLER, JR., THE RAILROADS: THE NATION'S FIRST BIG BUSINESS 36 (1965) (explaining the rise of railroads and its impact on modern corporate management).

46. *E.g.*, GEORGE GUNTON, TRUSTS AND THE PUBLIC 8 (1899) (examining corporate trusts and their impact).

47. For a contemporary survey, observing that New Jersey, West Virginia, Kentucky, and a little later Delaware permitted their state-chartered corporations to own productive assets such as plants in other states, see generally Edward Q. Keasbey, *New Jersey and the Great Corporations*, 13 HARV. L. REV. 198 (1899) (outlining notable New Jersey corporations). On the movement to use corporate law rather than antitrust to control corporate power, see Herbert Hovenkamp, *The Power of Antitrust Personhood*, 25 U. PA. J. BUS. L. 891, 899–903 (2023) (examining corporate personhood); *see* Herbert Hovenkamp, *Antitrust Policy, Federalism, and the Theory of the Firm: An Historical Perspective*, 59 ANTITRUST L.J. 75, 84–86 (1990) [hereinafter *Antitrust Policy*] (examining state and federal law governing corporations). On the history of such developments in New Jersey, see Christopher Grandy, *New Jersey Corporate Chartermongering, 1875–1929*, 49 J. ECON. HIST. 677 (1989).

48. *Antitrust Policy*, *supra* note 47, at 84.

49. *See, e.g.*, State v. Standard Oil Co., 30 N.E. 279, 289 (Ohio 1892) (discussing how Standard Oil's stock transfer trust was designed to circumvent the regulations Ohio law imposed on corporations).

corporations.[50] The nine trustees met every three months to manage the companies together as a single firm.[51] However, the Ohio Supreme Court declared the trust agreement invalid under state corporate law.[52] The decision was not based on competition policy, and even acknowledged that the trust had "cheapened the costs of petroleum and its products to the consumer."[53] Rather, the trust agreement violated state corporation law that required each corporation to be managed by its own directors, and prevented corporations from entering into partnerships with other corporations.

Standard responded to the Ohio decree by reincorporating in New Jersey. Progressives had described New Jersey as the "traitor state," because it had amended its incorporation act so as to permit both ownership of out-of-state assets and holding companies.[54] While many Progressives savaged the statute, other contemporaries defended it as "a means of bringing the savings of many into efficient use as capital for the development of resources and the promotion of industries."[55] In retrospect, New Jersey had profited from technological developments that came to be viewed as inevitably driving the size and scope of business firms.[56] This was hardly a "race to the bottom," as Gilded Age developments in corporate law have sometimes been described.[57] Rather, it was a contest to determine who could design a law of corporations best able to accommodate the emergent multistate enterprise.

Incorporation in New Jersey made Standard immune to state corporate law challenges based on its structure, but of course not to the federal antitrust laws. The antitrust breakup resulted from the Supreme Court's 1911 decision condemning Standard for monopolizing the market for petroleum products in the United States. The remedy was quick and crude. The Court simply dissolved the New Jersey holding company and sent all of the assets of the 34 original corporations in the trust back to their original shareholders.[58] Because these individual corporations had each operated in a different state, they were not competitors to begin with. As a result, they were not competitors after the 1911 breakup either. The large production and distribution firms that emerged from the breakup included Standard of New York (Socony), Standard of California (SoCal, later Chevron), Standard of New Jersey

50. The structure is described in the headnotes to *Standard Oil Co.*, 30 N.E. at 289 (discussing arguments of counsel).

51. E. Benjamin Andrews, *Trusts According to Official Investigations*, 3 Q.J. ECON. 117, 130 (1889). For a detailed factual account of both the formation of the trust and its subsequent antitrust dissolution, see THOMPSON, *supra* note 11, at 57–107.

52. *Standard Oil Co.*, 30 N.E. at 289–90 (*quo warranto* proceeding under Ohio corporate law).

53. *Id.* at 290.

54. Lincoln Steffens, *New Jersey: A Traitor State*, MCCLURE'S MAG. May 1905, at 650; NAT'L MUN. LEAGUE, PROCEEDINGS OF THE ATLANTIC CITY CONFERENCE FOR GOOD CITY GOVERNMENT 34 (Clinton Rogers Woodruff, ed., 1906); *see also* Charles M. Yablon, *The Historical Race Competition for Corporate Charters and the Rise and Decline of New Jersey: 1880–1910*, 32 J. CORP. L. 323 (2007) (examining how corporations compete for charters).

55. *E.g.*, Edward Q. Keasbey, *New Jersey and the Great Corporations*, 13 HARV. L. REV. 198, 209 (1899).

56. *See* ALFRED D. CHANDLER JR., THE VISIBLE HAND: THE MANAGERIAL REVOLUTION IN AMERICAN BUSINESS 330 (1977).

57. *See* John V. Orth, *'The Race to the Bottom': Competition in the Law of Property*, 9 GREEN BAG 2D 47 (2005); Yablon, *supra* note 54.

58. *See* Standard Oil Co. of N.J. v. United States, 221 U.S. 1, 78 (1911) (directing "the transfer by the New Jersey corporation back to the stockholders of the various subsidiary corporations").

(later ExxonMobil), Standard of Ohio (Sohio), Standard of Indiana, and Standard of Kentucky.[59] Each of these continued as a dominant firm, except in a smaller territory.

From the beginning, the law of monopoly breakups had to confront the *Standard Oil* problem that breaking up a firm is not the same thing as breaking up a monopoly. Sometimes the breakup just creates separate monopolies operating in two different markets. In other cases, the breakup spins off a complementary asset that is not even a part of the monopoly.

As the Standard Oil breakup illustrates, dividing a national monopoly into several regional monopolies is not reasonably calculated to bring prices down and output up. The profit-maximizing price of a regional monopoly would depend on competitive and cost conditions in that region, and it could be either higher or lower than the price of a national monopoly, but there is no reason for thinking that it would be lower overall. Moreover, any breakup that deprived the firm of scale economies would move prices higher, as would any breakup of a national network for transportation or other coordination.[60] That was the case with Standard. Rockefeller himself concluded that "the larger the volume the better the opportunities for the economies, and consequently the better the opportunities for giving the public a cheaper product . . . ."[61]

The decision simply confused breaking up the firm with breaking up the monopoly. Many of the resulting pieces retained dominance, except in smaller geographic territories. Further, the Standard Oil breakup fragmented Standard's highly efficient supply and distribution network, depriving Standard of one of its important competitive advantages.[62] In the years following, the price of gasoline rose rather than fell,[63] leading the FTC to author a lengthy report. The *Standard Oil* decree took effect in Dec. 1911. At that time, the price of gasoline as reported by the FTC was 12¢; at the end of 1913 it was 14¢ and remained so in 1914.[64] Of course, correlation is not necessarily causation. Nevertheless, a 12.5% price increase immediately following a breakup decree was an embarrassing outcome for a high-profile antitrust case.

The Supreme Court repeated its error in the *Grinnell* case, which broke up a firm in the business of supplying hard-wired "central station protective services."[65] Grinnell's technology involved a set of phone line connections from a central municipal hub to numerous subscribers, attaching fire, water, and other alarms. When an alarm was triggered in a subscriber's building, the system sent a phone signal to the hub, whose range was 25

59. *See* William F. Shugart II, *Reappraising* Standard Oil, REGUL., Summer 2025, at 10, 12 (describing the history of Standard Oil's break up and successor corporations).

60. *See generally* Benjamin Klein, *The 'Hub-and-Spoke' Conspiracy that Created the Standard Oil Monopoly*, 85 S. CAL. L. REV. 459 (2011) (explaining Standard Oil's integration strategy and operations); *see also* George L. Priest, *Rethinking The Economic Basis of the Standard Oil Refining Monopoly: Dominance Against Competing Cartels*, 85 S. CAL. L. REV. 499 (2011) (accounting for Standard's horizontal growth and vertical integration as effort to avoid cartels in railroad and petroleum transportation).

61. *See* RON CHERNOW, TITAN: THE LIFE OF JOHN D. ROCKEFELLER, SR. 150 (1998).

62. On Standard's highly centralized distribution network, see generally GILBERT HOLLAND MONTAGUE, THE RISE AND PROGRESS OF THE STANDARD OIL COMPANY (1903).

63. Robert W. Crandall, *The Failure of Structural Remedies in Sherman Act Monopolization Cases*, 80 OR. L. REV. 109, 126–27 (2001) (writing on spike in gasoline prices following the Standard Oil divestiture).

64. FED. TRADE COMM'N, REPORT ON THE PRICE OF GASOLINE IN 1915 108–09 (1917).

65. United States v. Grinnell Corp., 384 U.S. 563, 572 (1966).

miles from the center, and an operator then responded accordingly.[66] The Supreme Court approved a decree that required the defendant to spin off 21 of its 115 municipal networks.[67]

As the *Grinnell* decision illustrates, identifying the boundaries of a monopoly depends critically on market definition. The majority had defined a single national market by aggregating all of the defendant's individual networks. Dissenting, Justice Fortas correctly protested that the defendants did not control a single monopoly but rather 115 individual monopolies. That conclusion led the court to a breakup that spun off some of the individual network monopolies while retaining others.[68] As a result, "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."[69] Quite simply, the majority had simply permitted the defendant to retain some intact monopolies while other intact monopolies were transferred to various third parties. With such a transfer, there was no reason to expect lower prices or higher output.

The critique that the *Standard Oil* and *Grinnell* decrees did nothing to break up the monopolies is easy enough to make. But that evades the more important question, which is whether *any* kind of structural relief would have worked better. Each of the individual hard-wired networks that comprised the Grinnell system operated as a single unit, and cutting one of them into two or three pieces would have resulted in significantly higher costs and poorer performance, perhaps with fatal results.[70] That problem—how to break up a dominant network—arises much more frequently today than it did in the 1960s when *Grinnell* was decided. For example, relevant markets in cases involving passenger airlines are typically city pair routes, which is where price competition is focused. Imagine breaking up a large carrier such as American Airlines by separating operations west of the Mississippi River from those that are east. Most of the city-pair monopolies would remain intact, although some adjustment might occur on routes that crossed the boundary from one portion of AA to the other.[71] If you really want to "restore competitive conditions" the breakup needs to reach *into* the dominated markets and come up with competitive structures for those. That is much more easily said than done.

The same thing was true of Standard Oil. There appears to be no information about how many refineries and outlets Standard owned in 1911, or where they were located. But cutting up the company so as to achieve competition in each location would have involved redrawing lines and setting up new firms that actually competed with one another, not merely segregating the noncompeting companies previously united under the trust agreement. That would have been a monumentally more difficult task, requiring the court to determine workable boundaries for collections of plants and distribution outlets that had

66. *Id.* at 567, 575.

67. *Compare* Detroit v. Grinnell Corp., 495 F.2d 448, 452–53 (2d Cir. 1974) (describing the decree), *with* Donald I. Baker, *Government Enforcement of Section Two*, 61 NOTRE DAME L. REV. 898 (1986) (providing the critique by Baker, who was head of the Antitrust Division under President Carter).

68. *Grinnell*, 384 U.S. at 588 (Fortas, J., dissenting).

69. *Id.* at 590.

70. *See, e.g.*, Howard A. Shelanski & J. Gregory Sidak, *Antitrust Divestiture in Network Industries*, 68 U. CHI. L. REV. 1 (2001) (describing AT&T's break-up and the subsequent consequences).

71. On the relevance of city-pair markets to assessing airline competition, see Marcus V.R. Oliveira & Alessandro V.M. Oliveira, *What Drives Effective Competition in the Airline Industry? An Empirical Model of City-Pair Market Concentration*, 63 TRANSP. POL'Y 165 (2018).

never functioned as a separate single unit. Doing that while retaining any distribution efficiencies would have been impossible.

The breakup decree in the *United Shoe Machinery (USM)* was also unfortunate, although in a different way.[72] It pitted District Judge Wyzanski's more measured approach that was having some success against the Supreme Court's much more aggressive decree that led to disaster.[73] The United Shoe Machinery Company produced all of its output of shoe making machinery in a single plant located in Beverly, Massachusetts. Its business model was to lease its various machines as a package to shoe manufacturers. USM's dominance resulted from the fact that it offered shoe manufacturers full-service turnkey operations, but also that its historical lease-only policies made it impossible for other firms to purchase and restore used equipment and enter the market as competitors.[74]

Judge Wyzanski did not order a breakup. Rather, he ordered USM to make machines available individually for sale as well as lease, and also enjoined its "full capacity" clauses that forbade its lessees from using a rival's machine unless current machinery was operating at maximum capacity.[75] USM's market share began to drop after the remedy decree,[76] but not fast enough for the Supreme Court.[77] It then ordered USM to divest, granting the Government's request that it "establish an independent full-line shoe machinery manufacturing company capable of competing with the defendant."[78] Eventually, USM shut down entirely. How much the decree contributed to its demise is unclear, because there were other headwinds as well, including declining popularity of stitched leather shoes and greater competition from abroad.[79] But the one thing that the structural decree clearly did not do is increase competition.

The Government also brought the calamitous *IBM* case in 1969, shortly after obtaining the breakups in *Grinnell* and *USM*.[80] The Antitrust Division requested a breakup there as well. IBM at the time was a highly innovative firm. It had led the transition from analog to digital technology in the 1950s, culminating in the development of a series of improved and ever smaller computers introduced in rapid succession, including its highly successful System/360 family of computers in 1964.[81] The Government charged IBM with a potpourri

72. United States v. United Shoe Mach. Corp., 110 F. Supp. 295, 352–54 (D. Mass. 1953), *aff'd*, 347 U.S. 521, 521 (1954).

73. United States v. United Shoe Mach. Corp., 391 U.S. 244, 249–52 (1968).

74. *See* Michael Waldman, *Eliminating the Market for Secondhand Goods: An Alternative Explanation for Leasing*, 40 J.L. & ECON. 61, 61 (1997); *see also* John Shepard Wiley, Eric Rasmusen & J. Mark Ramseyer, *The Leasing Monopolist*, 37 UCLA L. REV. 693, 697 (1990).

75. *United Shoe Mach. Corp.*, 110 F. Supp. at 346–49.

76. Scott E. Masten & Edward A. Snyder, *United States Versus United Shoe Machinery Corporation: On the Merits*, 36 J.L. & ECON. 33, 64–67 (1993); Roger D. Blair & Jill Bolyston Herndon, *United Shoe Machinery and the Antitrust Significance of 'Free' Service*, 17 REV. INDUS. ORG. 301 (2000).

77. *United Shoe Mach. Corp.*, 391 U.S. at 251–52.

78. Brief for the United States at 50 n.24, United States v. United Shoe Mach. Corp., 391 U.S. 244 (1968) (No. 597), 1968 WL 112831, at *50 n.24.

79. *See* Masten & Snyder, *supra* note 76, at 66–67 (noting a rise in imported shoes).

80. *See In re* Int'l Bus. Machines Corp., 618 F.2d 923, 924–26 (2d Cir. 1980) (providing a brief factual recounting of the antitrust litigation against IBM). For more discussion, see generally Herbert Hovenkamp, *Antitrust's Controversy with Disruption* (U. Penn. Inst. for L. & Econ. Rsch., Paper No. 26-14, 2026), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=6934218 [https://perma.cc/62WW-FWZE] (discussing the antitrust litigation brought against IBM).

81. *See* GERARD O'REGAN, A BRIEF HISTORY OF COMPUTING 97–103 (3d ed. 2021).

of practices, beginning an antitrust case that failed to appreciate the integrative nature of computer technology and confused rapid innovation with predation.

The antitrust claims included bundling of hardware and software; introducing machines at very low, although profitable, prices; giving software away free with the purchase of a computer; overly aggressive announcements of future products earlier than they would in fact be available, mainly in order to deter customers from switching to other manufacturers;[82] and heavy discounts in sales to universities and other education institutions. The software claims mainly reflected the Government's failure to appreciate the extent to which the industry was migrating from bespoke software written for individual installations to a separate commercial software market such as we have today. Today, of course, sales of computers with operating software preinstalled is virtually universal.

This collection of practices, the Government alleged, "prevented competing manufacturers . . . from having an adequate opportunity effectively to compete" in the new digital computer market.[83] In an internal memorandum written as the case was falling apart, the Antitrust Division itself acknowledged that "[s]tructural relief . . . would be totally disproportionate to the nature and scope of the violations that we might be able to prove." Further, the government had not identified any proposal for structural relief that "would inject new competition into the industry while retaining the efficiencies necessary to create viable successor companies."[84]

Finally, the *AT&T* decree broke the telephone company into seven regional firms,[85] each having a dominant position as incumbent phone carrier in its assigned territory.[86] For a time, AT&T retained device manufacturer Western Electric's productive assets. It also continued operating as a long-distance provider, distinct from the regional operating companies.[87]

There was little reason to think that a single telephone network owned by seven companies with mutually exclusive monopoly territories was a recipe for competitive

82. United States v. Int'l Bus. Machs. Corp. No. 69 Civ. 200, 1975 WL 837, at *1 (S.D. N.Y Jan. 8, 1975) (explaining that IBM "announc[ed] future production and marketing [of certain products] when it believed or had reason to believe that it was unlikely to be able to produce and market such products within the announced time frame").

83. *Id.* For the government's own retrospective, see Memorandum from the U.S. Dept. Just. on the 1969 Case (Oct. 5, 1995), https://www.justice.gov/atr/case-document/united-states-memorandum-1969-case [https://perma.cc/Z4PY-6BKF].

84. Memorandum from Abbott B. Lipsky, Jr., to the Att'y Gen. (Jan. 6, 1982), *quoted in* Baker, *supra* note 67, at 911–12. For sharp critiques of the government's action, see generally FRANKLIN M. FISHER, JOHN J. MCGOWAN & JOEN E. GREENWOOD, FOLDED, SPINDLED, AND MUTILATED: ECONOMIC ANALYSIS AND U.S. V. IBM (1984) (providing that Fisher served as IBM's chief economic expert); John E. Lopatka, United States v. IBM*: A Monument to Arrogance*, 68 ANTITRUST L.J. 145 (2000).

85. United States v. AT&T, Inc., 552 F. Supp. 131, 201 (D.D.C. 1982), *aff'd sub nom.* Maryland v. United States, 460 U.S. 1001 (1983).

86. The original seven 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, 149–54 (2008).

87. The original decree segregated the regional operating companies from AT&T, which continued to operate its old Long Lines division which had provided hard-wired long-distance service. *See generally* Joseph H. Weber, *The Bell System Divestiture: Background, Implementation, and Outcome*, 61 FED. COMMC'NS L.J. 21 (2008).

improvement. This was simply repetition of the error the Supreme Court made in the *Standard Oil* and *Grinnell* cases. It confused breaking up the firm with breaking up the monopoly.

In order to function as an integrated system, the seven broken-up firms had to enter into interconnection agreements, and disputes had to be resolved. All of these costs would be unnecessary in a single network, which could achieve the same level of integration without them.[88]

One possible rationale for the division of the AT&T monopoly into seven regional monopolies was the hope that eventually each of the seven firms would enter the territories of the others as competitors. That was not contemplated by the original antitrust breakup decree, however, which created only the regional monopolies. The 1996 Telecommunications Act, more than a decade later, permitted the regional companies to enter one another's territories as competitive carriers.[89] The Supreme Court's *Twombly* decision, which came a decade after that, arose because the individual regional operating companies still had not entered each other's territories as competitors even though the 1996 Act permitted them to do so.[90] The Supreme Court refused to infer a horizontal market division agreement from the simple fact that the regional carriers had not done so.

The main thing that resulted from the breakup of AT&T into seven firms was seven regional monopolies rather than a single national monopoly, resembling the *Standard Oil* and *Grinnell* cases, and coupled with the added burden of interconnection obligations in order to make the seven regional firms operate as a unitary network. Eventually most of the regional carriers merged back together.[91] All of the economic gains from the AT&T decree came from its interconnection obligations permitting other sellers to join the network, not from the breakup of the existing network.

C. Optimal Remedies: Structure or Performance?

The arguments favoring breakup remedies are "structural." They rest on the premise that creating more firms with lower individual market shares will improve competitive performance. That is sometimes true, but other variables can point in the opposite direction—particularly economies of scale or scope, as well as network effects. In addition is the

88. For a contemporary complaint, see Kenneth Robinson, *Maximizing the Public Benefits of the AT&T Breakup*, 5 J. POL'Y ANALYSIS & MGMT. 572, 572–74 (1986) (discussing high costs of interconnection); *see also* Christopher S. Yoo, *The Enduring Lessons of the Breakup of AT&T: A Twenty-Five Year Retrospective*, 61 FED. COMMC'NS L.J. 1, 8 (2008) (arguing that nearly all of the benefits of the decree could have been achieved through the interconnection agreements with third parties, without a breakup); Daniel F. Spulber & Christopher S. Yoo, *Access to Networks: Economic and Constitutional Connections*, 88 CORNELL L. REV. 885, 899–903 (2003) (discussing costs of interconnection and disputes); *see generally* Adam Candeub, *Network Interconnection and Takings*, 54 SYRACUSE L. REV. 369 (2004) (examining the costs of interconnection and takings).

89. Telecommunications Act of 1996, Pub. L. No. 104-104, 110 Stat. 56 (1996). On the history, see Bell Atl. Corp. v Twombly, 550 U.S. 544, 548–50 (2007); AT&T v. Iowa Utils. Bd., 525 U.S. 366, 371 (1999).

90. *Twombly*, 550 U.S. at 549–51.

91. In 1997, SBC acquired Pacific Telesis and later acquired Ameritech. Then SBC acquired AT&T, which subsequently acquired Bell South. Effectively, four of the original regional monopolies became part of AT&T. *See* Jason Whalley & Peter Curwen, *Whatever Happened to the Baby Bells? Internationalization and De-Internationalization in the Telecommunications Industry*, 8 MINN. J.L. SCI. & TECH. 149, 149–50 (2006) (tracing out the complex set of acquisitions and alliances that followed the regional breakup).

design problem of creating smaller firms that actually compete with each other closely enough so as to make a difference in performance.

An economy of scale is cost savings that accrue as a firm does more of a certain thing, and a badly designed breakup can interfere with them.[92] Equally problematic are economies of scope, which depend on cost savings or product improvement that results from combining complementary processes or features, including single-firm production of multiple products with shared costs.[93] The *Google* (search) court was clearly worried about the costs of a remedy that separated the Google search engine from the Chrome browser. These were non-competing, complementary products that were designed from creation to work together. A breakup would be "incredibly messy," the court concluded.[94] Finally, network effects reduce costs and provide better operation as networks become larger.[95] Any remedy that breaks up a functioning network must confront the likelihood that a smaller network will yield higher costs or poorer performance at best. While networks can be interconnected, as in the *AT&T* decree,[96] interconnection is itself costly. In a later decision involving Google's digital advertising technology a different court drew largely the same conclusions.[97] The court decision denying structural relief rested on two propositions. First, that management of the divestiture would be extremely complex and risky. Second, that alternative behavioral remedies seemed to be quite promising.

One feature of § 2 breakups is that the current shape of the firm has presumptively been developed internally, typically over a period of many years. So, a court is now being asked to do something that the market itself did not do. The all-important question is: Why did the firm grow to its current size and shape? For example, the court in the *Google* (search) case found it impossible to determine how much of Google's dominant share in search resulted from its superior innovation and development, which it acknowledged was

92. The classic treatment is George J. Stigler, *The Economies of Scale*, 1 J.L. & ECON. 54 (1958). An important Harvard School empirical study is Joe S. Bain, *Economies of Scale, Concentration, and the Condition of Entry in Twenty Manufacturing Industries*, 44 AM. ECON. REV. 15 (1954).

93. David J. Teece, *Economies of Scope and the Scope of the Enterprise*, 1 J. ECON. BEHAV. & ORG. 223, 224 (1980); John C. Panzar & Robert D. Willig, *Economies of Scope*, 71 AM. ECON. REV. 268, 268 (1981).

94. United States v. Google LLC, 803 F. Supp. 3d 18, 100 (D.D.C. 2025). 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. It also is deeply reliant on Google's "hyperscale" technical systems and infrastructure. [citing Nieh testimony] (describing Google's underlying infrastructure as an "engineering marvel" that enables "all of Google's products to be able to operate at the enormous scale to service billions of users"). Chrome relies on Google's back-end systems and engineering personnel for, among other things, account sign-in and authentication, data storage and management at a global scale, and cybersecurity. (Nieh) ("If you were to, say, spin off Chrome and its functionality and, I think, re-creating the Google infrastructure would be hard, if not impossible."). And then there 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.

Id. at 100–01.

95. *See* discussion *infra* note 98.

96. *See* discussion *supra* text accompanying notes 85–86.

97. United States v. Google LLC, No. 1:23-CV-108, 2026 WL 2754741, at *47 (E.D. Va. Sep. 2, 2026).

substantial, and how much from anticompetitive exclusive agreements for default status, which were found to be unlawful.[98]

By contrast, terminating exclusive dealing agreements by injunction is easier, explicitly justified by the antitrust statutes, and is more narrowly focused on the conduct found to be anticompetitive. One problem with the simple injunction is that it may not be sufficient. Another problem is that it too can be excessive if exclusivity is important for competitive performance. Nevertheless, the potential for overreach is far less when the court is simply enjoining an exclusivity provision than when it is breaking up an entire firm. In the search case, for example, the court could simply stop, or at least limit, the payments for exclusivity but leave Google's own innovative efforts untouched.

Inferences about competition drawn from market structure are very old in antitrust law, dating back almost to passage of the Sherman Act itself in 1890. Around the turn of the twentieth century, antitrust economists in the United States began to use empirical evidence about industry structure to address the state of competition.[99] Progressive economists pioneered in the use of data from the U.S. Census of Manufacturers to assess business concentration, which refers to the number of firms in a market and their size distribution.[100] Beginning in the 1930s and for several decades, the Harvard School adopted that methodology and subjected it to a great deal of empirical testing.[101] In its 1962 *Brown Shoe* decision, the Supreme Court relied on data from the Census Bureau in order to assess market concentration in the retail shoe market.[102]

These Progressive Era and Harvard School writers had one thing in common: they regarded studies of industrial structure as a key to estimating industry "performance," measured by profit rates, output, or price, but not as an end in itself.[103] Concentration was bad to the extent it led to unreasonably high profits, reduced output, or higher prices. The result was the well-known "structure-conduct-performance," or SCP paradigm, which was dominant in antitrust analysis during the middle portion of the twentieth century.[104] For

98. United States v. Google LLC, 803 F. Supp. 3d 18, 72–73 (D.D.C. 2025).

99. *See* HERBERT HOVENKAMP, ANTITRUST POLICY DESIGN ch. 2 (forthcoming 2027).

100. Prominent examples include GUNTON, *supra* note 46, at 8; William Z. Ripley, *Industrial Concentration as Shown by the Census*, 21 Q.J. ECON. 651 (1907); CHARLES R. VAN HISE, CONCENTRATION AND CONTROL: A SOLUTION OF THE TRUST PROBLEM IN THE UNITED STATES (1912); Henry R. Seager, *The New Anti-Trust Acts*, 30 POL. SCI. Q. 448, 458 (1915).

101. *E.g.*, Edward S. Mason, *Monopoly in Law and Economics*, 47 YALE L.J. 34, 35, 40, 48–49 (1937) (detailing empirical methods courts used to evaluate market conditions in which monopolies existed); EDWARD S. MASON, ECONOMIC CONCENTRATION AND THE MONOPOLY PROBLEM 332–37 (1957); Joe S. Bain, *Economies of Scale, Concentration, and the Condition of Entry in Twenty Manufacturing Industries*, 44 AM. ECON. REV. 15 (1954). On the Harvard School's use of concentration data, see HOVENKAMP, *supra* note 99, at ch. 2.

102. Brown Shoe Co., Inc. v. United States, 370 U.S. 294, 345–50 (1962) (citing U.S. BUREAU OF CENSUS, RETAIL TRADE, SINGLE UNITS AND MULTIUNITS, BC58–RS3, at 1 (For the current edition, see https://www.census.gov/programs-surveys/arts/technical-documentation/methodology.html)*; see also* United States v. Columbia Steel Co., 334 U.S. 495, 501 (1948) (relying on census data to reject government merger challenge); *see generally* Crown Zellerbach Corp. v. Fed. Trade Comm'n, 296 F.2d 800 (9th Cir. 1961) (relying on census data to justify condemning merger).

103. *E.g.*, CARL KAYSEN & DONALD F. TURNER, ANTITRUST POLICY: AN ECONOMIC AND LEGAL ANALYSIS 93–111 (1959) (arguing strong link between structure and performance).

104. *E.g.*, PAUL R. FERGUSON & GLENYS J. FERGUSON, *The Structure-Conduct-Performance Paradigm*, *in* INDUSTRIAL ECONOMICS 13–37 (1994); Leonard W. Weiss, *The Structure-Conduct-Performance Paradigm and Antitrust*, 127 U. PA. L. REV. 1104 (1979)*; see generally* Matthew T. Panhans, *The Rise, Fall, and Legacy of the*

the Harvard School, the critical relationships were between concentration and either profit rates or margins, which are a fundamental metric for assessing market power.[105] Indeed, to this day we continue to use concentration evidence as a mechanism for assessing market power, or the tendency of practices such as mergers to reduce output and increase prices. The main difference is that the methodologies used today are more qualified about how they use concentration data, always seeking to balance in other factors that provide both meaning and limitations on the use of structural evidence.[106]

This approach is explicit in the various editions of the Merger Guidelines,[107] which were first issued in 1968 and stretch to the current 2023 edition.[108] Although the relative metrics and the weight to be attached to concentration data have changed over that fifty-five-year period, one thing that has remained consistent is that market structure, of which concentration is an important component, is key to estimating performance.[109] That is, deconcentration is a metric for measuring competitive performance, not the ultimate goal itself. Whatever one might think about the merits of deconcentration arguments, the central concern has always been the linkage between concentration, or more particularly, changes in concentration,[110] and higher prices or lower output. A corollary is that if the non-structural factors affect performance, they must be taken into account as well.

For a relatively brief moment in the 1960s, the Supreme Court lost sight of the connection between concentration and performance. Its 1962 *Brown Shoe* decision was clearly concerned with increasing market concentration. The concern that the Court expressed, however, was not that higher concentration threatened higher prices but rather that larger firms would be in a position to undersell smaller ones. In reaching that position, it gave a very one-sided account of the legislative history of the 1950 amendments to the merger statute,[111] entirely ignoring the concerns with high prices stated by many members of Congress.[112]

Structure-Conduct-Performance Paradigm, 46 J. HIST. ECON. THOUGHT 337 (2023) (detailing the history of SCP analysis).

105. *E.g.*, Joe S. Bain, *Relation of Profit Rate to Industry Concentration*, 65 Q.J. ECON. 293, 297 (1951) (describing how economists would determine if an industry was dominated by a monopoly); Richard A. Miller, *Market Structure and Industrial Performance: Relation of Profit Rates to Concentration, Advertising Intensity, and Diversity*, 17 J. INDUS. ECON. 104, 104 (1969); Leonard W. Weiss, *Average Concentration Ratios and Industrial Performance*, 11 J. INDUS. ECON. 237, 237 (1963); Norman R. Collins & Lee E. Preston, *Price-Cost Margins and Industry Structure*, 51 REV. ECON. & STAT. 271, 272–73 (1969).

106. *See, e.g.*, AREEDA, HOVENKAMP & HOVENKAMP, *supra* note 17, at ¶¶ 940–44; *see also id.* at ¶ 408 (discussing economies of scale); *id.* at ¶ 409 (highlighting product differentiation); *id.* at ¶ 410 (looking into information asymmetry); *id.* at ¶ 411 (explaining agency and free rider problems).

107. The U.S. Dept. of Justice has archived and preserved all previous editions of the Merger Guidelines. *See Guidance and Policy Statements Archive*, U.S. DEPT. JUST., https://www.justice.gov/archives/atr/guidelines-and-policy-statements [https://perma.cc/SQG5-EWML].

108. U.S. DEPT. OF JUST. & FED. TRADE COMM'N, MERGER GUIDELINES (2023), https://www.ftc.gov/system/files/ftc_gov/pdf/2023_merger_guidelines_final_12.18.2023.pdf [https://perma.cc/W7TJ-UKG8].

109. *See* Weiss, *supra* note 104, at 1104–10 (summarizing the data and finding strong positive correlations between industry concentration and profit rates, and also between concentration and price).

110. *See* Herbert Hovenkamp, *Merger Law: the Rehabilitation of Philadelphia Bank*, THE MONOPOLY PROBLEM (Sep. 11, 2026), https://herbhovenkamp.substack.com/p/merger-law-the-rehabilitation-of [https://perma.cc/E8A4-2R5N].

111. Brown Shoe Co. v. United States, 370 U.S. 294, 325 (1962).

112. *See* HOVENKAMP, *supra* note 99, at ch. 6; *see also, e.g.*, 95 CONG. REC. 11493–95 (1949) (detailing statement of John A. Carroll, D. Colo., speaking in favor of the bill) ("[W]e know that if there is free competition

Almost immediately, however, the Supreme Court began stepping back from that conclusion. It made price central in merger cases like *Philadelphia Bank*[113] and *El Paso Natural Gas*, only one and two years after *Brown Shoe.*[114] It finally concluded in the 1986 *Cargill* decision[115] that it would be "inimical" to the purpose of merger law to condemn a merger because it resulted in lower prices that could injure rivals.

The reasons for antitrust policy's concerns about concentration have important implications for antitrust remedies. If the concern is concentration for its own sake, or perhaps that larger firms can undersell smaller ones, as *Brown Shoe* indicated,[116] then any breakup that makes a firm smaller is presumptively a good thing. We don't have to worry very much about how we are dividing them up, provided that they are in fact smaller and that the market contains more of them when we are finished. Excessive reliance on concentration indexes can lead to this result, because a horizontal breakup will *always* reduce the reading on an index of concentration.[117] The only thing these indexes measure is concentration.

But a lower index reading is not a goal in itself. Our real concern is whether output has increased, prices declined, or the market is more competitively vital under post-breakup conditions. For example, the crude breakup of Standard Oil described above led to the creation of more firms, but the price of gasoline shot up.[118] That is not an outcome that the structure-conduct-performance paradigm would predict.

Crafting successful remedies requires courts to appreciate the limitations of structural change as a remedy. While there are links between structure and performance, they are complex and imperfect at best. That is particularly true when the structure is dictated by a court decision rather than internal firm development. If we really want to make the market perform more competitively, with lower prices, higher output, or more innovation, then the task is more difficult. We need to have some reason for thinking that a particular breakup will lead to an increase in competition, and without significantly impairing scale, scope, or network economies that often flow from larger or more diverse firms. Doing this has never been easy, and the record thus far indicates that courts are not very good at it. Further, the most promising results have not come from breakups, but rather from injunctive remedies that break down exclusivity or, in some cases, require a firm to share one or more assets.

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the public will be protected from unduly high prices . . . ."); *id.* (detailing statement of Sidney R. Yates, D. Ill., speaking in favor) ("When three or four producers take the places of 20 or 30, the chances are great the price competition will be crippled."); *id.* (detailing statement of Joseph R. Bryson, D.S.C., speaking in favor) ("A trend toward more and more mergers, which suppress competition, increase the outside control of local enterprise, and cause higher prices and instability of employment . . . ."); *id.* (detailing statement of William T. Dyrne, D.N.Y.) (citing FTC Report that "under competitive capitalism consumers are protected from high prices by the constant rivalry among numerous firms . . . ."); *see also* 96 CONG. REC. 16433 (1950) (detailing statement of Sen. Forrest C. Donnell, R. Mo.) (understanding the bill to authorize injunctions against "any economic concentration, be it existing or incipient . . . which has power to raise prices or to exclude competition . . . .").

113. United States v. Phila. Nat'l Bank, 374 U.S. 321, 370–71 (1963).

114. United States v. El Paso Nat. Gas Co., 376 U.S. 651, 658–59 (1964).

115. Cargill, Inc. v. Monfort of Colo., Inc., 479 U.S. 104, 114–15 (1986).

116. Brown Shoe Co., Inc. v. United States, 370 U.S. 294, 325 (1962).

117. On concentration indexes, see AREEDA, HOVENKAMP & HOVENKAMP, *supra* note 17, at ¶ 404. For example, the Herfindahl-Hirschman Index (HHI) commonly used in merger litigation is the sum of the squares of the market shares of each firm in the market. If a market starts with four equal size firms its HHI will be $25^2 + 25^2 + 25^2 + 25^2$, which equals 2500. A breakup of one firm into two firms with markets shares of 15% and 10% will yield a market with five firms and an HHI of 2200.

118. *See* discussion *supra* text accompanying notes 59–63.

D. Remedies in Digital Markets

When the Supreme Court stated that the purpose of an antitrust remedy is to "restore competitive conditions" it was referring to a market where prices were lower.[119] That also implies that output was higher. Sometimes breaking firms up and reducing market concentration will further these ends, but often it will not.

Breaking up a digital product is unlikely ever to produce lower prices and higher output. The best way to create close competition among viable firms making digital products is not to break them up but rather require them to share. By this metric, the remedy in the 2025 *Google* (search) decision promises much greater success than nearly any of the remedies discussed in the Supreme Court remedy decisions above. Its principal vulnerability is lack of a track record, but if the history of remedies in old economy markets has taught us anything, it is that we should be looking for alternatives.

1. Digital Market Breakups

Digital markets have three features that make them unique for the purpose of formulating appropriate antitrust remedies. *First*, the assets of digital firms are even harder to divide than are those in old economy markets. Many digital assets cannot be broken up at all without destroying or severely impairing their value.

To be sure, some aggregated digital assets, such as patent portfolios or video libraries, can be divided, but the recipients would each own a different set of exclusive rights. For example, breaking up a 100-patent portfolio might entail giving one firm patents #1–#50, and the other #51–#100. That would not make them competitors. They might perform as complements, depending on what those patents cover. In some cases they may not have any significant competitive or complementary relationship at all. In any event, separating complements and placing them with different firms is in and of itself not a recipe for competitive improvement.

Second, however, digital products are more amenable to sharing, particularly by nonexclusive license. In fact, non-exclusive licenses in digital markets come as close to creating head-to-head competitors as any structural antitrust remedy available. They almost always provide better results than breaking up of physical assets, which seldom results in the creation of perfect head-to-head competitors.

One frequently used historical equivalent is compulsory licensing of patents, which has often been approved as part of an antitrust remedy.[120] For example, if the firm with a 100-patent portfolio gave its rival a nonexclusive license covering all of them, each would be able to practice the entire set of patents. Operationally, they would be competitors as far as the range of practices covered by these patents permit. Dividing physical manufacturing plants or retail stores among two or more firms virtually never produces that result.

The recipient of an unrestricted, nonexclusive license can do everything that the original owner can do except exclude others from doing the same thing. As a result, it has the capacity to create a form of perfect competition among these licensees. Further, issuing a

119. United States v. Int'l Harvester Co., 274 U.S. 693, 697 (1927).

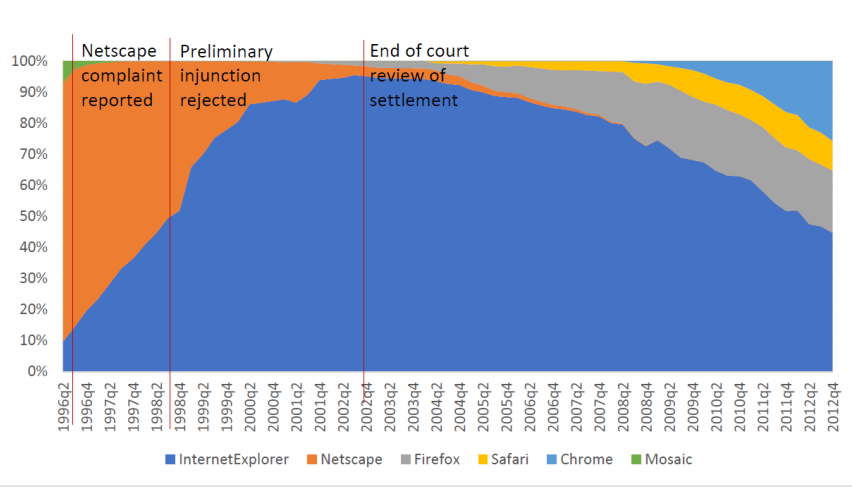
120. *See, e.g.*, Martin J. Adelman, *Property Rights Theory and Patent-Antitrust: The Role of Compulsory Licensing*, 52 N.Y.U. L. REV. 977 (1977). On EU law, see generally Friso Bostoen & David van Wamel, *Antitrust Remedies: From Caution to Creativity*, 14 J. EUR. COMPETITION L. & PRAC. 540 (2023).

nonexclusive license rarely involves firms and courts in all of the many technical details that make traditional breakups so messy and difficult to manage.

Third, digital products are almost always more responsive to nonstructural remedies that free up rivals because competitors can typically increase digital output quickly and at low cost. While entry barriers into digital markets can be high, an established firm whose product is digital can usually increase its output very quickly, with marginal costs close to zero. It need not produce new manufacturing facilities or arrange to have products shipped. Capacity constraints are typically much less. For example, an injunction that prohibits exclusive dealing or tying should let purely digital rivals fill up available demand in a brief period of time and typically, at low incremental cost.

To illustrate, Judge Wyzanski's loosening up of lease terms that favored United Shoe Machinery's exclusive distribution cleared a path for rivals to increase their output, but they would still have to manufacture and perhaps design the shoe machinery, construct additional plant capacity, and create a distribution network. Further, the incremental output would have to be sold at a profitable price. Nevertheless, after the district court's decree, USM's market share fell from 85% to 62% in a fifteen-year period. While that was significant progress, it was not enough for the Supreme Court, which then required a divestiture.[121]

By contrast, the *Microsoft* decree provisions that removed licensing restrictions that excluded browsers other than its own Internet Explorer meant that rivals could increase their output purely digitally.[122] The history of Internet Explorer market share shows a quick rise during the period of Microsoft's exclusionary practices, up to more than 90%, and then a quick decline when the decree took effect, to about 50% ten years later:[123]



121. United States v. United Shoe Mach. Corp., 391 U.S. 244, 252 (1968). On the details, see Crandall, *supra* note 63 at 169–70.

122. United States v. Microsoft Corp., 253 F.3d 34, 60–63 (D.C. Cir. 2001).

123. Sean Ennis, U.S. v. Microsoft*: Where did the Time Go?* 7 (Univ. of E. Anglia Working Paper No. 21-05, 2021), https://ueaeprints.uea.ac.uk/id/eprint/80236/1/CCP_21_05.pdf [https://perma.cc/QQ94-JAHV].

Today Internet Explorer's successor, Microsoft Edge, has a market share under five percent.[124] Because a browser is a purely digital product, once it has been deployed it can accommodate additional users quickly, and at a per user cost very close to zero. It can also lose them to a digital rival just as quickly. Typically, there are few capacity constraints that limit a firm's ability to increase output quickly.

Or consider the *Google* (search) case.[125] Given the finding that Google had unlawfully abused its monopoly position, what is the best path toward restoring competitive conditions in the online search market? Google's principal search asset is its enormous search files database of as many as 400 billion individual web pages. It cannot be "broken up" without destroying its functionality.[126]

The government did not request breaking up the search monopoly, however, but rather a divestiture of the Chrome Browser, which is a non-competing, complementary product. Breaking off Chrome does nothing to split search among multiple competing providers. Even the Government's own testifying economist conceded that a Chrome divestiture would not "dislodge Google from its market primacy, at least not in the short term."[127] The only rationale was that Chrome was in some way a lever that facilitated Search's dominance.[128]

Chrome is a very popular browser, and is the channel for approximately 20% of searches conducted in the United States.[129] Nevertheless, the court concluded that the government failed to show a "significant causal connection" between Chrome divestiture and greater competition in search.[130] The only real link the court could find between Google's search dominance and its ownership of Chrome was that Google Search was the default search engine on most Chrome installations.[131] But that was true of Apple devices as well, even though Google does not own Apple. As a result, divesting Chrome went much further than the conduct that the plaintiffs had challenged, requiring divestiture of a deeply integrated asset merely to open a "single channel of distribution to competition."[132] This overreach also extended to geography, because the parties had agreed that the relevant market for this antitrust action was limited to the United States, while more than 80% of active Chrome use came from outside the United States.

The court also observed that a Chrome divestiture would be "incredibly messy and highly risky,"[133] akin to separating Siamese twins. Chrome was built from the ground up, not as a standalone business, and as one that relied on Google for a host of administrative

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124. *Browser Market Share Worldwide*, STATCOUNTER GLOBALSTATS, https://gs.statcounter.com/browser-market-share [https://perma.cc/PBJ2-G2R2] (pointing to the market share data on January 2026).

125. United States v. Google LLC, 803 F. Supp. 3d 18, 161 (D.D.C. 2025) (remedies opinion).

126. *See generally* Herbert Hovenkamp, *Google Search and Antitrust's Remedial Goals*, 106 B.U.L. REV. 101 (2026) (describing the pitfalls of breaking up Google).

127. *Google LLC*, 803 F. Supp. 3d at 98.

128. *Id.*

129. *Id.* at 83,158.

130. *Id.* at 75. On causation and remedies, see *infra* text accompanying notes 131–134. On the requirement of a significant causal connection, see Erik Hovenkamp, *Monopoly Causation*, VAND. L. REV. (forthcoming 2027), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=7259941 [https://perma.cc/ZSP3-LQD5].

131. *Id.* at 98–100.

132. *Google LLC*, 803 F. Supp. 3d at 100 (citing United States v. Microsoft Corp., 253 F.3d 34, 107 (D.C. Cir. 2001)) (stating that a remedy should be "tailored to fit the wrong creating the occasion for the remedy").

133. *Id.* at 100.

functions.[134] The judge was extremely concerned about post-divestiture performance and the very substantial risk that a divested Chrome would fail. Considering this, the idea that spinning off Chrome would do anything to restore competitive conditions to the search market was unrealistic and, in any event, unproven.

By contrast, the remedy that the court actually created required Google to provide a single-snapshot copy of its search files database to a small but as yet undetermined number of qualified licensees who had established both their desire and ability to compete with Google in ongoing development of search. A nonexclusive license conveys the power to duplicate the licensor's asset precisely, limited only by the scope of the license. As a result, the court need not trouble itself about the effects of breaking off plants or other resources that compete with another only imperfectly or not at all, such as in the *Standard Oil*, *Grinnell*, or *AT&T* cases.[135] These advantages are largely limited to assets that are nonrivalrous, however, such as digital code. A digital database can be licensed so as to give each of several firms access to the entire asset. Most physical assets cannot be divided in that way.

One concern with compulsory licensing that cannot be ignored is congestion externalities, or failures that can result from overuse of an asset that reduces the incentive of each individual to invest.[136] In information technologies in particular, sometimes too many rivals can be as problematic as too few, particularly where their sheer number reduces the incentives of each to make a proper investment. That is very likely why Judge Mehta in the *Google* (search) case ordered the Google files database to be shared with a limited number of "qualified" licensees. The goal was not a model resembling a single manufacturer and a large number of dealers who simply resell what the manufacturer makes. The court did not want numerous "white label" sellers that simply "present[ed] Google search results under a different brand name."[137] Rather, the goal was to establish multiple competing firms with their own infrastructure and, eventually, their own diversity of offerings. Perhaps more easily said than done, but this was a laudable effort.

2. IP Rights on Digital Networks

Networked digital markets are distinctive because of the unique way that IP rights function in them. In old economy markets we think of IP rights mainly as encouraging innovation by creating limited exclusionary rights. In the process, they generally facilitate product differentiation. That is, in IP-rich markets we tend not to have perfect competition but rather competition among differentiated firms, each prohibited by IP rights from

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134. *Id.* at 101 (citations omitted)

> Chrome relies on Google's back-end systems and engineering personnel for, among other things, account sign-in and authentication, data storage and management at a global scale, and cybersecurity . . . [A]nd then there 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.

135. *See* discussion *supra* text accompanying notes 59–65, 88.

136. On congestion externalities, see generally Christopher S. Yoo, *Network Neutrality and the Economics of Congestion*, 94 GEO. L.J. 1847, 1847 (2006).

137. *Google LLC*, 803 F. Supp. 3d at 133.

precisely copying the other. In a few situations where differentiation is extreme enough, they can even lead to the creation of single-firm monopolies.

IP rights on digital networks also create the power to exclude, but on digital networks they more often operate to limit rather than facilitate the opportunities for monopoly. Digital networks are generally subject to relatively extreme economies of scale: they produce better results and have lower costs as they have more participants. This led to a common early argument that digital networks are "winner-take-all," or natural monopolies.[138]

The reality, however, is that many digital network markets operate in an environment that accommodates numerous competitors. That includes periodicals, social network sites, dating and match-making sites, and various product sellers. The reason is that they have been able to differentiate their products, meaning that they face somewhat different demand curves.[139]

IP rights are essential to this process because they enable firms to differentiate their products without immediately being copied by someone else. That requires two things: 1) technology that is capable of being significantly differentiated; and 2) IP protection that serves to limit copying.[140] On the first point, Google has been able to maintain a dominant position in search because search itself has (until now) been difficult to differentiate effectively. The promise today is that AI will be able to change that, creating an equilibrium more like the one we have for social networks, where many differentiated firms compete. Internally, social network sites exhibit significant economies of scale and scope as they grow larger and more diverse. They do not become durable monopolies, however, because effective differentiation entails that they appeal to different arrays of consumer preferences.

The remedy Judge Mehta designed in the *Google* (search) decision is intended to create close head-to-head competitors as a starting point, but then encourage individual licensees to develop their own unique search products, taking advantage of AI technologies as well.[141] "For Qualified Competitors to compete, they must innovate and differentiate their product from Google's rather than simply feeding off Google's work."[142] As contemplated, the licensee would start out as very close competitors but would thereafter "build out" in ways that they could differentiate their services.[143]

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138. Thomas H. Noe & Geoffrey Parker, *Winner Take All: Competition, Strategy, and the Structure of Returns in the Internet Economy*, 14 J. ECON. & MGMT. STRATEGY 141, 145 (2005).

139. Hovenkamp, *Antitrust and Platform Monopoly*, *supra* note 1, at 1969–96.

140. Herbert Hovenkamp, *How IP Rights Create Competition in E-Commerce*, NETWORK L. REV., Fall 2024, at 2–4.

141. Apparently pushing the other way, the EU is currently launching proceedings under its Digital Markets Act to force Google to share operating data with alternative search engines, with a goal of giving them "equally effective access to the same features" while operating on Google Search. *EU Steps in to Make Sure Google Gives Rivals Access to AI Services and Data*, ASSOC. PRESS (Jan. 27, 2026), https://apnews.com/article/google-european-union-competition-ai-c39de40513a0f00dc8e71244e115e30a [https://perma.cc/2BKF-WNAH]. Judge Mehta's approach contemplates a world in which multiple search engines each take advantage of genAI in competing with one another. The other (EU) contemplates a single dominant search engine containing competing genAI products.

142. *Google LLC*, 803 F. Supp. 3d at 118; *see also id.* at 109 ("[T]heir competitive advantage will have to come from innovation and differentiating their search services from Google's"); *id.* at 111 (noting that undifferentiated entry would likely fail (citing PHILLIP E. AREEDA & HERBERT HOVENKAMP, ANTITRUST LAW ¶ 421h (5th ed. 2023)); *id.* at 160 ("Technological advancement and product differentiation are what will change market dynamics, not a decade-long judicial decree.").

143. *Google LLC*, 803 F. Supp. 3d at 114.

E. Causation and Antitrust Remedies

Causation is relevant to both proof of unlawful monopolization and to determining appropriate remedies. When the United States government acts as enforcer, it need not show harm to itself, but only that the statute has been violated.[144] However, Section 2 of the Sherman Act contains its own built-in causation requirement. Proof of monopolizing conduct requires a showing that the challenged conduct created or contributed to the defendant's monopoly power.[145] In addition, private plaintiffs must prove that the challenged acts caused them either individual harm if they are seeking damages,[146] or threatened harm if they are seeking an injunction.[147]

The statutory language also requires a causal connection between the violation and the remedy. This requirement applies to the government as well as private plaintiffs. For example, the government equity statute authorizes the courts to "prevent and restrain" a proven violation.[148] That does not create authority to just break things up at random. The remedy must be reasonably calculated to prevent or restrain the violation. This was the principal reason that the court refused to order the divestiture of the Chrome browser in the *Google* (search) case—the government had not been able to show a causal link between possession of Chrome and Google's dominant position in search.[149] As a result, it had not shown that divesting Chrome would do much to prevent or restrain Google's monopoly.

When a forced breakup actually creates two or more head-to-head competitors, a causal link can be presumed from the breakup itself. Such competition, assuming it is durable, makes it less likely that any one of the resulting firms will commit monopolization in the future. It also creates an inference that prices will be lower and output higher. Assuming it is effective, the same thing is true of unrestricted nonexclusive licensing. For example, if the obligation to share Google's search file database results in the creation of three or four competitors with capabilities equivalent to that of Google itself, we can infer that the remedy will cause the market to become competitive.

By contrast, if all the court did was divest Chrome, which is not a part of the search monopoly to begin with, some other causal link must be shown. That is, divesting Chrome would "prevent and restrain" the antitrust violation only if it probably contributed to the destruction of the search monopoly. Spinning off a complement would not necessarily have any effect on Google's position in search. In fact, complements typically reduce a firm's costs or improve the quality of its product. As a result, removing one can make the situation worse.

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144. *E.g.*, 15 U.S.C. § 25 (authorizing United States attorneys "to institute proceedings in equity to prevent and restrain" antitrust violations); *see* Herbert Hovenkamp, *Antitrust Harm and Causation*, 99 WASH. U.L. REV. 787, 837–38 (2021).

145. Hovenkamp, *supra* note 144.

146. *See* 15 U.S.C. § 15 (permitting private plaintiffs to recover "threefold the damages . . . sustained").

147. 15 U.S.C. § 26 (entitling private antitrust plaintiffs to "injunctive relief . . . against threatened loss or damage by a violation of the antitrust laws").

148. 15 U.S.C. § 25; *see supra* note 144 and accompanying text.

149. *See* discussion *supra* note 142.

II. CONCLUSION: CREATIVE § 2 REMEDIES

The antitrust statutes provide very little guidance about remedies. They also impose few limitations on the federal courts, other than insisting that the remedy serve to prevent and restrain the antitrust violation. Each situation is different, and producing an effective remedy requires the court to identify as best it can a decree that is capable of being managed, and that will result in lower prices, higher output, or removal of unreasonable restraints on quality or innovation.

Nothing in the statutes, the Supreme Court case law, nor the history of monopolization cases suggests that structural change should be the first place to look for an antitrust remedy. Judge Mehta indicated as much in the *Google* (search) case—that "[t]he ordinary starting point is an injunction terminating the anticompetitive conduct."[150] Indeed, the history of antitrust § 2 breakups suggests that it would be uncommon in a situation not involving a substantial and recent merger that a breakup would restore competitive conditions.

The better places to look first are removal of exclusivity provisions or other contract or license agreements that favor the dominant firm's own assets. Removal of these should open the market up to more expansion by rivals or perhaps entry by potential rivals. Mandatory injunctions, including data or other asset sharing, are options to consider as well, provided that they can be effectively administered.

Another promising alternative, but very likely limited to digital markets, is compulsory dealing orders that require firms to share assets with one or more rivals. While the Supreme Court's *Trinko* decision prohibits treating most refusals to deal as antitrust violations, a court can reach much further when considering a remedy for conduct that has already been proven unlawful.[151] In the *Google Play* case, the court found that Google's refusal to permit Epic Games to sell its game levels and other accessories through any site other than the Android Google Play store was an antitrust violation. The court not only prohibited App store exclusivity but also held that newly introduced alternative app stores were entitled to a copy of Google's very large catalog of more than 2,000,000 apps so that they could set up in competition with the Google Play app.[152] The court noted that users are attracted by stores with large catalogs.

Under *Trinko*, an otherwise innocent firm could not be forced to share its inventory list with a competing seller simply because the seller would be at a competitive disadvantage without it. However, "it is well established that antitrust remedies can and often must proscribe otherwise lawful conduct to unwind and further prevent violators' anticompetitive activity."[153] That conclusion seems unavoidable. In fact, most of the remedy alternatives to divestiture require firms to cooperate in some way with rivals. Divestitures have historically included requirements such as compulsory patent licensing or interconnection, which are things that *Trinko* makes suspect when they are imposed on otherwise innocent

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

151. Verizon Commc'ns, Inc. v. L. Offs. of Curtis V. Trinko, LLP, 540 U.S. 398, 398 (2004).

152. *See, e.g.*, *In re* Google Play Store Antitrust Litig., 147 F.4th 917, 930–31, 948 (9th Cir. 2025) (describing the courts rationale for why the Play Store set up violated antitrust law).

153. *Id.* at 948 (citing Ford Motor Co. v. United States, 405 U.S. 562, 572 (1972), discussing a remedy that required Ford to purchase one half of its spark plug needs from a new company that it was required to establish).

firms. In the case of compulsory licensing, the Patent Act makes clear that a firm has no duty to license.[154]

The Supreme Court has also warned against detailed remedies that would require "continuing supervision" by the courts.[155] For digital markets, sharing remedies are promising and offer a form of "quasi-structural" reorganization. These can include mandatory interoperability such as required by the *AT&T* consent decree.[156]

The district court's remedy in the *Google* (search) case is a promising example of a well-designed remedy, even though its success is not guaranteed.[157] The court ordered forced, single-time sharing of the defendant's enormous search files index, restricted to a small number of licensees who could establish their ability and willingness to develop search on their own. The judge also had the foresight to appreciate that the presence of AI is a game changer, enabling market-differentiated search of a kind we have not experienced before. As with any highly creative remedy, it lacks a history, but every antitrust remedies case presents unique challenges. Sadly, today we have a much thicker history of the things that do not work than of the things that do.

Courts could also experiment more with compelled changes in management that might serve to divide decision making among different interests. That could both reduce the likelihood of anticompetitive behavior and additionally bring it under the more severe rules of § 1 of the Sherman Act.[158]

The lack of relevant precedents, the immense variability of monopolization cases, and the high standards that the Supreme Court has imposed makes the creation of remedies in monopolization cases one of the most difficult things that federal judges do. It is also essential, however, to the maintenance of a competitively vital and innovative economy. The gains from a well-supported finding of anticompetitive conduct can be too quickly lost by a poorly designed remedy, particularly those that are insufficiently attentive to the differences between structure and performance.

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154. *See* 35 U.S.C. § 271(d) ("No patent owner otherwise entitled to relief for infringement or contributory infringement of a patent shall be denied relief or deemed guilty of misuse or illegal extension of the patent right by reason of his having . . . refused to license or use any rights to the patent.").

155. NCAA v. Alston, 594 U.S. 69, 102–03 (2021).

156. *See* United States v. AT&T, Inc., 552 F. Supp. 131, 201 (D.D.C. 1982) (discussing the AT&T decree); *see generally* Herbert Hovenkamp, *Antitrust Interoperability Remedies*, 123 COLUM. L. REV. F. 1 (2023) (providing more discussion on the AT&T litigation).

157. United States v. Google LLC, 803 F. Supp. 3d 18, 18 (D.D.C. 2025) (remedy); United States v. Google LLC, 2025 WL 3496448, at *1 (D.D.C. Dec. 5, 2025) (final decree).

158. The idea is explored more fully in HOVENKAMP, *supra* note 99, at ch. 7; *see also* Hovenkamp, *Antitrust and Platform Monopoly*, *supra* note 1, at 2021–31.