Note

Grandpa Sherman Did Not See Google Coming: Evolutions in Antitrust to Regulate Data Aggregating Firms

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INTRODUCTION

"Senator, we run ads."[1] Mark Zuckerberg's snarky response in his 2018 Senate testimony could be considered the opening salvo between state and federal competition enforcement officials and market-dominant technology companies like Google and Facebook (collectively "Big Tech").[2] Congress subpoenaed

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1. *Facebook, Social Media Privacy, and the Use and Abuse of Data: Joint Hearing Before the S. Comm. on Com., Sci., & Transp. & the S. Comm. on the Judiciary*, 115th Cong. 21 (2018) (Mark Zuckerberg's response to Senator Orrin Hatch's question regarding how Facebook can remain free for users).

2. To avoid confusion, this Note will refer to all subsidiary firms of the Alphabet organization collectively as "Google." Kamil Franek, *Who Really Owns Google (Alphabet) and Who Controls It*, KAMIL FRANEK (Dec. 11, 2022), https://www.kamilfranek.com/who-owns-google-alphabet [https://perma.cc/SR2B-WM6Z]. Many past and current litigation efforts name Google as the defendant. *See, e.g.*, Complaint, Utah v. Google, No. 3:21-cv-05227 (N.D. Cal. July 7, 2021) [hereinafter Utah Complaint], https://naagweb.wpenginepowered.com/wp-content/uploads/2021/07/Utah-et-al-v.-Google-App-Store-complaint.pdf [https://perma.cc/L4GJ-2UWT]; Complaint, United States v. Google, No. 1:20-cv-03010 (D.D.C. Oct. 20, 2020) [hereinafter Google Complaint], https://www.justice.gov/opa/press-release/file/1328941/download [https://perma.cc/K8BS-R3SL]. Although Facebook changed its name to Meta in 2021, this Note will refer to it as Facebook. *See* Mike Isaac, *Facebook Renames*

Zuckerberg in the wake of the Cambridge Analytica scandal in March 2018.[3] In short, the Cambridge Analytica scandal arose out of Facebook leaking the private data of tens of millions of users to buyers of American psychological voter profiles.[4] A prominent buyer of Facebook's ads was a major oil company linked to the Russian government[5]—shocking information, given the Russian interference in the 2016 American presidential election.[6] The Cambridge Analytica scandal and Zuckerberg's testimony were the last straw in a year that saw record-setting erosion of consumer privacy through data breaches.[7] And although Zuckerberg may not have not been lying to Congress, his statement that Facebook simply "runs ads" was not an accurate representation of Facebook's business.[8] In fact, both Facebook and its peer, Google, are in the business of *data aggregation*.[9]

This Note defines data aggregation as the collection of personal and social data[10] from multiple, significantly distinct

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Itself Meta, N.Y. TIMES (Oct. 28, 2021), https://www.nytimes.com/2021/10/28/technology/facebook-meta-name-change.html [https://perma.cc/WY8D-CF6R].

3. Nicholas Confessore, *Cambridge Analytica and Facebook: The Scandal and the Fallout So Far*, N.Y. TIMES (Apr. 4, 2018), https://www.nytimes.com/2018/04/04/us/politics/cambridge-analytica-scandal-fallout.html [https://perma.cc/R6GV-7LRW].

4. *Id.*

5. *Id.*

6. Scott Shane & Mark Mazzetti, *The Plot to Subvert an Election: Unraveling the Russia Story So Far*, N.Y. TIMES (Sept. 20, 2018), https://www.nytimes.com/interactive/2018/09/20/us/politics/russia-interference-election-trump-clinton.html [https://perma.cc/E6PL-TZCY].

7. Chris Morris, *Data Breaches in 2021 Already Top All of Last Year*, NASDAQ (Oct. 21, 2021), https://www.nasdaq.com/articles/data-breaches-in-2021-already-top-all-of-last-year-2021-10-21 [https://perma.cc/746H-M3T8] (reporting 1,529 major data breaches in 2017).

8. Kamil Franek, *How Facebook Makes Money: Business Model Explained*, KAMIL FRANEK (Apr. 4, 2021), https://www.kamilfranek.com/how-facebook-makes-money-business-model-explained [https://perma.cc/64Q9-T9JP] (stating that Facebook earns ninety-eight percent of its revenue from advertising and the remainder from growing revenue products, like virtual reality and payments products).

9. STAFF OF H. COMM. ON THE JUDICIARY, 117TH CONG., INVESTIGATION OF COMPETITION IN DIGIT. MKTS. 8 (Comm. Print 2020) [hereinafter MAJORITY REPORT] ("Google maintained its monopoly over general search through a series of anticompetitive tactics. These include an aggressive campaign to undermine vertical search providers, which Google viewed as a significant threat.").

10. Personal data is data captured from an individual user, whereas social data is the aggregate of personal data that informs the data aggregator about other users and potential users with similar characteristics or behaviors. *See*

sources.[11] For example, data flowing from Google Maps mobile app usage and data flowing from Google's desktop search engine come from two significantly distinct sources.[12] Google then feeds data from those distinct sources into overarching machine learning algorithms that power many Google products.[13] This cross-product data collection is profitable to Google because it allows local brick-and-mortar businesses to engage in nuanced price discrimination while advertising across platforms like YouTube, Google Search, and in-app ads for Android OS apps.[14] Taking

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Dirk Bergemann, Alessandro Bonatti & Tan Gan, *The Economics of Social Data*, 53 RAND J. ECON. 263, 264 (2022).

11. Data aggregation is an ambiguous term. Some define data aggregators as companies that attract suppliers (like advertisers) and consumers (like search engine users), acting as a matchmaker; then, the increased quality experience leads to a cycle of gaining more suppliers and more consumers. *See* Ben Thompson, *Antitrust and Aggregation*, STRATECHERY BLOG (Apr. 26, 2016), https://stratechery.com/2016/antitrust-and-aggregation [https://perma.cc/HHJ7-MVXH]. The definition used here describes Google's conduct discussed in MAJORITY REPORT, *supra* note 9, at 175–76 ("In 2016 . . . Google . . . combined DoubleClick data with personal information collected through other Google services—effectively combining information from a user's personal identity with their location on Google Maps, information from Gmail, and their search history, along with information from numerous other Google products.").

12. For an overview of how multi-source machine learning algorithms work, see Nilani Algiriyage, Raj Prasanna, Kristin Stock, Emma E. H. Doyle & David Johnston, *Multi-Source Multimodal Data and Deep Learning for Disaster Response: A Systematic Review*, SN COMPUT. SCI. (Nov. 27, 2021), https://doi.org/10.1007/s42979-021-00971-4. *C.f.* Kyle Wiggers, *Google Details How It's Using AI and Machine Learning to Improve Search*, VENTUREBEAT (Oct. 15, 2020), https://venturebeat.com/ai/google-details-how-its-using-ai-and-machine-learning-to-improve-search [https://perma.cc/REJ7-PXXQ] (discussing Google using distinct data sources to improve its machine learning algorithm for its busyness function about businesses and areas).

13. *See* MAJORITY REPORT, *supra* note 9, at 144; Steven Levy, *How Google Is Remaking Itself as a "Machine Learning First" Company*, WIRED (June 22, 2016), https://www.wired.com/2016/06/how-google-is-remaking-itself-as-a-machine-learning-first-company [https://perma.cc/6TYC-HNVU] (quoting Google's CEO on an earnings call, where he stated: "Machine learning is a core, transformative way by which we're rethinking how we're doing everything. We are thoughtfully applying it across all our products, be it search, ads, YouTube, or Play. And we're in early days, but you will see us—in a systematic way—apply machine learning in all these areas.").

14. *See* ARIEL EZRACHI & MAURICE E. STUCKE, VIRTUAL COMPETITION: THE PROMISE AND PERILS OF THE ALGORITHM-DRIVEN ECONOMY 85–145 (2016) (discussing how data-opolies facilitate behavioral discrimination for advertisers, convincing consumers to buy things they did not necessarily want at the highest

this example further, data from these two distinct sources can feed machine learning algorithms for products Google has yet to make public.[15] Or this blended data can inform what nascent competitors should be acquired.[16] Once a person's data is transmitted from a Google product to overarching machine learning algorithms, there is no telling how it may be used. In the words of Google's founder, Sergey Brin, the business goal for a data aggregation company like his is to be "like the mind of God."[17]

Congress was outraged by the Cambridge Analytica scandal, and it initially focused on the injuries to the privacy rights

price they are willing to pay); Nathan Newman, *Search, Antitrust, and the Economics of the Control of User Data*, 31 YALE J. ON REGUL. 401, 443–44 (2014) (contrasting price discrimination conducted by airlines as beneficial to the consumer with price discrimination enabled by Google's data collection, which distinctly does not allow for prices to be fully open and transparent like airline ticket prices); Ramsi A. Woodcock, *Big Data, Price Discrimination, and Antitrust*, 68 HASTINGS L.J. 1371, 1385–91 (2017) (describing the pricing of fungible items to extract maximum profitability from consumers); Kevin Rowe, *How Search Engines Use Machine Learning: 9 Things We Know for Sure*, SEARCH ENGINE J. (Aug. 13, 2021), https://www.searchenginejournal.com/ml-things-we-know [https://perma.cc/A4UB-NY5C] (discussing how Google's multi-source machine learning identifies custom signals based on a user's specific query to provide more nuanced results and how that leads to improved advertiser targeting and value propositions).

15. *See* Rowe, *supra* note 14 (noting how Google's machine learning, specifically its RankBrain algorithm, allows for the identification of new ranking signals to improve Google's search results and advertising offerings); *see also* Barry Schwartz, *How Google Uses Artificial Intelligence in Google Search*, SEARCH ENGINE LAND (Feb. 3, 2022), https://searchengineland.com/how-google-uses-artificial-intelligence-in-google-search-379746 [https://perma.cc/7Z6F-CQ9Y] (discussing Google's latest machine learning algorithm, Multitask Unified Model, the second machine learning iterative improvement since RankBrain).

16. MAJORITY REPORT, *supra* note 9, at 33 ("Persistent data collection can also create information asymmetries and grant firms access to non-public information that gives them a significant competitive edge. These insights include information on user behavior as well as on broader usage trends that enable the dominant platforms to track nascent competitive threats. . . . This significant data advantage also enables dominant platforms to identify and acquire rivals early in their lifecycle. Leading economists and antitrust experts have expressed concern that serial acquisitions of nascent competitors by large technology firms have stifled competition and innovation.").

17. Frank Pasquale, *Copyright in an Era of Information Overload: Toward the Privileging of Categorizers*, 60 VAND. L. REV. 135, 146 (2007) (quoting Siva Vaidhyanathan, *A Risky Gamble with Google*, CHRON. HIGHER EDUC., Dec. 2, 2005, at B7).

of individual Big Tech users.[18] In 2021, congressional testimony from former Facebook employee Frances Haugen inspired an additional focus on harms beyond privacy injuries and the raised risk of monetary injuries, such as harm to users' mental health.[19] In addition to causing injury to individual users, the market dominance and anticompetitive behavior of firms like Google also harm non-users because more and more industries find it impossible to avoid using Google.[20]

Five years have passed since the Cambridge Analytica scandal, and scrutiny of Big Tech based on antitrust and anticompetitive behavior grounds has only grown.[21] But neither the courts nor Congress has produced meaningful regulation, although not for lack of trying.[22] In essence, antitrust law enforcement agencies like the United States Department of Justice and the Federal Trade Commission (FTC) have failed to regulate Big Tech firms because: (1) their actions frame target firms in the most narrow relevant market possible instead of using the more accurate relevant market data aggregation;[23] and (2) before enforcement agencies can properly enforce antitrust law, Congress must amend the law to reinvigorate the goals of antitrust and to ensure consumers can understand the cost of Big Tech product usage.[24]

The Internet and Internet platforms have transformed "the ways we produce, consume, work, finance, and learn."[25] Yet

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18. Issie Lapowsky, *How Cambridge Analytica Sparked the Great Privacy Awakening*, WIRED (Mar. 17, 2019), https://www.wired.com/story/cambridge-analytica-facebook-privacy-awakening [https://perma.cc/SF4U-XR4Y].

19. Adam Geller & Matt O'Brien, *How One Facebook Worker Unfriended the Giant Social Network*, ASSOCIATED PRESS (Oct. 10, 2021), https://apnews.com/article/facebook-science-technology-business-congress-frances-haugen-80e92043b7211590b6be84dcc7a05b4a [https://perma.cc/ATH5-QHHN].

20. *See, e.g.*, Kashmir Hill, *I Tried to Live Without the Tech Giants. It Was Impossible.*, N.Y. TIMES (July 31, 2020), https://www.nytimes.com/2020/07/31/technology/blocking-the-tech-giants.html [https://perma.cc/9BLW-VW22].

21. *See, e.g.*, Lauren Feiner, *How Cambridge Analytica and the Trump Campaign Changed Big Tech Forever*, CNBC (Dec. 26, 2019), https://www.cnbc.com/2019/12/24/how-facebook-and-big-tech-gained-dc-scrutiny-in-the-2010s.html [https://perma.cc/N2WX-6VLB].

22. *See* Cecilia Kang, *Lawmakers, Taking Aim at Big Tech, Push Sweeping Overhaul of Antitrust*, N.Y. TIMES, https://www.nytimes.com/2021/06/11/technology/big-tech-antitrust-bills.html [https://perma.cc/T3JN-ZEMT] (June 29, 2021).

23. *See infra* Parts I.A.2 and III.A.

24. *See infra* Part III.B.

25. Orly Lobel, *The Law of the Platform*, 101 MINN. L. REV. 87, 89 (2016).

Americans are dissatisfied with the conduct of data aggregating firms and the government. In 2021, over fifty-five percent of Americans believed major technology companies should be regulated more, thought these firms have too much power and influence in the economy, and cited competition as the justification for restricting the growth of technology companies that follow current law.[26] Roughly six in ten Americans "do not think it is possible to go through daily life without having data collected about them by companies."[27] Sixty-nine percent of Americans do not feel confident that data-collecting companies will use customers' data in ways that people would feel comfortable with, and seventy-five percent of Americans are not confident that the government will hold companies accountable when they misuse data.[28] What is more, Americans' opinions are well supported—2021 set the record for data breaches, impacting nearly 294 million people.[29] The crisis of confidence in private business and government is overwhelmingly clear, perhaps acting as the main

26. Emily A. Vogels, *56% of Americans Support More Regulation of Major Technology Companies*, PEW RSCH. CTR. (July 20, 2021), https://www.pewresearch.org/fact-tank/2021/07/20/56-of-americans-support-more-regulation-of-major-technology-companies [https://perma.cc/TGG3-Q37F] (finding that sixty-eight percent of Americans surveyed believe Big Tech has "too much power and influence" in the economy, and fifty-five percent say even if major technology companies follow the rules, the government "should *not* allow these companies to grow beyond a certain size because it hurts competition") (emphasis in original); *Platform Perceptions: Consumer Attitudes on Competition and Fairness in Online Platforms*, CONSUMER REPS. 2–3 (Sept. 24, 2020), https://advocacy.consumerreports.org/wp-content/uploads/2020/09/FINAL-CR-survey-report.platform-perceptions-consumer-attitudes-.september-2020.pdf [https://perma.cc/MV6R-TFMC] (finding that seventy-nine percent of Americans "think that mergers and acquisitions pursued by large platforms are unfair because they undermine competition and limit consumer choice").

27. Brooke Auxier, Lee Rainie, Monica Anderson, Andrew Perrin, Madhu Kumar & Erica Turner, *Americans and Privacy: Concerned, Confused and Feeling Lack of Control over Their Personal Information*, PEW RSCH. CTR. (Nov. 15, 2019), https://www.pewresearch.org/internet/2019/11/15/americans-and-privacy-concerned-confused-and-feeling-lack-of-control-over-their-personal-information [https://perma.cc/GW9H-XUGD] (emphasis omitted).

28. *Id.*

29. Chris Morris, *After a Decline in 2020, Data Breaches Soar in 2021*, NASDAQ (Feb. 1, 2022), https://www.nasdaq.com/articles/after-a-decline-in-2020-data-breaches-soar-in-2021 [https://perma.cc/2UWW-HKWX].

driver of the recent congressional debate around antitrust reform in the technology sector.[30]

Antitrust enforcement has been declining since the late 1970s,[31] and Congress has not updated antitrust law since 1976.[32] "[E]xcessive concentration and undue market power now look to be not an isolated issue but rather a systemic feature of America's political economy."[33] Yet, Big Tech's anticompetitive conduct has stoked a rare wave of bipartisanship in Congress[34]

30. *See* Thomas A. Lambert, *What's Behind the War on Big Tech?*, CATO INST.: REGUL., Fall 2021, at 30, 36, https://www.cato.org/sites/cato.org/files/2021-09/regulation-v44n3-1.pdf [https://perma.cc/PBD3-84AE] (discussing how political actors are attempting to increase Big Tech regulation on a self-interested basis because "cracking down on Big Tech" is electorally popular). *See generally* Auxier et al., *supra* note 27 (evidencing public distrust in Big Tech and data aggregation).

31. Maurice E. Stucke & Ariel Ezrachi, *The Rise, Fall, and Rebirth of the U.S. Antitrust Movement,* HARV. BUS. REV. (Dec. 15, 2017), https://hbr.org/2017/12/the-rise-fall-and-rebirth-of-the-u-s-antitrust-movement [https://perma.cc/RUL8-PETS] (explaining that antitrust policy and enforcement contracted from the late-1970s to the mid-2010s); Thurman Arnold Project, *Modern Antitrust Enforcement*, YALE SCH. MGMT. (Nov. 21, 2021), https://som.yale.edu/faculty-research-centers/centers-initiatives/thurman-arnold-project-at-yale/antitrust-enforcement-data-0 [https://perma.cc/5JV9-KSMV] (bemoaning the decline in antitrust enforcement since the 1970s).

32. *See* Hart-Scott-Rodino Antitrust Improvements Act of 1976, Pub. L. No. 94-435, 90 Stat. 1383.

33. Lina M. Khan, *The Ideological Roots of America's Market Power Problem*, 127 YALE L.J.F. 960, 961 (2018).

34. Kang, *supra* note 22 (highlighting bipartisanship in the House of Representatives); Diane Bartz, *Big Tech to Face Another Bipartisan U.S. Antitrust Bill*, REUTERS (Oct. 14, 2021), https://www.reuters.com/world/us/big-tech-face-another-bipartisan-antitrust-bill-2021-10-14 [https://perma.cc/6227-2DU3] (highlighting bipartisanship in the Senate).

and across the states,[35] resulting in newly proposed legislation[36] and an increase in government-initiated litigation.[37] Although some commentators and scholars may castigate the modern revival of interest in antitrust law as being driven by politics or the media,[38] today's economic landscape parallels the era that created American antitrust law. The late nineteenth and early

35. Letter from Phil Weiser, Colo. Att'y Gen., Douglas Peterson, Neb. Att'y Gen., Letitia James, N.Y. Att'y Gen., Herbert H. Slattery III, Tenn. Att'y Gen., Rob Bonta, Cal. Att'y Gen., William Tong, Conn. Att'y Gen., Kathleen Jennings, Del. Att'y Gen., Karl A. Racine, D.C. Att'y Gen., Leevin Taitano Camacho, Guam Att'y Gen., Clare E. Connors, Haw. Att'y Gen., Lawrence Wasden, Idaho Att'y Gen., Kwame Raoul, Ill. Att'y Gen., Tom Miller, Iowa Att'y Gen., Jeff Landry, La. Att'y Gen., Aaron M. Frey, Me. Att'y Gen., Brian Frosh, Md. Att'y Gen., Maura Healey, Mass. Att'y Gen., Dana Nessel, Mich. Att'y Gen., Keith Ellison, Minn. Att'y Gen., Aaron D. Ford, Nev. Att'y Gen., John M. Formella, N.H. Att'y Gen., Hector Balderas, N.M. Att'y Gen., Josh Stein, N.C. Att'y Gen., Wayne Stenehjem, N.D. Att'y Gen., Ellen F. Rosenblum, Or. Att'y Gen., Josh Shapiro, Pa. Att'y Gen., Peter F. Neronha, R.I. Att'y Gen., Sean D. Reyes, Utah Att'y Gen., T.J. Donovan, Vt. Att'y Gen., Mark R. Herring, Va. Att'y Gen., Robert W. Ferguson, Wash. Att'y Gen., and Joshua L. Kaul, Wis. Att'y Gen., to Nancy Pelosi, Speaker, U.S.H.R., Chuck Schumer, Majority Leader, U.S. Sen., Kevin McCarthy, Minority Leader, U.S.H.R., Mitch McConnell, Minority Leader, U.S. Sen., Jerrold Nadler, Chair, H. Comm. on Judiciary, Dick Durbin, Chairman, S. Comm. on Judiciary, Jim Jordan, Ranking Member, H. Comm. on Judiciary, and Chuck Grassley, Ranking Member, S. Comm. on Judiciary (Sept. 20, 2021), https://ag.ny.gov/sites/default/files/antitrust_package_support_letter_.pdf [https://perma.cc/CL8T-V4L5] (twenty-four Democrat state attorneys general, seven Republican state attorneys general, and one Independent U.S. territory attorney general collectively encouraging vast amendment of federal antitrust laws).

36. The most pertinent bills are the Platform Competition and Opportunity Act of 2021, H.R. 3826, 117th Cong. (2021); the Ending Platform Monopolies Act, H.R. 3825, 117th Cong. (2021); the American Innovation and Choice Online Act, H.R. 3816, 117th Cong. (2022); and the Augmenting Compatibility and Competition by Enabling Service Switching ("ACCESS") Act of 2021, H.R. 3849, 117th Cong. (2021). *See* Allen Grunes & William Moschella, *Congressional Antitrust Reform: State of Play*, BROWNSTEIN CLIENT ALERT (July 8, 2021), https://www.bhfs.com/insights/alerts-articles/2021/congressional-antitrust-reform-state-of-play-2021 [https://perma.cc/ENU2-U85Q] (reporting that in 2021, "the House Judiciary Committee marked up six bills directed at altering antitrust rules and enforcement that affect big technology companies").

37. *See, e.g.*, Utah Complaint, *supra* note 2; Google Complaint, *supra* note 2; FTC v. Facebook, Inc., 560 F. Supp. 3d 1 (D.D.C. 2021); New York v. Facebook, Inc., 549 F. Supp. 3d 6 (D.D.C. 2021).

38. Dan Mogin, *Politics in Antitrust: This Time It's Different*, NAT'L L. REV. (Apr. 27, 2021), https://www.natlawreview.com/article/politics-antitrust-time-it-s-different [https://perma.cc/MAJ5-KGRP]. This Note would be remiss if it did

twentieth centuries saw the American economy experience the benefits and ills of the Second Industrial Revolution.[39] New technology enabled firms to engage in unprecedented mass production and distribution, largely through automation.[40] Capital and economic power began to aggregate, putting consumers, competitors, and laborers in a precarious power dynamic with firm owners and management. And thus, public outrage about the trust problem drove the passage of America's first antitrust law—the Sherman Act—in a Republican Congress amidst a sea of industry titans in the Republican party.[41]

Instead of automation making it easier and cheaper for Americans to buy a Ford Model T, today's automation-based technological revolution has made it easier for dominant firms to aggregate data, predict social trends, and capitalize on near-perfect market intelligence.[42] Scholars have named this newfound ability for data aggregating monopolies "nowcasting."[43] In exchange, Americans get eerily perfect YouTube recommendations, mostly see ads for items they actually want, and do not have to worry about putting their flight itinerary on their Google Calendar because they found the ticket with Google Flights and bought it with Google Pay on their Google Pixel using the Google

not briefly discuss Neo-Brandeisianism or Antitrust Populism, an antitrust philosophy that has become associated with FTC Chair Lina Khan and White House advisor Tim Wu, the public leaders of the opposition to the current antitrust regime. *See A Brief Update of the "New Brandeis" School of Antitrust Law*, PATTERSON BELKNAP (Nov. 8, 2018), https://www.pbwt.com/antitrust-update-blog/a-brief-overview-of-the-new-brandeis-school-of-antitrust-law [https://perma.cc/D9KL-7868] (detailing Lina Khan's associations with Neo-Brandeisian viewpoints); TIM WU, THE CURSE OF BIGNESS: ANTITRUST IN THE NEW GILDED AGE (2018) (detailing the author's views on Neo-Brandeisianism). Neo-Brandeisianism espouses the view "that antitrust policy and regulators should be focused on broader measures of competition," not just dismissing a policy as "unlikely to be considered anticompetitive if it results in lower prices for consumers." PATTERSON BELKNAP, *supra*. Even if aspects of the analysis and some of the proposed solutions of this Note could be characterized as Neo-Brandeisian, this Note is not a complete advocate for Neo-Brandeisianism.

39. Barak Orbach, *The Present New Antitrust Era*, 60 WM. & MARY L. REV. 1439, 1445 (2019).

40. *Id.*

41. *Id.*

42. *See generally* MAJORITY REPORT, *supra* note 9.

43. MAURICE E. STUCKE & ALLEN P. GRUNES, BIG DATA AND COMPETITION POLICY 19–20, 285–87 (2016) (called "contemporaneous forecasting" by Google's Chief Economist in 2014).

Chrome browser.[44] All of these essential services do not cost a penny, but they are far from "free."[45]

Unlike many congressional regulatory schemes, the antitrust statutes are brief and facially simple. The Sherman Act is only eight paragraphs, and the heart of the Act amounts to only seventy-four words:[46]

> Every contract, combination in the form of trust or otherwise, or conspiracy, in restraint of trade or commerce among the several States, or with foreign nations, is declared to be illegal. . . .
>
> Every person who shall monopolize, or attempt to monopolize, or combine or conspire with any other person or persons, to monopolize any part of the trade or commerce among the several States, or with foreign nations, shall be deemed guilty of a felony . . . .[47]

Indeed, the Supreme Court and scholars have interpreted the brevity of the Sherman Act and other antitrust statutes as congressional intent to allow the law to be built out by the judiciary in a common-law manner.[48] Beyond leaving the judiciary with the responsibility to flesh out the mechanics of antitrust law, Congress also failed to provide clear guidance on its desired goal for antitrust law.[49] Such broad discretion given to the judiciary

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44. *See infra* Part I.B.2 (discussing Google's plethora of services and how data is exchanged across them).

45. *See* Maurice E. Stucke, *Should We Be Concerned About Data-Opolies?*, 2 GEO. L. TECH. REV. 275, 284 (2018) (advocating that the currency for online platforms is data, not money, as supported by the findings of the European Commission).

46. 15 U.S.C. §§ 1–2 (2004).

47. *Id.*

48. *See* Michael L. Katz & A. Douglas Melamed, *Competition Law as Common Law:* American Express *and the Evolution of Antitrust*, 168 U. PA. L. REV. 2061, 2062 (2020) ("[A]s the Supreme Court explained in *National Society of Professional Engineers*, '[t]he legislative history makes it perfectly clear that [Congress] expected the courts to give shape to the statute's broad mandate by drawing on common law tradition.'" (quoting Nat'l Soc. of Pro. Engineers v. United States, 435 U.S. 679, 688 (1978))).

49. *See* Kenneth G. Elzinga, *The Goals of Antitrust: Other than Competition and Efficiency, What Else Counts?*, 125 U. PA. L. REV. 1191, 1191 (1977) ("A reading of the congressional debates on the Sherman and Clayton Acts reveals no single thread of efficiency weaving together the whole of the fabric."); Christine S. Wilson, Thomas J. Klotz & Jeremy A. Sandford, *Recalibrating the Dialogue on Welfare Standards: Reinserting the Total Welfare Standard into the Debate*, 26 GEO. MASON L. REV. 1435, 1438 (2019) ("[T]he Sherman and Clayton Acts . . . are silent regarding welfare standards and the goals of antitrust.").

resulted in at least three iterations of antitrust doctrine.[50] Today, the judiciary has adopted the consumer welfare standard into the antitrust canon.[51]

Before even conducting a consumer welfare analysis, modern antitrust jurisprudence consistently requires defining the appropriate relevant market of the target firm to have a successful antitrust action.[52] Like the consumer welfare standard, antitrust law has no requirement for a relevant market definition, and some antitrust actions have been successful without the use

50. Orbach, *supra* note 39, at 1441 ("Three conflicting visions have shaped the evolution of antitrust law—fairness, laissez faire, and technocracy.").

51. The 1970s ushered in widespread acceptance by the judiciary of the antitrust enforcement regime advocated by supporters of the Chicago School of Economics. *See* Lina M. Khan, *Amazon's Antitrust Paradox*, 126 YALE L.J. 710, 718–19 (2017). The name "consumer welfare prescription" comes from Robert Bork's 1978 book on antitrust. *See* Daniel A. Crane, *The Tempting of Antitrust: Robert Bork and the Goals of Antitrust Policy*, 79 ANTITRUST L.J. 835, 835 (2014). In 1979, the Court made Bork's standard the law of the land. Reiter v. Sonotone Corp., 442 U.S. 330, 343 (1979) ("[The floor debate records] suggest that Congress designed the Sherman Act as a 'consumer welfare prescription.'" (quoting ROBERT BORK, THE ANTITRUST PARADOX 66 (1978))). In sum, supporters of the consumer welfare standard advocate that antitrust law's goal is efficiency, seeking to maximize the difference between what each consumer actually pays and what they would be willing to pay, ignoring any effects on sellers or employees. Herbert Hovenkamp, *Implementing Antitrust's Welfare Goals*, 81 FORDHAM L. REV. 2471, 2472 (2013). This standard contrasts with the standards used during the Populist era of antitrust enforcement, when courts also considered policy concerns about protecting small businesses. *See infra* Part I.A.1.

52. *See* Brown Shoe Co. v. United States, 370 U.S. 294, 324 (1962) ("[D]etermination of the relevant market is a necessary predicate to a finding of a violation of the Clayton Act, because the threatened monopoly must be one which will substantially lessen competition within the area of effective competition." (quotation marks omitted) (quoting United States v. E.I. du Pont de Nemours & Co., 353 U.S. 586, 593 (1957))); *E.I. du Pont de Nemours & Co.*, 351 U.S. at 394–95 (discussing the need to define the relevant market in cases arising under § 2 of the Sherman Act). When available, direct proof of market power is sufficient to sustain an action under the Sherman Act, and therefore no analysis regarding the relevant market would be necessary. FTC v. Ind. Fed'n of Dentists, 476 U.S. 447, 460–61 (1986). However, "direct proof" is "rarely available," so plaintiffs and courts "more typically examine market structure in search of circumstantial evidence of monopoly power." United States v. Microsoft Corp., 253 F.3d 34, 51 (D.C. Cir. 2001).

of a relevant market definition.[53] Yet, the definition of the relevant market has become dispositive for most antitrust actions.[54]

In Part I, this Note will conduct a brief review of antitrust law, examining the business model of Google and how it presents new challenges to antitrust law. In Part II, this Note will review past efforts by scholars, government enforcement agencies, and policymakers to regulate anticompetitive conduct. Part II will also explore how the unique business characteristics of Google detailed in Part I result in the current antitrust enforcement framework being a poor fit.

In Part III, this Note will advocate for fundamental changes to antitrust enforcement and law. First, this Note will contend that the relevant market for Google is not the online search market[55] or the mobile operating system market,[56] but rather the data aggregation market. Second, this Note will argue for congressional codification of a consumer welfare standard that (1) goes beyond the protection of low prices for marketable goods and (2) ensures enough transparency about the monetary and non-monetary cost of using Big Tech products so users can reasonably compare alternatives. In short, this Note aims to demonstrate that although antitrust enforcers are appropriate in acting against data aggregators like Google, not only must they shift their litigation tactics to be successful, but they also need help from Congress in providing clear guidance on a consumer welfare standard updated for the twenty-first century.

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53. *See Ind. Fed'n of Dentists*, 476 U.S. at 460–61 (evaluating a Sherman Act Section 1 claim under the Rule of Reason); Re/Max Int'l, Inc. v. Realty One, Inc., 173 F.3d 995, 1018–20 (6th Cir. 1999) (establishing monopoly power under Sherman Act Section 2 with direct evidence); Jonathan B. Baker, *Market Definition: An Analytical Overview*, 74 ANTITRUST L.J. 129, 131 (2007) ("[M]arket definition may not be required when market power or anticompetitive effect can be demonstrated directly through means other than inference.").

54. *See* Eastman Kodak Co. v. Image Tech. Servs., Inc., 504 U.S. 451, 469 n.15 (1992) ("Because market power is often inferred from market share, market definition generally determines the result of the case."). Beyond demonstrating market power, "[b]ecause [m]arket power is meaningful only if it is durable, a plaintiff proceeding by the indirect method must also show that the firm's dominant share of the relevant market is protected by barriers to entry into the market." FTC v. Facebook, Inc., 581 F. Supp. 3d 35, 43 (D.D.C. 2022) (quotation marks omitted).

55. *See In re* Digit. Advert. Antitrust Litig., 555 F. Supp. 3d 1372, 1375 (J.P.M.L. 2021) (defining the search advertising market).

56. *See* Utah Complaint, *supra* note 2 (defining the mobile app market).

I. THE EVOLUTION OF ANTITRUST LAW AND ANTICOMPETITIVE FIRMS

In Part I, this Note will provide a brief primer on antitrust law, including a review of the federal antitrust statutes, a discussion of the relevant market definition, the rise of the consumer welfare standard, and traditional antitrust remedies. Further, Part I will examine Google's business model as it relates to antitrust. This discussion will include facially zero-price markets, the lack of economies of scale limitations for Internet-based firms, and the non-monetary costs associated with the lack of regulation of Google. In sum, Part I will set the foundation to understand many of the harms created by a firm like Google and the proposed reforms to antitrust law addressed in Part II.A.

A. PRIMER ON ANTITRUST LAW

The antitrust statutes are brief, and most antitrust law has developed through the common law. Standards of analysis for liability have changed in response to the times, and a handful of remedies have become canonical tools for antitrust litigators. Yet this evolution demonstrates that antitrust law may not have all the tools to regulate data-aggregating, Internet-based firms like Google effectively.

1. What Is the Law?

Antitrust law in the United States is rooted in three acts passed in the late nineteenth and early twentieth centuries: the Sherman Act,[57] the Federal Trade Commission Act,[58] and the Clayton Act.[59] The Sherman Act creates two types of violations, with the main difference being that a Section 1 violation requires concerted action between multiple parties, and a Section 2 violation requires unilateral action.[60] Section 2 violations, often in the

57. 15 U.S.C. §§ 1–8 (1890).

58. 15 U.S.C. §§ 41–58 (1914).

59. 15 U.S.C. §§ 12–27 (1914); 29 U.S.C. §§ 52–53 (1914).

60. *See* Copperweld Corp. v. Indep. Tube Corp., 467 U.S. 752, 767–68 (1984) (explaining the difference between Section 1 and Section 2 of the Sherman Act). Additionally, "proving an antitrust violation under § 2 of the Sherman Act is more exacting than proving a § 1 violation, although courts have also held that the third element of a § 2 claim, the causation element, may be inferred." FTC v. Qualcomm Inc., 969 F.3d 974, 992 (9th Cir. 2020) (citing United States v. Microsoft Corp., 253 F.3d 34, 79 (D.C. Cir. 2001)).

form of monopoly allegations, are the focus of this Note and current litigation against Big Tech. Although the global economy and society have drastically changed since the beginning of the twenty-first century, antitrust statutes have not been updated since 1976,[61] and the foundational aspects of antitrust law have remained unchanged for over 100 years.[62]

Early antitrust cases focused on monopoly allegations against producer firms like Standard Oil[63] and American Tobacco.[64] These cases led to the creation of the Rule of Reason doctrine—that only "unreasonable" restraints of trade were illegal under antitrust law.[65] The Supreme Court later held that some obviously anticompetitive practices, like price-fixing, are per se illegal and thus do not require the Rule of Reason analysis.[66]

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61. *See* Hart-Scott-Rodino Antitrust Improvements Act of 1976, Pub. L. No. 94-435, 90 Stat. 1383.

62. *See The Antitrust Laws*, FTC, https://www.ftc.gov/advice-guidance/competition-guidance/guide-antitrust-laws/antitrust-laws [https://perma.cc/W6BW-R9WB] (discussing how the Sherman Act of 1890, the Federal Trade Commission Act of 1914, and the Clayton Act of 1914, notwithstanding some revisions, "are the three core federal antitrust laws still in effect today"); Fiona M. Scott Morton, *Is Antitrust Law Keeping Up?*, YALE INSIGHTS (July 12, 2013), https://insights.som.yale.edu/insights/is-antitrust-law-keeping-up [https://perma.cc/S8Y3-TAYE] ("[T]he head economist for the antitrust division of the U.S. Department of Justice, said that while the essential laws dictating antitrust haven't changed in 100 years, new technology, [and] globalization . . . have greatly expanded the realm of what can fall under antitrust.").

63. Standard Oil Co. of N.J. v. United States, 221 U.S. 1 (1911).

64. United States v. Am. Tobacco Co., 221 U.S. 106 (1911).

65. *See Standard Oil*, 221 U.S. at 87; Bd. of Trade v. United States, 246 U.S. 231, 238 (1918) (clarifying that the Rule of Reason doctrine required courts to "ordinarily consider the facts peculiar to the business to which the restraint is applied; its condition before and after the restraint was imposed; the nature of the restraint and its effect, actual or probable" and the "history of the restraint, the evil believed to exist, the reason for adopting the particular remedy, the purpose or end sought to be attained").

66. *See* United States v. Trenton Potteries Co., 273 U.S. 392, 397 (1927). "Price fixing is an agreement (written, verbal, or inferred from conduct) among competitors to raise, lower, maintain, or stabilize prices or price levels." *Price Fixing*, FTC, https://www.ftc.gov/advice-guidance/competition-guidance/guide-antitrust-laws/dealings-competitors/price-fixing [https://perma.cc/MRF7-KBJJ]. Another example of a per se violation is when horizontal competitors agree to divide markets. Palmer v. BRG of Ga., Inc., 498 U.S. 46, 49–50 (1990) (per curiam). Also, it is notable that some previously per se illegal violations are today judged under the Rule of Reason. Leegin Creative Leather Prods., Inc. v. PSKS, Inc., 551 U.S. 877, 882 (2007) (holding that vertical price restraints, once

The Rule of Reason doctrine is where the judiciary first began to flex its common law muscles in developing antitrust law. The years leading up to World War II saw a brief shift from robust competition enforcement in the courts to broad cooperation between industry and government agencies.[67] After World War II and until the late 1970s was the Golden Age of antitrust enforcement[68] as the Populist School,[69] built on the philosophy and writings of Justice Louis Brandeis, reigned supreme in the Court.[70]

The Populist School was the doctrinal manifestation of the fairness vision of antitrust law.[71] During the Populist School era, robust antitrust enforcement became essential to ensuring a competitive economy that served the holistic best interests of the American people.[72] Central tenets of the Populist School advocate for strong suspicion of the largest businesses and view

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per se illegal violations, are to be judged by the Rule of Reason). Today, an allegation of price fixing with direct evidence of such conduct would be an instance where no relevant market definition is required for a successful antitrust action. Any enforcement considered in the context of this Note should be focused under the Rule of Reason, as there is no evidence of Google engaging in traditional per se violations of restraint of trade.

67. Stucke & Ezrachi, *supra* note 31 (discussing the ebb and flow of antitrust activity from the 1900s to the 2000s).

68. *Id.*

69. Christopher S. Yoo, *The Post-Chicago Antitrust Revolution: A Retrospective*, 168 U. PA. L. REV. 2145, 2147–49 (2020) (describing the rise of the Populist School and their influence on antitrust thinking).

70. *See, e.g.*, United States v. E.I. du Pont de Nemours & Co., 351 U.S. 377, 413–14 (1956) (Frankfurter, J., concurring) (finding no illegal monopoly, but quoting Brandeis's Rule of Reason); Klor's, Inc. v. Broadway-Hale Stores, Inc., 359 U.S. 207, 212–14 (1959) (applying a per se rule to a boycott organized by a large department store inducing manufacturers of radios, television sets, and household appliances not to deal, or deal on discriminatory terms, with a rival merchant); Brown Shoe Co. v. United States, 370 U.S. 294, 328–46 (1962) (holding that a merger between two manufacturers and sellers of shoes would lessen competition substantially, and affirming an order for one of the manufacturers to divest from the other); United States v. Phila. Nat'l Bank, 374 U.S. 321, 371–72 (1963) (holding that the merger of two Philadelphia banks would violate the Clayton Act). For an example of the revival of the holdings and principles of Populist School jurisprudence, see AMY KLOBUCHAR, ANTITRUST: TAKING ON MONOPOLY POWER FROM THE GILDED AGE TO THE DIGITAL AGE 298–301 (2021) (advocating for the return of the presumption discussed in *Phila. Nat'l Bank*, 374 U.S. 321, that mergers resulting in over thirty percent market share are uncompetitive).

71. *See* Orbach, *supra* note 39, at 1441.

72. *See id.* at 1452.

profit-prioritizing practices as a source of undesirable distributive effects.[73] A hallmark characteristic of the Populist School era that distinguishes it from the modern era is the minimal market share that justified enforcement.[74] During the Populist School era, mergers where firms held as little as five percent of market share were blocked by competition regulators.[75] In contrast, courts today have required defendant companies to hold approximately sixty percent of market share to establish market power.[76] Moreover, the Populist School considers non-economic concerns in enforcement decisions.[77] During the height of the Populist School era, three major political values underlined these non-economic concerns: (1) fear of concentrated economic power; (2) the impact of economic power concentration on individual economic liberty based on consumer choice; and (3) the favoring of private businesses over state-run enterprises.[78]

All of these values find their justification in the legislative history from the 1950 amendments of the Clayton Act.[79] The first, fear of concentrated economic power, was justified by congressional fear that in times of distress, large firms, particularly multi-industry conglomerates, could "facilitate the overthrow of democratic institutions and the installation of a totalitarian regime."[80] The second is self-explanatory. Part of individual liberty is having control over how one spends their money; when there

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73. *Id.* at 1441.

74. Yoo, *supra* note 69, at 2148–49.

75. *Id.*

76. *See, e.g.*, FTC v. AbbVie Inc., 976 F.3d 327, 371 (3d Cir. 2020) ("A court can infer market power from a market share significantly greater than 55 percent."); Image Tech. Servs., Inc. v. Eastman Kodak Co., 125 F.3d 1195, 1206 (9th Cir. 1997) ("Courts generally require a 65% market share to establish a prima facie case of market power."). Today, a § 2 Sherman Act violation carries the most stringent market power requirements. Herbert J. Hovenkamp, *Monopolizing and the Sherman Act* 8 (U. Pa. L. Sch. Working Paper, Paper No. 22-02, 2022), https://dx.doi.org/10.2139/ssrn.3963245 ("The other statutes all have less stringent market power requirements.").

77. Yoo, *supra* note 69, at 2148–49 ("[T]he Populist School rejected economic welfare as the sole focus of antitrust and instead embraced a plural approach that included a wide range of noneconomic concerns.").

78. Robert Pitofsky, *The Political Content of Antitrust*, 127 U. PA. L. REV. 1051, 1052–58 (1979). These concerns are non-economic in that they are not justified by the sole desire to maximize consumer economic surplus, i.e., maximizing the aggregate social valuation of a good compared to what is paid.

79. *Id.* at 1061–65.

80. *Id.* at 1054.

are few to no choices for a product or service, liberty is constrained.[81] The third, favoring private business over state-run enterprises, is particularly noteworthy because it runs against modern Populist thought. Modern Populists see world government control as indirectly propping up firms that are bad for consumers via lack of enforcement.[82] Original supporters of the Populist School advocated that if firms were allowed to grow unchecked, they would eventually need to come under government control.[83] To avoid state seizure of essential businesses and ensure the freedom of private business, firm size must be regulated.[84]

As with many aspects of the law, the era of dominance for the Populist School in antitrust enforcement provoked a strong opposition—known today as the Chicago School. Championed by Richard Posner and Robert Bork, the Chicago School would eventually overtake the Populist School as the dominant school in antitrust enforcement and judicial decisions.[85] Although the Court did not authorize the Chicago School and the consumer welfare standard as the law of the land until 1979,[86] it signaled the end of the dominance of the Populist School in 1977 with its decision in *Continental T. V., Inc. v. GTE Sylvania Inc.*[87]

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81. *See id.* at 1056–57 (discussing the negative consequences of market concentration on private consumption).

82. Joshua D. Wright, Elyse Dorsey, Jonathan Klick & Jan M. Rybnicek, *Requiem for a Paradox: The Dubious Rise and Inevitable Fall of Hipster Antitrust*, 51 ARIZ. ST. L.J. 293, 294–95, 298–302 (2019) (discussing Senator Hatch's rhetoric against supporters of Hipster antitrust, i.e., neo-Populist School supporters, and analyzing the failures of the Populist and Hipster antitrust schools).

83. Pitofsky, *supra* note 78, at 1057–58.

84. *See id.*

85. *See* Crane, *supra* note 51, at 851 ("Bork, along with Richard Posner, led the way toward an economic-centered antitrust jurisprudence."); Stucke & Ezrachi, *supra* note 31 ("[A]ntitrust policy and enforcement declined . . . with the rise of the Chicago School of Economics in the late 1970s.").

86. *See* Reiter v. Sonotone Corp., 442 U.S. 330, 343 (1979) (suggesting that "Congress designed the Sherman Act as a 'consumer welfare prescription.'").

87. 433 U.S. 36, 57–59 (1977) (overruling the per se illegality of extensive vertical restrictions on franchisees set in United States v. Arnold, Schwinn & Co., 388 U.S. 365 (1967), and pivoting antitrust law to a rigorous application of the Rule of Reason to alleged antitrust violations, finding that restraints are only unreasonable when they diminish competition and promote inefficiency); *see also* M. Laurence Popofsky, Sylvania—*Fifteen Years After from the Perspective of a (Sometimes) True Believer*, 60 ANTITRUST L.J. 27, 30 (1991) ("*Sylvania*

Sylvania was a TV manufacturer, and Continental was a franchisee TV retailer—one of Sylvania's most successful. Sylvania sought to establish a franchise one mile from Continental, and Continental objected on the grounds that Sylvania's conduct violated its marketing agreement.[88] Tit-for-tat business retaliations ensued.[89] Ten years before *Sylvania*, the Court instituted a per se rule on franchisor-franchisee restrictions, stating "it is unreasonable without more for a manufacturer to seek to restrict and confine areas or persons with whom an article may be traded after the manufacturer has parted with dominion over it."[90] The Court expressly overruled recent precedent regarding the per se rule, holding that "[p]er se rules of illegality are appropriate only when they relate to conduct that is manifestly anticompetitive," and that although "[c]ompetitive economies have social and political as well as economic advantages, . . . an antitrust policy divorced from market considerations would lack any objective benchmarks."[91] In effect, *Sylvania* catalyzed the lasting shift away from non-economic considerations in antitrust.

Today, the Chicago School and its consumer welfare standard guide antitrust decisions. Nevertheless, older elements of antitrust jurisprudence persist, like the Rule of Reason, and of particular importance here, the relevant market definition. What is more, studying the evolution of antitrust jurisprudence raises questions about what values remain embedded in modern jurisprudence, what values have been discarded, and what values should be revived.

2. Relevant Market Definition Requirement

One of the most significant holdovers from the Populist School era is the relevant market definition requirement.[92] Although it remains important, the logic behind the relevant mar-

thus shifted the conception of the Sherman Act away from a multi-purpose political statute over which liberals and conservatives might endlessly debate to one grounded in modern welfare economics.").

88. *Sylvania*, 433 U.S. at 39–40.

89. *Id.*

90. *Id.* at 44 (quotation marks omitted) (quoting *Schwinn*, 388 U.S. at 379).

91. *Id.* at 49–50, 53 n.21 (citation omitted).

92. United States v. E.I. du Pont de Nemours & Co., 351 U.S. 377, 394–410 (1956) (implementing the relevant market definition in an analysis over a charge of monopolization of cellophane). Like much of modern antitrust jurisprudence, it is notable that the incorporation of a relevant market definition occurred over forty years after the passage of the Clayton Act.

ket definition requirement and how the definition should operate within an antitrust action is unsettled.[93] Some early antitrust scholars relied on the guidance of "natural markets."[94] However, a more useful and nuanced perspective is to view relevant markets not as observable, freestanding entities, but "mental constructs designed to help assess specific competitive concerns."[95] Moreover, antitrust enforcement agents and judges alike have commonly fallen to the "single market fallacy," assuming that each antitrust case involves a single relevant market to encompass the targeted products and services.[96] Adherence to the single market fallacy has given rise to the popularity of the "smallest-market principle" strategy, where antitrust enforcement agents adjust the relevant market to the most narrow definition where there is still a plausible monopolist case.[97] Some have argued that recent antitrust enforcement against Big Tech has been susceptible to these fallacies and strategies.[98] The fatal flaw of succumbing to the single market fallacy and adhering to the smallest market principle strategy is that it narrows the theories of harm for an antitrust case, when the facts may give rise to multiple theories of harm.[99] Alternatively, multiple

93. *See* Jacques Crémer, Yves-Alexandre de Montjoye & Heike Schweitzer, *Competition Policy for the Digital Era*, EUR. COMM'N, DIRECTORATE-GEN. FOR COMPETITION 3–4 (2019), https://ec.europa.eu/competition/publications/reports/kd0419345enn.pdf [https://perma.cc/GUT5-XVTS] (advocating deemphasizing the importance of market definition given the interdependence and fluidity of modern digital firms). *See generally* David Glasner & Sean P. Sullivan, *The Logic of Market Definition*, 83 ANTITRUST L.J. 293 (2020) (explaining that courts and antitrust scholars alike still struggle with why and how to define markets).

94. *See* Glasner & Sullivan, *supra* note 93, at 298–301 ("[The natural market] approach seeks characteristics of products and producers that indicate how a market should be categorized—almost as a biologist might try to identify an insect by comparing its characteristics to those of known exemplars."); Brown Shoe Co. v. United States, 370 U.S. 294, 336–37 (1962) (analyzing product and geographic markets); *see also* Marshall Steinbaum & Maurice E. Stucke, *The Effective Competition Standard: A New Standard for Antitrust*, 87 U. CHI. L. REV. 595, 598 (2020) (criticizing the Chicago School's belief that markets will self-correct to a natural state of free entry to market for nascent competitors).

95. Glasner & Sullivan, *supra* note 93, at 312.

96. *Id.* at 326–43 (explaining and analyzing the single market fallacy).

97. *Id.* at 334 (detailing the smallest market-principle). However, the "smallest-market principle" strategy is in contradiction to guidance from the Supreme Court after *Brown Shoe*. *See* United States v. Greater Buffalo Press, Inc., 402 U.S. 549, 553 (1971) ("[S]ubmarkets are not a basis for the disregard of a broader line of commerce that has economic significance.").

98. *See infra* Part II.

99. Glasner & Sullivan, *supra* note 93, at 299, 326–27.

submarkets may be relevant to the anticompetitive harm in question.[100] As a data aggregator across many submarkets,[101] Google demonstrates the case to avoid the smallest market principle to accurately address the multiple anticompetitive harms at play.

Internet-based firms and multi-sided platform[102] firms have created new challenges for defining relevant markets in antitrust actions.[103] One-sided platforms generate network effects—value added with increasing numbers of consumers—for a single type of consumer.[104] A one-sided platform example is an ad-free, paid online forum for sourdough baking enthusiasts, whereas an example of a multi-sided platform is Uber, creating value for riders *and* drivers. Additionally, one traditional element that has become largely obsolete in the context of Internet-based firms is

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100. *Id.* at 332–33.

101. MAJORITY REPORT, *supra* note 9 and accompanying text.

102. "Multisided platforms (MSPs) are technologies, products or services that create value primarily by enabling direct interactions between two or more customer or participant groups." Andrei Hagiu, *Strategic Decisions for Multisided Platforms*, MASS. INST. TECH. SLOAN MGMT. REV., Winter 2014, at 71, 71. In short, the facial value of MSPs is that they reduce transaction costs between buyers and sellers. Caio Mario S. Pereira Neto & Filippo Lancieri, *Towards a Layered Approach to Relevant Markets in Multi-Sided Transaction Platforms*, 83 ANTITRUST L.J. 429, 437 (2020). Multi-sided markets served by MSPs generally have three key features:

> (1) strong indirect network effects between the different groups (the externalities that lead to feedback effects can run one or both ways); (2) their price structure, and not only price level, impacts the total volume of demand to a given platform; and (3) platforms (not the groups of users they connect) normally internalize the network externalities (and diminished transaction costs) they generate.

Id. Google is one of the most ubiquitous MSPs. *See* David S. Evans, *Antitrust Issues Raised by the Emerging Global Internet Economy*, 102 NW. U. L. REV. 1987, 1997–2006 (2008) (discussing Google's role as an MSP, its ability to connect other MSPs, and the advantages bestowed upon Google as a centralized and dominant MSP, such as the ability to easily leverage into adjacent markets and to subsidize new products that undercut established and nascent competitors).

103. *See* Neto & Lancieri, *supra* note 102; Evans, *supra* note 102; Jared Kagan, Note, *Bricks, Mortar, and Google: Defining the Relevant Antitrust Market for Internet-Based Companies*, 55 N.Y. L. SCH. L. REV. 271, 282–84 (2010).

104. Rosa M. Abrantes-Metz & Albert Metz, *The Dynamics of Single- and Multi-Sided Platform Monopolies* 2 (Working Paper, 2020), https://dx.doi.org/10.2139/ssrn.3692861.

the definition of a relevant geographic market,[105] leading to heavier reliance on product and service markets.[106] The Supreme Court recently grappled with how to delineate relevant markets for multi-sided transaction platforms in *Ohio v. American Express Co.* (*Amex*).[107]

Amex was a case about American Express acting as a two-sided platform between merchants and cardholders and the mandatory anti-steering provisions in its merchant agreements.[108] In short, because American Express charged merchants higher transaction fees than its competitors, it needed to prevent merchants from prompting customers to use non-American Express credit cards.[109] The Court held that American Express's business should be analyzed as a single market because it (1) experienced significant indirect network effects, (2) exhibited interconnected pricing and demand, and (3) facilitated a single, simultaneous transaction to promote joint consumption of one product.[110] The plaintiffs failed to show price increases on both the cardholder and merchant side of American Express's platform, or any other anticompetitive exercise of market power.[111] Thus, the characterization of American Express's multi-sided platform as a single relevant market was fatal to the plaintiffs' claim.[112]

The *Amex* decision has created a heated debate over its application to Big Tech and whether the decision has hamstrung antitrust actions without amendments to the antitrust statutes.[113] One of the *Amex* decision's chief criticisms is that now

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105. *See* Alicia Ginsberg, Note, *Google—Do Not Pass Go, Do Not Collect $200: Why the Tech Giant Is a "Bad" Monopoly*, 71 HASTINGS L.J. 783, 792–93 (2020) (citing United States v. AT&T Inc., 310 F. Supp. 3d 161, 197 (D.D.C. 2018)) (discussing that, at minimum, the relevant geographic market for Google and other Big Tech firms is the entire United States, if not the entire world).

106. Kagan, *supra* note 103.

107. 138 S. Ct. 2274, 2287 (2018).

108. *Id.* at 2279–80.

109. *Id.* at 2282–83.

110. *Id.* at 2285–87.

111. *Id.* at 2287–90.

112. *Id.* at 2288–90.

113. *See, e.g.*, Sanjana Parikh, Note, *Defining the Market for Two-Sided Platforms: The Scope of* Ohio v. American Express, 34 BERKELEY TECH. L.J. 1305, 1332–36 (2019) (concluding that Google may gain from additional antitrust scrutiny and that Google Search would likely fail the *Amex* test); Neto & Lancieri, *supra* note 102, at 467–78 (analyzing the *Amex* decision and applying its framework to other platforms); Glasner & Sullivan, *supra* note 93, at 340–43

plaintiffs must do more than show a price increase in a particular market[114]—a significant challenge when dealing with the zero-price markets of Google.[115] Now, even if a plaintiff shows actual harm to competition on both sides of a multi-sided platform, like with evidence of price increases, the plaintiff would still not have met its burden without defining the relevant market where the defendant holds market power.[116] Supporters of greater regulation of Big Tech may see the *Amex* decision as a significant obstacle.[117] Yet, the *Amex* decision leaves the door open for one-sided analysis of multi-sided non-transaction platforms, in contrast to transaction-based platforms.[118] Neverthe-

(claiming that the majority's opinion in *Amex* deviated from appropriate market definition principles).

114. A. DOUGLAS MELAMED, RANDAL C. PICKER, PHILIP J. WEISER & DIANE WOOD, ANTITRUST LAW AND TRADE REGULATION, CASES AND MATERIALS 23 (7th ed. Supp. 2021–22) (discussing the cross-market effects of *Amex*).

115. *See* Letter from Herbert Hovenkamp, Prof., Univ. of Pa. Sch. of L., to Chairman David N. Cicilline and Ranking Member F. James Sensenbrenner, Jr., Subcomm. on Antitrust, Com., & Admin. L. of the H. Comm. on the Judiciary 3–4 (Apr. 17, 2020), *reprinted in* Herbert Hobenkamp, *House Judiciary Inquiry into Competition in Digital Markets: Statement* (U. Penn., Inst. for L. & Econ., Research Paper No. 20-38, 2020), https://dx.doi.org/10.2139/ssrn.3579693 (discussing the difficulty for plaintiffs to define the relevant market for a company with products as broad as Google).

116. *Amex*, 138 S. Ct. at 2285 n.7 ("The plaintiffs argue that we need not define the relevant market in this case because they have offered actual evidence of adverse effects on competition . . . . We disagree.") (citations omitted); David Kully & Joseph Vardner, *Vertical Restraints After* Amex*: Quietly Imposing New Burdens on Section 1 Plaintiffs*, ANTITRUST, Fall 2018, at 31, 32–33, https://www.hklaw.com/files/Uploads/Documents/Articles/Kully-VerticalRestraintsAfterAnnex.pdf [https://perma.cc/GY8R-ELNF].

117. Lina Khan, *The Supreme Court Case That Could Give Tech Giants More Power*, N.Y. TIMES (Mar. 2, 2018), https://www.nytimes.com/2018/03/02/opinion/the-supreme-court-case-that-could-give-tech-giants-more-power.html [https://perma.cc/L7VM-A2SM] ("Indeed, the reason that the tech giants are lining up behind the Second Circuit's approach is that—if ratified—it would make it vastly more difficult to use antitrust laws against them."). *But see* John M. Newman, *Antitrust in Attention Markets: Definition, Power, Harm* 13–14 (U. Mia. Sch. of L., Working Paper No. 3745839, 2020), https://dx.doi.org/10.2139/ssrn.3745839 (discussing that one might understand the entire digital advertising market as a vertical distribution system for attention).

118. *Amex*, 138 S. Ct. at 2287 n.9 ("Nontransaction platforms, by contrast, often do compete with companies that do not operate on both sides of their platform. A newspaper that sells advertising, for example, might have to compete with a television network, even though the two do not meaningfully compete for viewers.").

less, in the end, the data aggregation market framework advocated by this Note fits squarely within the *Amex* decision because it supports viewing multi-sided platforms like Google as a single market.[119]

Major modern companies often operate on national, if not global, scales. Distinct from companies at the turn of the century, today's companies facilitate relationships across consumer types and leverage data gained from this facilitation for other ventures; the latter point is key to characterizing a company as a data aggregator.[120] *Amex* shows that courts are not agile in analyzing today's innovative, multi-sided platforms that provide zero-price products.[121] Accordingly, this Note argues for a reframing of the relevant market definition requirement for data aggregating firms.

3. Consumer Welfare Standard

Like the relevant market definition requirement, antitrust common law has determined that the goal of antitrust law is promoting consumer welfare.[122] Even among consumer welfare standard supporters, the standard's exact definition is hotly debated. A primary issue of this debate is how consumer welfare should be achieved. One school of thought promotes the idea of "total welfare" or pure allocative efficiency, which disregards imbalances of positive welfare effects between consumers and producers.[123] Alternative schools advocate for varying weights being assigned to different stakeholders, with consumer welfare receiving the greatest weight.[124]

Another school of thought contends that the goal of antitrust law should be maintaining the highest level of output consistent

119. *Infra* Part III.

120. *Supra* note 11 and accompanying text.

121. Kacyn H. Fujii, Note, *The Impact of* Amex *and Its Progeny on Technology Platforms*, 120 MICH. L. REV. 691, 701–04, 708–14 (2022) (criticizing and collecting critiques of the *Amex* majority, in that it relied on unsettled economic principles and wholly formulated its own conception of two-sided market platforms in the antitrust context).

122. *See* Reiter v. Sonotone Corp., 442 U.S. 330, 343 (1979) ("[The floor debates] suggest that Congress designed the Sherman Act as a 'consumer welfare prescription.'" (quoting BORK, *supra* note 51)).

123. Gregory T. Gundlach & Diana Moss, *The Role of Efficiencies in Antitrust Law: Introduction and Overview*, 60 ANTITRUST BULL. 91, 95 (2015).

124. *Id.* at 95–96.

with sustainable competition; accordingly, low prices will follow.[125] The modern antitrust regime[126] focuses on maintaining market competition to promote consumer welfare,[127] often distilled into the more sanitized concept of economic efficiency.[128]

In the pursuit of the consumer welfare standard, antitrust enforcement under the Chicago School regime has required the following: (1) plaintiffs clearly define the relevant product market allegedly monopolized by the defendant;[129] (2) plaintiffs prove that the defendant has dominant and significant market power;[130] and (3) plaintiffs prove that the defendant's conduct had a competition-reducing effect that caused injury to the consumer.[131] However, as outlined in Part II.A, the strict requirements of the consumer welfare standard leave much to be desired in the modern era with monopolistic data aggregating firms like Google.

B. GOOGLE AND ITS PEERS: A NEW TYPE OF FIRM

Google has revolutionized the world and the consumer experience.[132] For the most part, Google offers consumers the benefits of constant communication, practically limitless access to knowledge, and easy living in the digital space at the price of $0.[133] But, as the sections below show, consumers, suppliers, and competitors all pay significantly for being forced to engage with Google.

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125. Herbert Hovenkamp, *Antitrust Harm and Causation*, 99 WASH. U. L. REV. 787, 800 (2021).

126. This enforcement regime contrasts with the previously dominant Populist School of thought supported by jurists like Justice Brandeis and Justice Douglas. *See* Yoo, *supra* note 69, at 2147–50 (2020).

127. *See Reiter*, 442 U.S. at 343.

128. *See* Crane, *supra* note 51, at 835 (mentioning antitrust law shifting from a large constraint on business to a mild constraint on practices threatening efficiency).

129. United States v. Microsoft Corp., 253 F.3d 34, 69 (D.C. Cir. 2001).

130. *See id.* at 51–53.

131. *See* Atl. Richfield Co. v. USA Petrol. Co., 495 U.S. 328, 344–45 (1990).

132. *See generally* Lily Rothman, *20 Years of Google Has Changed the Way We Think. Here's How, According to a Historian of Information*, TIME (Sept. 4, 2018), https://time.com/5383389/google-history-search-information [https://perma.cc/Q58B-7JH6].

133. *See id.*

1. Freedom from Economies of Scale Limitations and the Facially Zero-Price Market

The ability for firms to operate completely on the Internet has created an economic revolution in the twenty-first century.[134] Internet-era firms focus on information assets that are "incrementally inexpensive, inexhaustible, iterative, and non-rivalrous."[135] These firms operate in flexible market arrangements where they can "engage in trade and collaborative activities anytime, anywhere."[136] Further, Internet-based firms have superior network effects, low marginal cost distribution, and unique "free" end-user goods and services.[137] At bottom, pre-Internet-era economic models were constrained by assets that confronted diminishing marginal returns as costs rose and markets became saturated.[138] Internet-era economic models have no such constraints, and instead are "driven by an endless supply of data feeding boundless demands."[139]

As the economy has adapted to this paradigm shift, two trends are particularly relevant to antitrust. First, the traditional limitations of economies of scale[140] have mostly gone ex-

134. Tom Wheeler, *A Focused Federal Agency Is Necessary to Oversee Big Tech*, BROOKINGS (Feb. 10, 2021), https://www.brookings.edu/research/a-focused-federal-agency-is-necessary-to-oversee-big-tech [https://perma.cc/AQ43-KAWN] (discussing the systemic importance of digital companies and the need for more stringent federal oversight).

135. *Id.*

136. Barak Orbach, *Anything, Anytime, Anywhere: Is Antitrust Ready for Flexible Market Arrangements?*, ANTITRUST SOURCE, Apr. 2021, at 1, 1–2. Orbach discusses how Internet-era firms operating in flexible market arrangements are digital matchmakers. These firms can operate as trade venues (such as Airbnb, connecting property owners with short-term renters), as collaborative venues (facilitating work done by employees of the same firm or multiple firms, such as Zoom), or both. *Id.* at 7–9. This Note's argument, distinct from Orbach's, is that these firms cannot only operate as trade and collaborative venues, but also use social data collected from these services to inform future business strategy, ranging from nascent competitor acquisition to product/service expansion. *See infra* Part I.B.2.

137. Wheeler, *supra* note 134.

138. *Id.*

139. *Id.*

140. "Economies of scale are cost advantages reaped by companies when production becomes efficient. . . . The larger the business, the more the cost savings." Will Kenton, *Economies of Scale: What Are They and How Are They Used?*, INVESTOPEDIA (June 11, 2022), https://www.investopedia.com/terms/e/economiesofscale.asp [https://perma.cc/K3JT-EWKB].

tinct. In the pre-Internet era, a major retail firm could take advantage of spreading overhead costs across many products and properties, while also taking advantage of access to vast amounts of capital for large projects and investments.[141] However, marginal costs to serve more consumers remained high when compared to the modern era.[142] For example, to gain a potential new five thousand customers, a retail firm would need to open a new store and spend significant amounts of capital supporting the development and maintenance of the new store.[143] Contrastingly, an Internet-based firm like Google, for most of its products, can serve a hundred thousand new users with minimal increases in marginal costs.[144] Moreover, material improvements in Google's algorithms for its products, which becomes a competitive advantage for the collection of more users and data—albeit the desired effect in a pure capitalist world with free flow of information[145]—means that Google bears relatively little to no cost for serving more consumers.[146]

The elimination of traditional economies of scale limitations has enabled an explosion of firms in the facially zero-price market.[147] There are three primary strategies for zero-price market

141. *See* Mohammad Chowdhury, *Digital Is Turning the Economies of Scale Paradigm on Its Head*, FORBES INDIA BLOG (Apr. 1, 2015), https://www.forbesindia.com/blog/no-wires-attached/digital-is-turning-the-economies-of-scale-paradigm-on-its-head-2/ [https://perma.cc/A9FP-VVVT].

142. *See id.*

143. *See* MAJORITY REPORT, *supra* note 9, at 47–48; Ben Thompson, *Defining Aggregators*, STRATECHERY BLOG (Sept. 26, 2017), https://stratechery.com/2017/defining-aggregators [https://perma.cc/35RU-GHE2] (discussing the different degrees of marginal costs for Internet-based businesses compared to brick-and-mortar businesses).

144. Serving a hundred thousand new YouTube users would only require a minor additional investment in server costs. *See id.*

145. For a more in-depth discussion on the merits argument of such a competitive advantage, compare Thompson, *supra* note 11, with Tim Wu, *Ben Thompson's "Stratechery": Smart, but a Little Too Much Kool-Aid*, MEDIUM (Oct. 28, 2020), https://superwuster.medium.com/reviewing-ben-thompsons-stratechery-45b545dd959 [https://perma.cc/L7TQ-9RJY].

146. *See Big Data: Bringing Competition Policy to the Digital Era*, ORG. FOR ECON. COOP. & DEV. 11 (Oct. 27, 2016), https://one.oecd.org/document/DAF/COMP(2016)14/en/pdf [https://perma.cc/9GG2-TQUG] ("[T]he information technologies required to store and process the data can be very costly . . . . [But] [o]nce the system is fully operational, the incremental data can 'train' and improve the algorithms at a low cost (thereby also the product or service quality).").

147. John M. Newman, *Antitrust in Zero-Price Markets: Foundations*, 164 U. PA. L. REV. 149, 151 (2015); Michal S. Gal & Daniel L. Rubinfeld, *The Hidden*

firms.[148] First, firms may utilize a "freemium" model, where the base product is free, but the most useful product must be purchased.[149] Second, firms may create a multi-sided platform, where the firm creates an environment that aggregates a particular audience of users via a free product.[150] The firm then charges a fee to another firm for access to the aggregated audience.[151] Third, firms may participate in tying, where purchase or use of one product is tied to another one.[152] An example of tying in the antitrust context is Microsoft's tying of the Internet Explorer browser to its Windows operating system; utilizing legal monopoly in one market to illegally achieve monopoly in another.[153] Although advocates of the Neo-Brandeisian Movement critique the current antitrust regime for failing to address the scale advantages and network effects ushered in by the Internet age, this remains an unsettled issue.[154] Accordingly, whether the

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Costs of Free Goods: Implications for Antitrust Enforcement, 80 ANTITRUST L.J. 521, 522 (2016). The term "facially" is used because, although firms in zero-price markets are generally not charging for services, there are some non-monetary costs associated with usage that will be discussed *infra* Part I.B.3.

148. Newman, *supra* note 147, at 154.

149. *Id.* at 157.

150. *Id.* at 156.

151. *Id.* at 156–57.

152. *Id.* at 155.

153. United States v. Microsoft Corp., 147 F.3d 935, 940 (D.C. Cir. 1998).

154. Leon B. Greenfield, Perry A. Lange & Nicole Callan, *Antitrust Populism and the Consumer Welfare Standard: What Are We Actually Debating?*, 83 ANTITRUST L.J. 393, 415–16 (2020); *see also* Jason Furman, Diane Coyle, Amelia Fletcher, Derek McAuley & Philip Marsden, *Unlocking Digital Competition: Report of the Digital Competition Expert Panel*, DIGIT. COMPETITION EXPERT PANEL 84–89 (Mar. 2019), https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/785547/unlocking_digital_competition_furman_review_web.pdf [https://perma.cc/VSZ2-PMZX] (discussing how digital markets are prone to tipping in favor of the earliest successful firms and how antitrust regulation need not be overhauled, but adapted, such as ensuring the consumer welfare standard considers zero-price "quality aspects such as privacy, how much better 'free' services might be with more competition, and the possibility that the price might be negative if customers were paid a competitive price for their data"); Crémer et al., *supra* note 93, at 3 (advocating the consumer welfare standard be reformed to require a less strict showing because dominant digital platforms often rapidly employ strategies with the goal of reducing competitive pressure). *Compare* ANTITRUST MODERNIZATION COMM'N, REPORT AND RECOMMENDATIONS 9 (2007), https://govinfo.library.unt.edu/amc/report_recommendation/amc_final_report.pdf [https://perma.cc/ZLR2-GC37] (recommending no update of antitrust laws to better regulate the

modern regime can specifically address the scale advantages bestowed upon Big Tech by the Internet age is not the focus of this Note.

2. Why Google Appears Free

To understand how Google works, one must have a cursory understanding of its history. Google was founded in 1998.[155] Google became a public company in 2004,[156] acquired Android in 2005[157] and YouTube in 2006,[158] released the Chrome browser in 2008,[159] and acquired the mobile phone navigation company Waze in 2013.[160] Although Google may have begun as an online search engine, it has now expanded to products and services that are in both priced and zero-price markets, as well as markets that are both based in the physical world and solely in the digital space. Google's services include Google Search, Android mobile OS, Google Maps, Gmail, YouTube, Google Ads, Chrome, Google/Android Pay, Google Assistant, Google Analytics, Google Firebase, Google Play Store, Google Fiber, Google Fi, Google Nest, and Google Workspace.[161] What is more jarring, these

technology based "new economy"), *and* Hovenkamp, *supra* note 76, at 2 ("[C]riticisms that the antitrust statutes are out-of-date and not up to dealing with dominant digital firms today cannot be based on readings of the text."), *with* David Streitfeld, *To Take Down Big Tech, They First Need to Reinvent the Law*, N.Y. TIMES (June 20, 2019), https://www.nytimes.com/2019/06/20/technology/tech-giants-antitrust-law.html [https://perma.cc/Q5KF-99TN] (discussing a gain in momentum for those in support of changing antitrust regulation).

155. *Google Turns 20: How an Internet Search Engine Reshaped the World*, VERGE, https://www.theverge.com/2018/9/5/17823490/google-20th-birthday-anniversary-history-milestones [https://perma.cc/4MFZ-JZGP] (Sept. 27, 2018).

156. *Id.*

157. *Id.*

158. *Id.*

159. *Id.*

160. Dara Kerr, *Google Reveals It Spent $966 Million in Waze Acquisition*, CNET (July 25, 2013), https://www.cnet.com/tech/services-and-software/google-reveals-it-spent-966-million-in-waze-acquisition [https://perma.cc/7SB9-QCDR].

161. Mahesh Mohan, *Over 271 Google Products & Services You Probably Don't Know*, MAHESHONE (Mar. 4, 2021), https://www.matrics360.com/google-products-and-services [https://perma.cc/8MMM-TWXD] (discussing Google's products in the finance, Internet-provider, and mobile phone service spaces).

products are only those under the Google brand name. Alphabet[162] is also in the private equity,[163] artificial intelligence,[164] health,[165] autonomous vehicle,[166] and drone spaces.[167] Dialing in on Google's investment dealings, they have included insurance

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162. Alphabet is Google's parent company. Richard Nieva, *Google Creates New Parent Company Called Alphabet*, CNET (Aug. 10, 2015), https://www.cnet.com/tech/services-and-software/google-restructures-into-alphabet-soup-of-businesses [https://perma.cc/4U82-TNBV].

163. *See* Jason Rowley, *A Peek Inside Alphabet's Investing Universe*, TECHCRUNCH (Feb. 17, 2018), https://techcrunch.com/2018/02/17/a-peek-inside-alphabets-investing-universe [https://perma.cc/M3VL-U3VX] (analyzing Google's market-leading investment positions made via GV and Capital G, its primary investment arms).

164. Chad Bray, *Google Acquires British Artificial Intelligence Developer*, N.Y. TIMES (Jan. 27, 2014), https://archive.nytimes.com/dealbook.nytimes.com/2014/01/27/google-acquires-british-artificial-intelligence-developer [https://perma.cc/T6WJ-6EY2]; *see also* Natasha Lomas, *Google Faces Fresh Class Action-Style Suit in UK over DeepMind NHS Patient Data Scandal*, TECHCRUNCH (May 16, 2022), https://techcrunch.com/2022/05/16/google-deepmind-nhs-misuse-of-private-data-lawsuit [https://perma.cc/PCC8-6EG7] (reporting on a tort case charging DeepMind with misusing private information, distinct from prior findings that sharing NHS data with DeepMind was a breach of data protection law).

165. Sam Shead, *Google-Parent Alphabet Has Set up a New Lab That Will Use A.I. to Try to Discover New Drugs*, CNBC, https://www.cnbc.com/2021/11/05/isomorphic-labs-deepmind-ceo-to-lead-new-alphabet-drug-discovery-lab.html [https://perma.cc/QP7K-9P3E] (Nov. 5, 2021) (reporting on Isomorphic Labs, discovery company launched by Alphabet); Mariella Moon, *Google Reportedly Facing a DOJ Probe over Its $2.1 Billion Fitbit Purchase*, ENGADGET (Dec. 11, 2019), https://www.engadget.com/2019-12-11-google-fitbit-doj-probe-report.html [https://perma.cc/M8TT-XMEB] (noting Google's acquisition of health-focused wearable firm Fitbit and reporting subsequent scrutiny over the personal data that the acquisition would give Google); James Vincent, *EU Launches Full Investigation into Google's Fitbit Acquisition over Health Data Fears*, VERGE (Aug. 4, 2020), https://www.theverge.com/2020/8/4/21353947/google-fitbit-acquisition-eu-investigation-antitrust-health-tracking-data [https://perma.cc/HC6N-UMXG].

166. Andrew J. Hawkins, *Waymo's Driverless Taxis Keep Making Incremental Progress, While Others Flounder*, VERGE (Nov. 11, 2022), https://www.theverge.com/2022/11/11/23453262/waymo-av-driverless-taxi-phoenix-california-dmv-progress [https://perma.cc/VZ7N-DC3N] (comparing Alphabet's autonomous vehicle division, Waymo, to similar ventures).

167. Kyle Wiggers, *Wing Brings Drone Delivery Options to DoorDash Customers in Logan, Australia,* TECHCRUNCH (Nov. 8, 2022), https://techcrunch.com/2022/11/08/wing-brings-drone-delivery-options-to-doordash-customers-in-logan-australia [https://perma.cc/8X3F-R5MM] (discussing Alphabet's drone division, Wing).

companies, customer support and recruiting platforms, food producers, and alternative energy companies, to name a few.[168] Consequently, Google's data aggregation and usage is not limited to Google brand products, but also powers potential dominant firms in markets yet to be fully developed.

Most of Google's products are free and are also leaders in their respective markets.[169] One element that makes these products market leaders is user density. By leading in the number of users, Google can be the leader in the amount of personal and social data[170] that it can collect about users of a particular service. An example of personal data is an individual's Google search engine history; an example of social data collection is an observation of the increasing trend in cryptocurrency interest

168. *See* Rowley, *supra* note 163 (discussing Alphabet's major investment in Lemonade insurance, UJET, Ripple Foods, recruiting platform Andela, and Makani Power, an airborne wind turbine manufacturer).

169. Across desktop, mobile, and tablets, Google Search controls eighty-eight percent of market share in the United States and is the leader in online search advertising revenue, with twenty-nine percent of all revenue. *Search Engine Market Share United States of America*, STATCOUNTER, https://gs.statcounter.com/search-engine-market-share/all/united-states-of-america [https://perma.cc/543S-6CRG]; *see Distribution of Net Digital Ad Revenue in the United States in 2019 and 2020, by Company*, STATISTA (Aug. 6, 2021), https://www.statista.com/statistics/242549/digital-ad-market-share-of-major-ad-selling-companies-in-the-us-by-revenue [https://perma.cc/BMZ8-ZHUV] (showing that Google has a larger share of digital ad market than any competitors). As of May 2021, Gmail has thirty percent of email client market share. Christo Petrov, *52 Gmail Statistics to Show How Big It Is in 2023*, TECHJURY, https://techjury.net/blog/gmail-statistics [https://perma.cc/5A74-7HDZ] (Feb. 27, 2023). The Android OS accounts for seventy-three percent of the mobile OS market. *Mobile Operating Systems' Market Share Worldwide from 1st Quarter 2009 to 4th Quarter 2022*, STATISTA, https://www.statista.com/statistics/272698/global-market-share-held-by-mobile-operating-systems-since-2009 [https://perma.cc/6VW3-CQHJ]. Chrome browser holds fifty percent of Internet browser market share. Lionel Sujay Vailshery, *U.S. Market Share Held by Internet Browsers 2015–2022*, STATISTA (Oct. 4, 2021), https://www.statista.com/statistics/545520/market-share-of-internet-browsers-usa [https://perma.cc/L8NA-PRWU]. In 2020, Google Workspace, which includes products like Google Docs and Google Sheets, held fifty-nine percent of the office suite market share in the United States. Lionel Siujay Vailshery, *Office Suites Market Share in U.S. 2020*, STATISTA (Mar. 17, 2022), https://www.statista.com/statistics/961105/japan-market-share-of-office-suites-technologies [https://perma.cc/GM78-37W8].

170. Not to be confused with social media data, social data is data about social trends of users in the aggregate. See generally MAJORITY REPORT, *supra* note 9, for an overview of Google's ability to aggregate and capitalize on social data.

visible from the search histories of millions of users.[171] The personal data for most individuals is relatively worthless. Yet cross-industry social data has significant value, as it can guide data aggregators to invest in the economic winners of the future.[172]

Although there is significant research on Google's conduct as a multi-sided platform, including in the antitrust context,[173] this Note focuses on Google's role as a centralized data aggregation node and its anticompetitive and consumer-injuring effects. This builds on the single-market framing of multi-sided platforms advocated by some scholars,[174] as opposed to framing multi-sided platforms as engaging in multiple interrelated markets.[175] However, this Note takes the single-market approach to

171. *See* Jerry Goddard, *Exploring the Correlation Between Bitcoin Price and Google Search Trends*, BITCOIN MAG. (Mar. 26, 2022), https://www.nasdaq.com/articles/exploring-the-correlation-between-bitcoin-price-and-google-search-trends [https://perma.cc/N9CT-NP9G] (discussing the correlation between Google search trends about Bitcoin and Bitcoin price).

172. *See* MAJORITY REPORT, *supra* note 9, at 35 (explaining how the economic value for Google from "social data gathered through . . . [Google's] services may exceed their economic value to consumers"). One example of this phenomenon is Google's pivot from focusing on desktop computers to mobile phones. Jim Yu, *Google's Shift to Mobile-First: Mobile Moments that Matter*, SEARCH ENGINE LAND (Nov. 29, 2016), https://searchengineland.com/googles-shift-mobile-first-mobile-moments-matter-263971 [https://perma.cc/8G99-GP98]. The FTC did not believe this change would occur, influencing its decision not to bring an enforcement action against Google in 2012. *See infra* Part II.B. With the increasing popularity of the short video format used by TikTok, Google is likely to shift its focus and the focus of its advertisers to short video, whether they like it or not. Hura Anwar, *Google Search May Shift Focus to Short Videos over Web Stories as UI Tests Continue with More Variations*, DIGIT. INFO. WORLD BLOG (May 7, 2022), https://www.digitalinformationworld.com/2022/05/google-search-may-shift-focus-to-short.html [https://perma.cc/6RJN-2YSM].

173. *See, e.g.*, Lapo Filistrucchi, Damien Geradin, Eric Van Damme & Pauline Affeldt, *Market Definition in Two-Sided Markets: Theory and Practice*, 10 J. COMPETITION L. & ECON. 293, 301–02, 308–09 (2014) (extensively cited by the Supreme Court in Ohio v. American Express Co., 138 S. Ct. 2274, 2280, 2286–87, 2298, 2230–31 (2018)); Michael Katz & Jonathan Sallet, *Multisided Platforms and Antitrust Enforcement*, 127 YALE L.J. 2142, 2143, 2155, 2158 (2018) (examining Google's and YouTube's use of two-sided markets).

174. *See, e.g.*, Filistrucchi et al., *supra* note 173, at 301 (describing how some two-sided markets can be reframed as "only one market encompassing two sides").

175. *See generally* Katz & Sallet, *supra* note 173.

the highest level of abstraction, framing the single relevant market as the data aggregation market instead of limiting a multi-sided platform like Google to just the online search market.[176]

The key to Google's success is its predictive accuracy. Even though the average person may believe that Google achieves this predictive accuracy by eavesdropping,[177] Google instead uses a highly accurate digital fingerprint of a person to test a variety of value propositions and products before showing them to consumers.[178] For instance, a Millennial[179] who searched on Google for new athleisure shoes that are comfortable and sustainable may see an ad on YouTube for Allbirds shoes a week later.[180] The reason why this hypothetical person sees an Allbirds ad instead of a Nike ad is because Google has so many observational data points on the hypothetical person that it is certain Allbirds would be preferred *and* that a sustainability value proposition[181]

176. A simplistic framing of the online-search market is that it comprises two markets: one of searchers and one of firms seeking to be discovered by searchers.

177. Rob Pegoraro, *People Still Think Their Smart Speakers Are Eavesdropping on Conversations*, PCMAG (Oct. 24, 2022), https://www.pcmag.com/news/people-still-think-their-smart-speakers-are-eavesdropping-on-conversations [https://perma.cc/ZAZ5-XFC6] ("A vast majority of people in the US and Canada suspect their smart speakers can eavesdrop on their conversations, and just over two-thirds think they've gotten ads based on that snooping.").

178. *See* Roger McNamee, *Big Tech Needs to Be Regulated. Here Are 4 Ways to Curb Disinformation and Protect Our Privacy*, TIME (July 29, 2020), https://time.com/5872868/big-tech-regulated-here-is-4-ways [https://perma.cc/JZC3-PPVD] (describing and expanding upon digital tracking claims made by ex-Google employee Tristan Harris).

179. Although cutoff dates vary among demographers, Millennials are generally considered to be people born between 1981 and 1996. Michael Dimock, *Defining Generations: Where Millennials End and Generation Z Begins*, PEW RSCH. CTR. (Jan. 17, 2019), https://www.pewresearch.org/fact-tank/2019/01/17/where-millennials-end-and-generation-z-begins [https://perma.cc/5Y24-QNLR].

180. Two of Allbirds' top value propositions are that they are comfortable and sustainable. Beka Rice, *eCommerce Marketing Tear Down: Allbirds*, JILT, https://jilt.com/blog/ecommerce-marketing-tear-down-allbirds [https://perma.cc/28GJ-N3WW] (Feb. 11, 2020).

181. Alexandra Twin, *Value Proposition: How to Write It with Examples*, INVESTOPEDIA, https://www.investopedia.com/terms/v/valueproposition.asp [https://perma.cc/VZ9Q-QN2H] (Sept. 25, 2022) ("A value proposition in marketing is a concise statement of the benefits that a company is delivering to customers who buy its products or services.").

in the ad would be a winner.[182] Moreover, Google and its peer firms are distinct from twentieth-century firms in that because there are minimal limits to consumption on the supply and demand side for Big Tech's products, Google is economically incentivized to induce users to increase engagement with Google products because more data means more accurate user and market predictions.[183]

Accurate user and potential user predictions can make most single-market firms into market winners.[184] But what sets Google apart is its involvement in so many different markets.[185] By capitalizing on social data aggregated across different, but often related, markets, Google can create the market-leading user experience and products at the lowest price in the market: free.[186] For example, Google's vast network of information on how people use the Internet led to its shift to indexing search results based on a site's mobile experience instead of the desktop experience[187] and the prioritization of sites with Accelerated Mobile Pages (AMP) hosted on Google servers.[188] Google made each

182. *See* Rice, *supra* note 180 (explaining how value propositions are used in advertising); Shoshy Ciment, *Allbirds Sees High Conversion Rates Among Millennials and Gen Z, Thanks to Sustainability Focus*, FOOTWEAR NEWS (Oct. 8, 2021), https://footwearnews.com/2021/business/retail/allbirds-conversion-rate-millennial-gen-z-sustainability-1203191991 [https://perma.cc/K3VJ-NNRM] (examining how Allbirds uses its value propositions to sell its products).

183. *See* Ajay Agrawal, Joshua Gans & Avi Goldfarb, *How to Win with Machine Learning*, HARV. BUS. REV., Sept.–Oct. 2020, at 126, 130 (outlining how technology companies can leverage the value of AI by persuading "[c]onsumers [to] willingly supply personal data," allowing the AI to "make better predictions over time"). Stucke, *supra* note 45, at 310–11 (contrasting business model of Internet-based Big Tech firms with that of Gillette, which faced a limit to consumption growth, as a person is limited by how many times he or she shaves).

184. Agrawal et al., *supra* note 183, at 131–32 (explaining how accurate user predictions underly the success of Google, Amazon, Facebook, and Apple).

185. *See supra* note 161 (exploring Google's vast range of products across different markets).

186. Ben Thompson, United States v. Google, STRATECHERY BLOG (Oct. 20, 2020), https://stratechery.com/2020/united-states-v-google [https://perma.cc/M6BB-D7DU] (describing the self-reinforcing, high-quality user experience advantage bestowed upon Google due to its dominant control of user data).

187. Yu, *supra* note 172.

188. *See* Christopher Ratcliff, *Google Has Launched Accelerated Mobile Pages*, SEARCH ENGINE WATCH (Feb. 23, 2016), https://www.searchenginewatch.com/2016/02/23/google-has-launched-accelerated-mobile-pages [https://perma.cc/HHD2-24SG] (noting that pages created with AMP "likely [receive a] boost in search rankings"); Dieter Bohn, *Inside Google's Plan to Make the Whole Web*

of these changes in 2016, when American smartphone usage was at seventy-seven percent, whereas today, smartphones are used by eighty-five percent of Americans.[189] Further, Google's aggregation of social data and users has allowed it to have near-perfect market intelligence, creating an easy entry into adjacent zero-price and non-zero-price markets.[190] Google's ease of entry into adjacent markets has created a digital economic landscape that has become impossible to avoid, both as users without competitive alternatives and non-users that interact with users.[191] This thus feeds Google more social data to enhance its near-perfect market intelligence.

To be sure, advocates of highly targeted advertising driven by predictive algorithms range from the usual suspects like Facebook and digital marketing professionals to journalists, small-business owners, and antitrust enforcers.[192] Jeff Jarvis, a journalism professor at the City University of New York, sums up the virtues of targeted advertising well:

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as Fast as AMP, VERGE (Mar. 8, 2018), https://www.theverge.com/2018/3/8/17095078/google-amp-accelerated-mobile-page-announcement-standard-web-packaging-urls [https://perma.cc/2WDN-KQUZ] (discussing Google's attempt to lobby the group in charge of web standards to adopt AMP-inspired technology, and the resistance of publishers to AMP because they do not want to cede control to Google).

189. *Mobile Fact Sheet*, PEW RSCH. CTR. (April 7, 2021), https://www.pewresearch.org/internet/fact-sheet/mobile [https://perma.cc/D3YH-T6UV].

190. *See* MAJORITY REPORT, *supra* note 9, at 9 ("Internal communications also reveal that Google exploits information asymmetries and closely tracks real-time data across markets, which—given Google's scale—provide it with near-perfect market intelligence.").

191. Hill, *supra* note 20. People who actively use one Google product may have their data shared with other Google products. An example of this is Gmail data, which is shared with Google Maps regardless of if the Gmail account holder uses Google Maps. Greg Bensinger, *Never-Googlers: Web Users Take the Ultimate Step to Guard Their Data*, WASH. POST (July 23, 2019), https://www.washingtonpost.com/technology/2019/07/23/never-googlers-web-users-take-ultimate-step-guard-their-data [https://perma.cc/LA8M-ENVT]. However, even people who do not use any Google-owned product but visit webpages or use apps that utilize Google tracking services, such as Google Analytics (websites) or Google Firebase (mobile apps), are providing data to Google, feeding its market intelligence regarding social trends. *See* Douglas Schmidt, *Google Data Collection*, DIGIT. CONTENT NEXT 2 (Aug. 15, 2018), https://digitalcontentnext.org/wp-content/uploads/2018/08/DCN-Google-Data-Collection-Paper.pdf [https://perma.cc/WKB8-YT3M] (discussing Google's use of passive data gathering through publisher tools such as Google Analytics).

192. *See* John Koetsier, *Facebook Wants You to Want Personalized Ads. It's Not Going Well*, FORBES (Mar. 1, 2021), https://www.forbes.com/sites/

> With targeting, a small business, a new candidate, a nascent movement can efficiently and inexpensively reach people who would be interested in their messages so they may transact or assemble and act. . . .
>
> Without targeting, we are left with mass media—at the extreme, Super Bowl commercials—and the people who can afford them: billionaires and those loved by them. Without targeting, big money will forever be in charge of commerce and politics. Targeting is an antidote.[193]

Research on whether consumers prefer algorithm-driven targeting is mixed.[194] The upshot is that although American consumers generally prefer personalized targeting, they also fear vast data collection by private companies and the government.[195] See Figure 1 for a visualization of survey responses concerning how people value data based on the nature of data and how the data aggregator uses the data.

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johnkoetsier/2021/03/01/facebook-wants-you-to-want-personalized-ads-its-not-going-well [https://perma.cc/8S8S-UNCX] (discussing Facebook's advertising campaign to convince users to opt into ad personalization, with the goal of supporting small business and connecting with ideas that users like); Jeff Jarvis, *In Defense of Targeting*, WHITHER NEWS BLOG (Jan. 9, 2020), https://medium.com/whither-news/in-defense-of-targeting-9329272e9c9d [https://perma.cc/C4TE-LSRL] (demonstrating a journalist's support for microtargeting algorithms); Yan Lau, *A Brief Primer on the Economics of Targeted Advertising*, FTC: BUREAU OF ECON. 11–12 (Jan. 2020), https://www.ftc.gov/system/files/documents/reports/brief-primer-economics-targeted-advertising/economic_issues_paper_-_economics_of_targeted_advertising.pdf [https://perma.cc/4J72-B7YE] (reporting that targeted ads "increase[] the total value consumers derive from acquiring the products they match with" and "could mean fewer ads overall; consumers benefit directly from not having to view ads, but also indirectly from cost-savings passed on by firms").

193. Jarvis, *supra* note 192.

194. Ross Benes, *Do People Actually Want Personalized Ads?*, INSIDER INTEL. (Mar. 4, 2019), https://www.insiderintelligence.com/content/do-people-actually-want-personalized-ads [https://perma.cc/6CXC-6792].

195. Auxier et al., *supra* note 27; Russell Heimlich, *Internet Users Don't Like Targeted Ads*, PEW RSCH. CTR. (Mar. 13, 2012), https://www.pewresearch.org/fact-tank/2012/03/13/internet-users-dont-like-targeted-ads [https://perma.cc/DT76-XQ8B] (reporting that sixty-eight percent "of internet users disapprove of search engines and websites tracking their online behavior in order to aim targeted ads at them"); *see also* Global Witness, *Do People Really Want Personalised Ads Online?*, GLOB. WITNESS BLOG (Apr. 15, 2021), https://www.globalwitness.org/en/blog/do-people-really-want-personalised-ads-online [https://perma.cc/A3VJ-76ZK] (discussing how fifty-seven percent of people do not want personal data being used for targeted ad, based on YouGov poll of over 2,000 French and German social media users); Benes, *supra* note 194 (reporting that consumers express concern over the data collection that enables personalized ads).

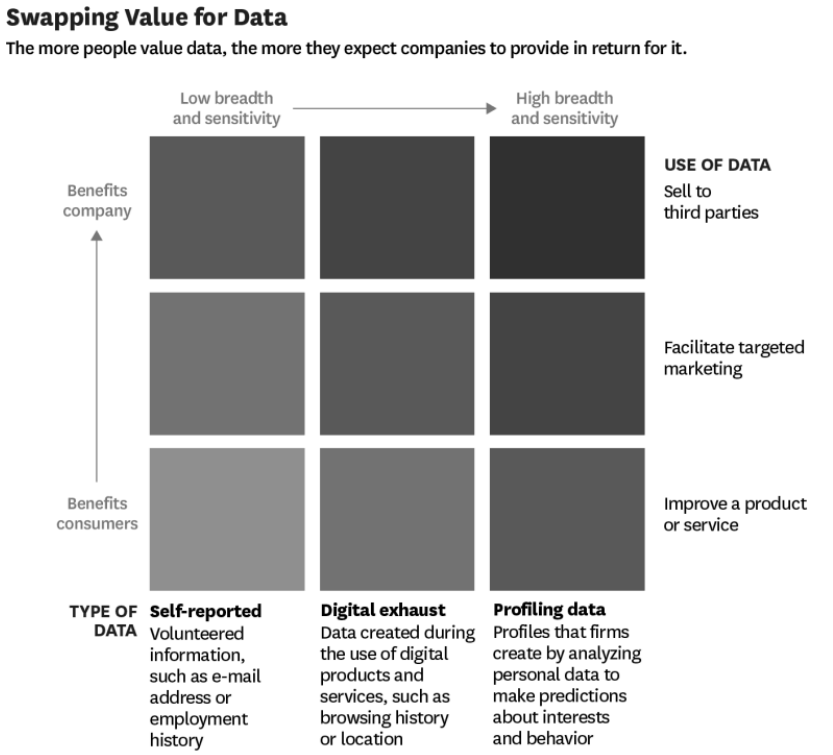

Figure 1.[196] Demonstrating how consumers determine the value of data based on the nature of data and how it is used. The darker the box, the more valuable the data is to a consumer, and thus, the higher the price a data aggregator should, in theory, pay.

This fear about data collection parallels Americans' concern that Big Tech has too much economic influence and that it must be curtailed.[197] So, why do Americans appear to have such paradoxical opinions about data-driven targeting? It is likely that Americans accept a world of data-driven targeting because they cannot envision a world where data-driven targeting is no

196. Figure sourced from Timothy Morey, Theodore Forbath & Allison Schoop, *Customer Data: Designing for Transparency and Trust*, HARV. BUS. REV. (May 2015), https://hbr.org/2015/05/customer-data-designing-for-transparency-and-trust [https://perma.cc/R8DG-6DAP].

197. *See* Vogels, *supra* note 26 (describing Americans' concern about Big Tech's power and support of curtailing it).

more.[198] Maybe Americans are comfortable with data-driven targeting that is not rooted in third-party data, but zero-party data—"information that is intentionally and proactively shared directly by individual consumers."[199] Or perhaps Americans remain outraged about Google's data-driven targeting[200] and are waiting for Congress to create the tools necessary to curtail undesirable Big Tech conduct while preserving modern economic innovations; similar to what was done with the enactment of the Sherman Act.[201]

3. Non-Monetary Costs

Antitrust law once considered non-monetary costs but now focuses solely on monetary costs.[202] Regarding zero-price-market products like Google Search, Robert Bork, the father of the consumer welfare standard, remarked that "[r]egulators may attempt to develop . . . antitrust complaints against the search engines but they are unsupportable. There is no coherent case for monopolization because a search engine, like Google, is *free to*

198. *See* Auxier et al., *supra* note 27 (finding that sixty percent of American adults "say they do not think it is possible to go through daily life *without having data collected about them* by companies or the government"); Leslie K. John, Tami Kim & Kate Barasz, *Ads That Don't Overstep: How to Make Sure You Don't Take Personalization Too Far*, HARV. BUS. REV., Jan.–Feb. 2018, at 62, 64 ("[A]n ad-free experience is not realistic in today's ad-supported web landscape.").

199. Tim Glomb, *Say Goodbye to Cookies*, HARV. BUS. REV. (Apr. 8, 2021), https://hbr.org/2021/04/say-goodbye-to-cookies [https://perma.cc/9HSG-KU85]. *But see* Auxier et al., *supra* note 27 (reporting that Americans believe "data collection poses more risks than benefits").

200. John D. McKinnon, *Voters Want to Curb the Influence of Big Tech Companies, New Poll Shows*, WALL ST. J., https://www.wsj.com/articles/voters-want-to-curb-the-influence-of-big-tech-companies-new-poll-shows-11632405601 [https://perma.cc/2RHJ-SVH7] (Sept. 23, 2021) (reporting eighty percent of registered voters agreed federal government "needs to do everything it can to curb the influence of big tech companies that have grown too powerful and now use our data to reach too fair into our lives").

201. Orbach, *supra* note 39, at 1445–46 ("The enactment of the Sherman Act responded to growing public demands to address the influence of large businesses on the economy . . . . [T]he Supreme Court ruled that the Sherman Act prohibits only unreasonable restraints of trade, not all restraints . . . .").

202. *See supra* Parts I.A.1–2 (historicizing antitrust law); *supra* note 77 (discussing the relevance of non-monetary costs in once-dominant Populist School of antitrust law).

consumers."[203] Key non-monetary costs to the consumer often discussed in the context of Google and the zero-price market include information (personal and social), attention, privacy, and mental health.[204]

Studying the effects of non-monetary costs is difficult for two reasons. First, there is no near-equal competitor to Google.[205] Firms can compete with Google in individual product markets, but no firm has the social trend data to inform the creation of a better user experience.[206] Second, there is little transparency of key features for Google and any competitor, such as how the firms protect privacy or attempt to create a product that does not result in mental health injuries.[207] Further, consumers are not likely to be sufficiently literate in these areas to make a proper comparison between competitors.[208] Lastly, what makes these non-monetary costs the most nefarious is that they are paid by users and non-users, especially regarding social information and privacy costs.[209]

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203. Robert H. Bork, *Antitrust and Google*, CHI. TRIB., Apr. 6, 2012 (§ 1), at 19, https://www.proquest.com/docview/968040077/6B5AC2F0E5904455PQ/2 [https://perma.cc/XU5D-ZUXS] (emphasis added).

204. *See* Newman, *supra* note 147, at 165–72 (exploring costs to the consumer in terms of information, personal data, and attention); Gal & Rubinfeld, *supra* note 147 (discussing private information as currency in zero-cost markets); Jessica Lyons Hardcastle, *US Schools Sue Meta, Google and Friends over 'Youth Mental Health Crisis*,*'* REGISTER (Jan. 10, 2023), https://www.theregister.com/2023/01/10/schools_sue_meta_google [https://perma.cc/D76V-LQPD] (reporting on a lawsuit alleging that Big Tech companies, including Google, "have designed their products to maximize the amount of time users spend scrolling, direct[ing] harmful content to tens of millions of kids and teens across the US"); *cf.* Geller & O'Brien, *supra* note 19 (noting that Google algorithms were "engineered to understand the desires of users").

205. Even though Google has competitors in individual submarkets it engages in, like online search and video content, no firm encompasses all its submarkets. *See* Suzanne Kvilhaug, *Who Are Google's Main Competitors?*, INVESTOPEDIA, https://www.investopedia.com/ask/answers/120314/who-are-googles-goog-main-competitors.asp [https://perma.cc/8BSU-G4DW] (July 8, 2022) ("Due to its cross-cutting products and services, Google's competitors vary [across its submarkets].").

206. Thompson, *supra* note 186 and accompanying text.

207. *See* MAJORITY REPORT, *supra* note 9, at 53 (describing the lack of accountability of dominant search and social platforms in regulating content that they feature, including "deadly content").

208. *See id.* at 52–53 ("When online news is disintermediated from its source, people generally have more difficulty discerning the credibility of reporting online.").

209. *Supra* note 191 and accompanying text.

Zero-price markets did not exist when Congress enacted the antitrust laws. Nor did firms that could shed traditional limitations of economies of scale. Yet non-monetary costs were central concerns for lawmakers.[210] Chief among these were concerns about the non-economic effects of large businesses and distributive effects.[211] Although antitrust law has evolved, scholars, legislators, and practitioners alike recognize that the common law nature of antitrust law is too slow to regulate the anticompetitive harms of data aggregating firms like Google.[212] As shown below, however, current proposals for change may not be up to the task.

II. FITTING A SQUARE PEG INTO AN OCTAGON HOLE: EFFORTS TO USE AND ADAPT CURRENT LAW

Since the dawn of the twenty-first century, antitrust enforcement agencies have failed to meaningfully regulate growing firms and protect competition, particularly Internet based firms like Google. Although there is some opposition to this proposition,[213] it is well understood among the American public,[214] politicians on both sides of the aisle,[215] and antitrust enforcers.[216] This Part discusses efforts by scholars, enforcement officials, and legislators to adapt to firms like Google that are fundamentally distinct from any firm previously regulated by American antitrust law.[217] This broad survey demonstrates that even though some efforts have been successful, the root harms caused

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210. *See* Barak Orbach, *How Antitrust Lost Its Goal*, 81 FORDHAM L. REV. 2253, 2256 (2013) (identifying lawmakers' concern with the cost of failing to protect competition).

211. *See generally* Pitofsky, *supra* note 78.

212. *See infra* Part II.

213. *See generally* Greenfield et al., *supra* note 154, at 416–17 (advocating that tempered changes to the enforcement regime and not to antitrust law itself are preferable and have had success, instead of a drastic overhaul as advocated by Antitrust Populists).

214. *See supra* notes 26–28 and accompanying text (demonstrating the American public's support for more stringent antitrust regulation of Big Tech).

215. *See supra* note 34 and accompanying text (showing support of a bipartisan group of congresspeople).

216. *See supra* note 35 and accompanying text (showing support of a bipartisan group of state attorneys general).

217. *See* Wheeler, *supra* note 134 ("While data assets enjoy industrial-like scope and scale economies, they are different in many other ways. Those differences create such strong proclivities to market failure that a new kind of regulatory oversight is required.").

by Google's anticompetitive conduct have not ceased.[218] To sufficiently address these root harms, antitrust stakeholders working on behalf of the public interest must change how they define Google's relevant market, along with adopting fundamental reforms to the central tenets of the modern antitrust regime, as discussed in Part III.

A. TUNNEL-VISION SCHOLARSHIP

Relevant scholarship can be sorted into three categories. First, scholars, journalists, and politicians have discussed Google's bad behavior and its anticompetitive impact on the online search engine and search advertising market.[219] Second, Professor Maurice Stucke and a few other scholars have written about Google's conduct as a data aggregator, creating a data monopoly.[220] This research significantly informed the House Majority Report on Digital Markets and serves as the foundation for the arguments of this Note.[221] Third, scholarship has proposed a variety of options for updating antitrust law, ranging from a targeted increase of enforcement resources[222] to adopting European legal standards.[223]

1. The Siloed Framing of Google's Conduct and Big Data as a Method for Monopoly Entrenchment

Most scholarship focuses on the anticompetitive nature of Google's conduct in a siloed manner, limiting itself to a discus-

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218. *See infra* note 282 (collecting examples where legal action from a competitor and a regulatory settlement have not appeared to impact Google's anticompetitive practices).

219. *See, e.g.*, Benjamin Clay Hughes, Note, *Time for Change: How Google's Anticompetitive Conduct Reveals the Deficiencies of Modern Antitrust Regulation*, 4 CARDOZO INT'L & COMPAR. L. REV. 399, 422 (2020) (examining how Google violated antitrust law to pursue its business model and "ensure that its monopoly position in Search [advertising] would not be eroded").

220. *Infra* notes 253–59 (examining Google's market power resulting from data aggregation).

221. *See generally* MAJORITY REPORT, *supra* note 9.

222. *E.g.*, *supra* note 213.

223. *E.g.*, Brennan Weiss, Note, *Reframing Antitrust Law for Big Tech: Lessons from the German Bundeskartellamt*, 73 FED. COMMC'NS L.J. 193 (2020).

sion of the online search engine (including shopping) and advertising industry,[224] the mobile operating system industry,[225] or the web browser industry.[226] However, for at least the past decade, Big Tech has also been criticized for its rampant violations of user—and perhaps worse, non-user[227]—privacy rights in the name of the efficiencies generated by Big Data[228] algorithms and artificial intelligence.[229]

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224. *See generally* Kristine Laudadio Devine, *Preserving Competition in Multi-Sided Innovative Markets: How Do You Solve A Problem Like Google?*, 10 N.C. J.L. & TECH. 59 (2008); Brian J. Smith, *Vertical vs. Core Search: Defining Google's Market in a Monopolization Case*, 9 N.Y.U. J.L. & BUS. 331 (2012); Andrew Langford, *gMonopoly: Does Search Bias Warrant Antitrust or Regulatory Intervention?*, 88 IND. L.J. 1559 (2013); Geoffrey A. Manne & William Rinehart, *The Market Realities that Undermined the FTC's Antitrust Case Against Google* 1 (Harv. J.L. & Tech. Occasional Paper Series, 2013); Newman, *supra* note 14.

225. *See generally* Laura Bassett, *How Google's Android Bundles Could Cost Them Billions in the EU & India*, 25 MICH. ST. INT'L L. REV. 119 (2017); Ginsberg, *supra* note 105; Hughes, *supra* note 219, at 421–32.

226. *See* Sarah Oh, *Is There Evidence of Antitrust Harm in the House Judiciary Committee's Hot Docs?*, 37 SANTA CLARA HIGH TECH. L.J. 193, 227 (2021) (discussing Google's efforts to make Chrome the default web browser for Dell computers and AT&T devices); Giorgio Monti & Alexandre Ruiz Feases, *The Case Against Google: Has the U.S. Department of Justice Become European?*, ANTITRUST, Spring 2021, at 26, 26 (discussing the enforcement efforts of the European Commission regarding Google's prioritization of its Chrome browser on devices using the Android operating system).

227. *See* Asunción Esteve, *The Business of Personal Data: Google, Facebook, and Privacy Issues in the EU and the USA*, 7 INT'L DATA PRIV. L. 36, 39 (2017) (using the Facebook "Like" button embedded on non-Facebook pages to collect non-user data); *Belgian Court Orders Facebook to Stop Tracking Non-Members*, GUARDIAN (Nov. 9, 2015), https://www.theguardian.com/technology/2015/nov/10/belgian-court-orders-facebook-to-stop-tracking-non-members [https://perma.cc/N5PR-29NF] (reporting Facebook's use of "datr" cookie to record user and non-user activities).

228. Bridget Botelho & Stephen J. Bigelow, *Big Data*, TECHTARGET, https://www.techtarget.com/searchdatamanagement/definition/big-data [https://perma.cc/2E7N-R7V8] ("Big data is a combination of structured, semistructured and unstructured data collected by organizations that can be mined for information and used in machine learning projects, predictive modeling and other advanced analytics applications.").

229. *See* Steve Lohr, *Big Data Is Opening Doors, but Maybe Too Many*, N.Y. TIMES (Mar. 23, 2013), https://www.nytimes.com/2013/03/24/technology/big-data-and-a-renewed-debate-over-privacy.html [https://perma.cc/JG7R-8U75]; Brian X. Chen, *The Battle for Digital Privacy Is Reshaping the Internet*, N.Y. TIMES (Sept. 16, 2021), https://www.nytimes.com/2021/09/16/technology/digital-privacy.html [https://perma.cc/JG7R-8U75] (discussing growing concerns about "infringements on privacy" using Big Data technology as well as "a new

Although scholarship has limited itself to analyzing how Google's collection and use of Big Data entrench its market power in the search advertising market,[230] this siloed approach still has great value for this Note's analysis. This scholarship suggests that Google has aggregated user personal and non-personal (i.e., social trend) data not simply through innovation, but often through "illegal violations of user privacy and other aggressive corporate behavior."[231] These "bad acts" include: (1) Google collecting personal and non-personal data without consent from unencrypted WiFi hotspots in people's homes under the cover of photographing homes for Google Maps Street View;[232] (2) threatening to refuse to deal with Motorola and Samsung regarding the Android operating system when these phone manufacturers attempted to use a Google competitor for geolocation services;[233] (3) Google's violation of a consent decree arising out of an FTC action regarding Google's deceptive tactics in both the initial launch of Google Buzz and Google's exploitation of a vulnerability in Apple's Safari web browser to secretly place cookies (offsite trackers) on Safari users;[234] (4) Google scraping and stealing content from competitor websites, then leveraging its market power in online search to threaten to delist competitors if they protested;[235] and (5) Google leveraging its monopoly gatekeeper power over all mobile apps for the Android OS to remove Disconnect, a privacy app that prevented Google's collection of valuable data from Android users.[236]

This area of scholarship also argues that Google's conduct in the search advertising market levies three types of harms on consumers, addressed below. First, Google has harmed its users

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deal on data," which asserts that "you have the right to possess your data, control how it is used, and destroy or distribute it as you see fit").

230. *See generally* Newman, *supra* note 14.

231. *Id.* at 410.

232. *Id.* at 435–36.

233. *Id.* at 438.

234. *Id.* at 439–40. Google Buzz, launched in 2010, was Google's first attempt to compete with Facebook in the social networking space. Jessica Guynn, *Google Aims to Take on Facebook with New Social Feature Called 'Buzz,'* L.A. TIMES (Feb. 9, 2010), https://www.latimes.com/archives/blogs/technology-blog/story/2010-02-09/google-aims-to-take-on-facebook-with-new-social-feature-called-buzz [https://perma.cc/RC9L-BFUX].

235. Stucke, *supra* note 45, at 297 (discussing the voluntarily ceased FTC investigation into Google's conduct).

236. EZRACHI & STUCKE, *supra* note 14, at 179–80, 184–86.

because its anticompetitive conduct has left them with no comparable substitutes, nor competitors that can offer better privacy protection[237] or a better economic deal for the valuable data that consumers share with companies like Google.[238] In short, this results in consumers giving away or trading personal data for a bad bargain when they might otherwise withhold it.[239] A 2015 Harvard Business Review survey found that Americans would pay around $100 to protect credit card information and around $50 to protect digital communication.[240] Further, the survey found that

> the value consumers place on their data rises as its sensitivity and breadth increase from basic information that is voluntarily shared to

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237. The most salient example of a competitor with better privacy offerings than Google is DuckDuckGo. Yet its 2.5 percent market share in the United States is incomparable to Google's. *See Search Engine Market Share Held by Duckduckgo from July 2019 to August 2021, by Region*, STATISTA (Nov. 2, 2021), https://www.statista.com/statistics/1220046/duckduckgo-search-engine-market-share-by-region [https://perma.cc/YD93-LURF]. One can make a counterargument that DuckDuckGo's small market share indicates that consumers do not care about privacy as much as they say they do, see Auxier et al., *supra* note 27, and thus the free market has crowned Google a market winner. But, given that eighty-one percent of Americans believe the potential risk of companies collecting data about them outweigh the benefits, seventy-nine percent are very or somewhat concerned about how companies use the data collected, and fifty-nine percent have very little or no understanding about what companies do with the data collected, it is unlikely that consumers would freely choose Google over DuckDuckGo if there were no illegal restraints on trade or usage of monopoly power present in the market. *See id.* (discussing sentiment statistics).

238. Newman, *supra* note 14, at 443.

239. *Id.* at 441–42; *see also* Nathan Newman, *The Costs of Lost Privacy: Consumer Harm and Rising Economic Inequality in the Age of Google*, 40 WM. MITCHELL L. REV. 849, 855–65 (2014) (discussing how users overvalue Google's services, undervalue their data, and fail to receive full economic value for data given up); Erika M. Douglas, *Monopolization Remedies and Data Privacy*, 24 VA. J.L. & TECH. 1, 68–73 (2020) (advocating for the incorporation of data privacy interests into antitrust remedies); Stucke, *supra* note 45, at 294–95 (illustrating that free services may not be fair compensation for user data or content). Given that most Americans believe they cannot go through their day without giving up information to companies like Google, a certain proportion of Americans would clearly prefer to withhold their data. *See* Auxier et al., *supra* note 27. *But see generally* Eliana Garcés & Daniel Fanaras, *Antitrust, Privacy, and Digital Platforms' Use of Big Data: A Brief Overview*, 28 COMPETITION: J. ANTITRUST, UNFAIR COMPETITION & PRIVACY L. SECTION CAL. LAWS. ASSOC., Fall 2018, at 23, 23 (concluding that the link between privacy concerns raised by Google's data collection and antitrust is too tenuous, and thus, antitrust enforcement is not the proper mechanism to remedy privacy violations).

240. Morey et al., *supra* note 196 (comparing American value of data against survey results from Chinese, Indian, British, and German respondents).

> detailed information about the consumer that the firm derives through analytics, and as its uses go from principally benefiting the consumer (in the form of product improvements) to principally benefiting the firm (in the form of revenues from selling data).[241]

Yet, despite the survey's findings, visualized in Figure 2 below, such information is often given up to Google for free.[242] So, one is left with quite the quandary: are the survey responses driven by respondent's expectations that they should value their data more, or are users failing to demand a better bargain for their data from data aggregators because there are no competitive options? As this Note argues, the answer is the latter.

Second, Google's anticompetitive conduct enables search advertisers to engage in price discrimination harmful to consumers.[243] Third, Google's premium costs to search advertisers—only possible because its conduct has pushed out all realistic competition—are passed on to consumers by raising consumer monetary costs for products and services purchased from advertisers.[244] These harms, as well as the bad acts illustrated below, remain significant when analyzing Google's conduct in the data aggregator framework.

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241. *Id.*

242. *See, e.g.*, Allen P. Grunes, *Another Look at Privacy*, 20 GEO. MASON L. REV. 1107, 1120–23 (2013); *see also* Megan Case, *Google, Big Data, & Antitrust*, 46 DEL. J. CORP. L. 189, 201–03 (2022) (highlighting customers' surrender of personal information while continuing to use the services).

243. Newman, *supra* note 14, at 443–44 (contrasting price discrimination conducted by airlines as beneficial to the consumer with price discrimination enabled by Google's data collection, which distinctly does not allow for prices to be fully open and transparent like airline ticket prices). There has been extensive scholarship regarding data aggregation (beyond just Google-owned sources) enabling price discrimination harmful to consumers. *See, e.g.*, Woodcock, *supra* note 14, at 1385–91 (pricing of fungible items extracting maximum profitability from consumers); Valerie Schneider, *Locked Out by Big Data: How Big Data, Algorithms and Machine Learning May Undermine Housing Justice*, 52 COLUM. HUM. RTS. L. REV. 251, 278–81 (2020) (illegally excluding poor applicants from rental housing); Julia F. Hollreiser, Note, *Closing the Racial Gap in Financial Services: Balancing Algorithmic Opportunity with Legal Limitations*, 105 CORNELL L. REV. 1233, 1249–54 (2020) (discussing the use of Big Data and algorithms to illegally discriminate against financial lending applicants). *But see generally* Dennis D. Hirsch, *That's Unfair! Or Is It? Big Data, Discrimination and the FTC's Unfairness Authority*, 103 KY. L.J. 345, 349–61 (2015) (advocating that although Big Data needs more regulation to mitigate illegal discrimination, in the long run, the benefits likely outweigh the costs).

244. Newman, *supra* note 14, at 411.

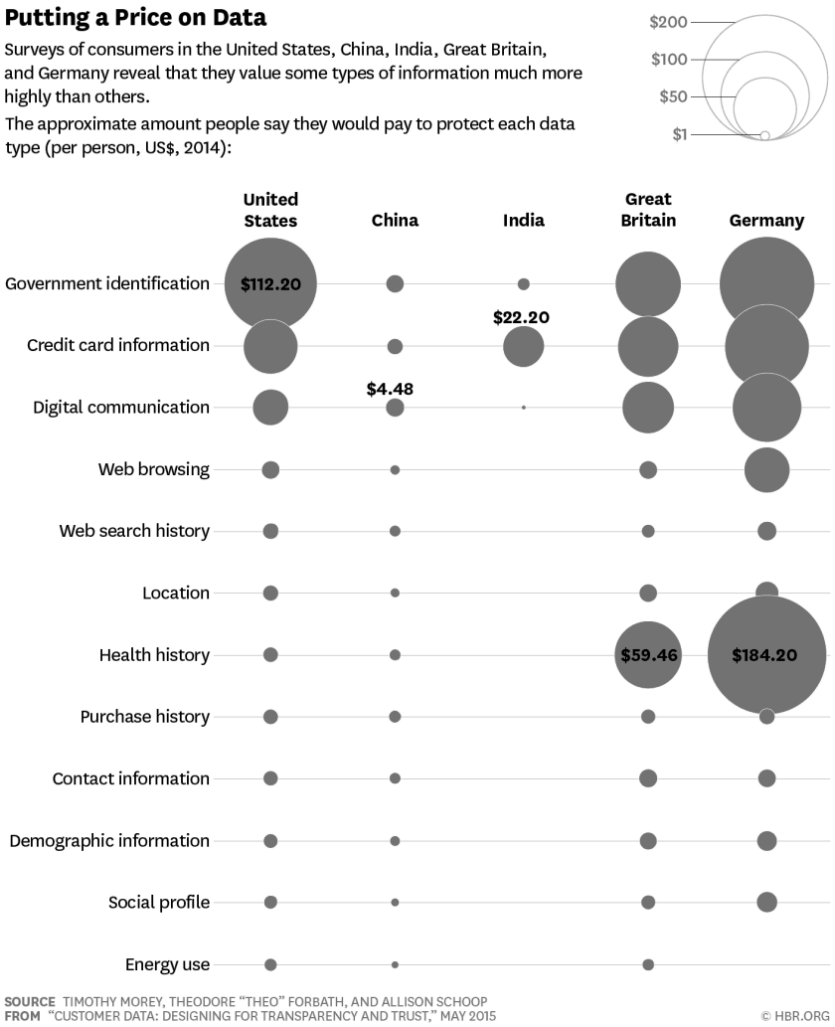

Figure 2.[245] Survey results from multi-continental respondents questioned about data valuation.

Despite Google's appearance as a data aggregation behemoth, some believe Google's conduct should not be addressed by antitrust law but instead by privacy or consumer protection

245. Figure sourced from Morey et al., *supra* note 196.

law.[246] Possibly beginning with former FTC Commissioner Pamela Harbour's dissent concerning the 2007 merger of Google and DoubleClick (a dominant force in digital display advertising at the time),[247] antitrust enforcers have deemed data aggregation and its impact on privacy and network effects as "cognizable under the antitrust laws."[248] Scholars have built on this notion, with some arguing that privacy issues raised by data aggregation should be at the center of antitrust enforcement,[249] and others arguing that data aggregation should play an informative role in antitrust enforcement,[250] particularly when data is used as an anticompetitive weapon.[251] All in all, scholars advocating antitrust reform generally favor consideration of data aggregation, privacy, and the negative impact of consumers giving their data away for free;[252] thus, an artificial separation of Google's antitrust liability and data aggregating behavior is unwarranted.

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246. *See, e.g.*, Jacob Beaupre, Note, *Big Is Not Always Bad: The Misuse of Antitrust Law to Break Up Big Tech Companies*, 18 DEPAUL BUS. & COM. L.J. 25, 28, 44–47 (2020) (noting the current gaps in regulatory framework that prevent effective data privacy enforcement nationwide); Geoffrey A. Manne & Joshua D. Wright, *Google and the Limits of Antitrust: The Case Against the Case Against Google*, 34 HARV. J.L. & PUB. POL'Y 171, 243 n.245 (2011) ("The privacy complaints are not arguments that Google would engage in conduct that would reduce competition, but rather 'status' arguments that a single firm in control of data is presumptively bad from an antitrust perspective. There is nothing in modern monopolization law to support such a claim."); Olivia T. Creser, Note, *In Antitrust We Trust?: Big Tech Is Not the Problem—It's Weak Data Privacy Protections*, 73 FED. COMMC'NS L.J. 289, 310–15 (2021) (arguing that privacy considerations could be addressed through an expansion of the FTC's authority in section 5 of the Federal Trade Commission Act).

247. *See* Case, *supra* note 242, at 206–07 (providing details on the Google acquisition of DoubleClick).

248. *Id.* at 219 (quoting *In re* Google/DoubleClick, F.T.C. File No. 071-0170, at 10 (Dec. 20, 2007) (Harbour, Comm'r, dissenting), https://www.ftc.gov/sites/default/files/documents/public_statements/statement-matter-google/doubleclick/071220harbour_0.pdf [https://perma.cc/8AXE-WUKV]).

249. Peter Swire, *Protecting Consumers: Privacy Matters in Antitrust Analysis*, CTR. FOR AM. PROGRESS (Oct. 19, 2007), http://www.americanprogress.org/issues/regulation/news/2007/10/19/3564/protecting-consumers-privacy-matters-in-antitrust-analysis [https://perma.cc/8C4B-NMYR].

250. Grunes, *supra* note 242, at 1120–23.

251. *See* Case, *supra* note 242, at 221–25 (indicating the advantages that data collection can provide to dominant firms in stifling potential competitors).

252. *See, e.g.*, Grunes, *supra* note 242; Case, *supra* note 242; Pamela Jones Harbour & Tara Isa Koslov, *Section 2 in a Web 2.0 World: An Expanded Vision of Relevant Product Markets*, 76 ANTITRUST L.J. 769, 773–74, 792–96 (2010); *supra* note 239 and accompanying text.

2. The Data Aggregator Framework

Scholarship analyzing Google's conduct (or that of any Big Tech firm) using the data aggregator framework is rare. However, Professor Maurice Stucke's work has been foundational in exploring data aggregators (termed data-opolies in his work), how they fit within the present antitrust regime, and their impacts on consumers and society.[253] Some of the key takeaways from his work include: (1) the data monopoly held by firms like Google is a barrier to entry for nascent and well-established competitors in markets where Google has already entered or adjacent markets;[254] (2) Google's data monopoly gives it near-perfect market intelligence about current market conditions and future market conditions;[255] (3) Google's monopolistic gatekeeping power over environments like the Android OS create nefarious effects,[256] (4) disadvantageous metrics about Google's offerings, such as its privacy policy, are incentivized to be as opaque as possible to consumers,[257] thus limiting the possible comparative literacy of consumers against any possible substitute competitor and obscuring the market value of one's data to the consumer;[258]

253. Stucke, *supra* note 45; STUCKE & GRUNES, *supra* note 43; EZRACHI & STUCKE, *supra* note 14. *But see* Jenny Paquette, Comment, *Old Is Not Always Wise: The Inapplicability of the Sherman Act in the Age of the Internet*, 89 TEMP. L. REV. ONLINE 1, 39 (2017) (advocating that each of Google's product lines should be framed separately when applying antitrust law).

254. Lina M. Khan, *The Separation of Platforms and Commerce*, 119 COLUM. L. REV. 973, 1025 (2019); Daniel A. Hanley, *A Topology of Multisided Digital Platforms*, 19 CONN. PUB. INT. L.J. 271, 308 (2020) ("[T]he ownership, collection, and utilization of the data is the barrier to entry for many prospective platform companies . . . ."); Stucke, *supra* note 45, at 290; Newman, *supra* note 14, at 407 ("Google's entrenched knowledge of consumers' personal information makes it nearly impossible for any rival or potential rival to woo online advertisers away and creates an anticompetitive barrier to entry."); MAJORITY REPORT, *supra* note 9, at 12 (discussing how venture capitalists have reported the existence of innovation "kill zone[s]" where investment is discouraged because of the competitive pressure from dominant data aggregating firms like Google); C. Scott Hemphill & Tim Wu, *Nascent Competitors*, 168 U. PA. L. REV. 1879, 1889–1910 (2020).

255. MAJORITY REPORT, *supra* note 9, at 182–83.

256. Stucke, *supra* note 45, at 282, 303 (discussing feedback loops, leading to a focus by third-party developers on developing products for dominant platforms such as the Google Play Store and Apple App Store and a failure to innovate beyond limits authorized by Google, lest those products be eliminated from the Play Store).

257. *Id.* at 288–90.

258. ORG. FOR ECON. COOP. & DEV., *supra* note 146, at 25.

and (5) the market power held by data aggregating firms is more durable than that held by any other kind of firm.[259]

The work done by Professor Stucke and a few other scholars informed the development of the seminal report on data aggregating firms, prepared by the majority staff of the House Subcommittee on Antitrust, Commercial, and Administrative Law.[260] A key finding of the report is that Google's access to real-time personal and social data, combined with its data from third parties forced to rely on Google services for lack of competition, provide Google with near-perfect market intelligence.[261] This near-perfect market intelligence and Google's physical and online scale give it the ability to expand and dominate adjacent markets at extremely low costs.[262] Moreover, Google's dominance in facially zero-price markets[263] results in non-monetary injuries to consumers, like privacy injuries.[264] However, the Majority Report fails to frame Google's conduct in the relevant data aggregation market, nor does it discuss how American antitrust regulation must evolve for this new kind of firm.

In sum, scholars have usefully explored some of the far-reaching negative impacts flowing from Google's bad behavior. Further, scholars have provided keen and insightful scrutiny of the government's failure to regulate data aggregating firms. This Note contributes additional scrutiny below. Yet, what scholars fail to flesh out fully—and what this Note provides—is how to mitigate the anticompetitive behavior and harms of data aggregating firms.

B. GOVERNMENT'S FAILURE TO REGULATE

American antitrust enforcement against Google has had mixed results. To understand enforcement efforts, one must have a brief understanding of the history of target firms. Part I.B.2 outlines Google's history. For comparison, Facebook was founded in 2004, went public in 2012, acquired Instagram in

259. Stucke, *supra* note 45, at 320–23.

260. *See generally* MAJORITY REPORT, *supra* note 9.

261. *Id.* at 9, 182–83.

262. *Id.* at 34.

263. Newman, *supra* note 147, at 198–206 (advocating that individual consumers and the consumer market in the aggregate receive a reduction in welfare in non-monetary ways); Gal & Rubinfeld, *supra* note 147, at 523–25.

264. MAJORITY REPORT, *supra* note 9, at 12.

2012 after going public, and acquired WhatsApp in 2014.[265] Even though law enforcement engaged in investigations and antitrust actions against Google before 2019, they were minimal compared to today's antitrust actions. However, although today's antitrust actions have broad support among law enforcement officials[266] and the public,[267] they fail to resolve the harmful conduct of data aggregators. This is because law enforcement officials have succumbed to the single market fallacy.[268] Even if they did not, their actions would have a much higher likelihood of success if Congress changes antitrust law.[269]

Law enforcement has been unsuccessful in mitigating Google's anticompetitive conduct since 2008.[270] This is consistent with the greater decline in antitrust enforcement since the 1960s.[271] More broadly, some scholars argue that law enforcement has not even tried to mitigate monopolization harms since the *Microsoft* case.[272] Moreover, despite facially acquiescing to law enforcement demands arising from investigations, Google has repeatedly continued its anticompetitive conduct in defiance of commitments made to law enforcement. The first salient example of this conduct arose out of the FTC's investigation into Google using Gmail users' private information for its now-defunct social networking tool, Google Buzz, despite telling users

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265. Kurt Wilberding & Georgia Wells, *Facebook's Timeline: 15 Years In*, WALL ST. J. (Feb. 4, 2019), https://www.wsj.com/articles/facebooks-timeline-15-years-in-11549276201 [https://perma.cc/D6UL-G5LH].

266. *Supra* note 35 and accompanying text.

267. *Supra* note 26 and accompanying text.

268. *Supra* notes 96–97 and accompanying text.

269. *Infra* Part III.B.

270. In 2008, the DOJ was successful in blocking an agreement between Google and Yahoo! that would have effectively given Google a ninety percent market share in the search advertising market and a ninety-five percent market share in the search syndication market. Additional Developments—Antitrust Law, *Google and Antitrust*, 25 BERKELEY TECH. L.J. 709, 709 (2010). Yet, the DOJ's efforts were largely ineffective as Google now processes ninety percent of online searches in the United States. Richard Nieva & Andrew Morse, *Google's Three Antitrust Battles: Here's What You Need to Know*, CNET (Dec. 22, 2020), https://www.cnet.com/news/googles-three-antitrust-battles-heres-what-you-need-to-know-faq [https://perma.cc/52C7-7GUC].

271. Filippo Lancieri, Eric A. Posner & Luigi Zingales, *The Political Economy of the Decline of Antitrust Enforcement in the United States* 5–6 (Nat'l Bureau of Econ. Rsch., Working Paper No. 30326, 2022).

272. *See* Steinbaum & Stucke, *supra* note 94, at 599 (noting that the *Microsoft* case had been the only monopolization case brought by the government in the previous twenty years).

it would only use that information for Gmail services.[273] A consent decree was issued prohibiting Google from "future misrepresentations regarding: (1) its collection and use of private information and its customers' control over that information; and (2) its membership and compliance with privacy or security programs."[274] However, in less than a year, a federal district court found that Google had violated this consent decree.[275]

Another example of Google's defiance of law enforcement arose from a 2011–12 FTC investigation into Google's mobile operating system, search advertising product, and search engine.[276] Previously undisclosed internal FTC documents show that its investigation made significant underestimates about Google and the future of the economy, including: (1) that off-platform online tracking, like cookies, had "limited potential for growth"; (2) that consumers would continue to rely primarily on desktop computers instead of mobile phones; (3) that competitors would arise in the mobile operating system space; and (4) grossly underestimating Google's market share in the search engine market, finding that it was only ten to twenty percent.[277] Yet, in 2006, Google was so synonymous with searching for information on the Internet that it was added to the Merriam-Webster Dictionary[278]—an odd thing to happen for a company that only enjoys ten to twenty percent of search market share. In 2013, the FTC voluntarily ceased its investigation, and Google

273. Press Release, FTC, FTC Charges Deceptive Privacy Practices in Googles Rollout of Its Buzz Social Network (Mar. 30, 2011), http://www.ftc.gov/opa/2011/03/google.shtm [https://perma.cc/7B22-WAUQ].

274. United States v. Google Inc., No. CV 12-04177 SI, 2012 WL 5833994, at *1 (N.D. Cal. Nov. 16, 2012); Google Inc., 152 F.T.C. 435, 453–59 (2011).

275. *Google*, 2012 WL 5833994, at *1 (describing the consent decree issued in October 2011 and order approving a permanent injunction issued in August 2012).

276. Leah Nylen, *How Washington Fumbled the Future*, POLITICO, https://www.politico.com/news/2021/03/16/google-files-ftc-antitrust-investigation-475573 [https://perma.cc/N8T3-PWKF] (Mar. 16, 2021).

277. *Id.*

278. Scott Duke Harris, *Dictionary Adds Verb: To Google*, MERCURY NEWS (July 7, 2006), https://web.archive.org/web/20070206065348/http://www.mercurynews.com/mld/mercurynews/business/14985574.htm [https://perma.cc/T8N4-MG9L]; *see also* MAJORITY REPORT, *supra* note 9, at 144 ("[Google] has grown and maintained its search engine dominance, such that 'Googling' something is now synonymous with online search itself.").

agreed to change some of its business practices under investigation, including web scraping[279] the content of potential competitors and using this content in its own products,[280] like its Google knowledge panel shown via Google search.[281] Despite this agreement, Google allegedly continues to scrape competitor content for its own use.[282]

Overall, the progression of antitrust litigation against Google has been slow and a mixed bag. Lawsuits regarding Google's digital advertising conduct have been centralized in a multidistrict litigation case in the Southern District of New York amidst significant opposition from the state attorneys general of

279. Web scraping is "the activity of taking information from a website or computer screen and putting it into an ordered document on a computer." *Web scraping*, CAMBRIDGE DICTIONARY, https://dictionary.cambridge.org/us/dictionary/english/web-scraping [https://perma.cc/3XPD-6HVL]. Generally, scraping is done with "software that simulates human Web surfing to collect specified bits of information from different websites. Those who use web scraping programs may be looking to collect certain data to sell to other users, or to to [sic] use for promotional purposes on a website." *Web Scraping*, TECHOPEDIA, https://www.techopedia.com/definition/5212/web-scraping [https://perma.cc/7WLJ-V3ET].

280. Press Release, FTC, Google Agrees to Change Its Business Practices to Resolve FTC Competition Concerns in the Markets for Devices Like Smart Phones, Games and Tablets, and in Online Search (Jan. 3, 2013), https://www.ftc.gov/news-events/press-releases/2013/01/google-agrees-change-its-business-practices-resolve-ftc [https://perma.cc/3SFD-GHS3].

281. "Knowledge panels are information boxes that appear on Google when you search for entities (people, places, organizations, things) that are in the Knowledge Graph. They are meant to help you get a quick snapshot of information on a topic based on Google's understanding of available content on the web." *About Knowledge Panels*, GOOGLE, https://support.google.com/knowledgepanel/answer/9163198 [https://perma.cc/6FZG-FG6X].

282. Samuel Gibbs, *Getty Images Files Antitrust Complaint Against Google*, GUARDIAN (Apr. 27, 2016), https://www.theguardian.com/technology/2016/apr/27/getty-images-files-antitrust-google [https://perma.cc/C3KM-HZ6D]. In 2018, Google and Getty entered into a licensing agreement. *See* Chris O'Brien, *Getty Images and Google Declare a Truce with New Image Licensing Partnership*, VENTURE BEAT (Feb. 9, 2018), https://venturebeat.com/2018/02/09/getty-images-and-google-declare-a-truce-with-new-image-licensing-partnership [https://perma.cc/LU9S-C89Q]. Online reviews firm Yelp has also alleged that Google broke its promise and continues to scrape its site for content that Google then used for its own products. *See* Jack Nicas, *Google Rival Yelp Claims Search Giant Broke Promise Made to Regulators*, WALL ST. J. (Sept. 11, 2017), https://www.wsj.com/articles/google-rival-yelp-claims-search-giant-broke-promise-made-to-regulators-1505167498 [https://perma.cc/539H-5MHS].

Texas and other state plaintiffs.[283] In addition, a major class action regarding Google's digital advertising conduct was dismissed in 2021.[284] Similarly, antitrust litigation concerning Google's Play Store has been centralized in a multidistrict litigation case in the Northern District of California.[285] Even assuming these are not signs of failure, they are also not indicators of eventual success for law enforcement.[286] Nevertheless, law enforcement continues to proceed under the misconception that they simply need to tweak their allegations and complaints to be successful instead of drastically reframing legal argument.[287]

The best indicator of eventual success for law enforcement litigants in antitrust actions against Big Tech is the recent denial of a motion to dismiss in the FTC's action against Facebook.[288] Like the Google litigation, law enforcement litigants in the Facebook case fall into the single market fallacy, specifically

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283. *In re* Digital Advert. Antitrust Litig., 555 F. Supp. 3d 1372, 1373 (J.P.M.L. 2021); Diane Bartz, *U.S. Judicial Panel Moves Texas Lawsuit Against Google to New York*, REUTERS (Aug. 10, 2021), https://www.reuters.com/technology/us-judicial-panel-rejects-google-effort-move-texas-antitrust-case-2021-08-10 [https://perma.cc/AT7S-V939].

284. *In re* Google Digital Advert. Antitrust Litig., No. 20-CV-03556-BLF, 2021 WL 2021990, at *1 (N.D. Cal. May 13, 2021).

285. *In re* Google Play Store Antitrust Litig., No. 21-MD-02981-JD, 2022 WL 17252587, at *1 (N.D. Cal. Nov. 28, 2022). One positive indication of eventual success is that this series of litigation includes evidence that Facebook and Google negotiated a preferential deal regarding their respective advertising platforms. Daisuke Wakabayashi & Tiffany Hsu, *Behind a Secret Deal Between Google and Facebook*, N.Y. TIMES (Apr. 6, 2021), https://www.nytimes.com/2021/01/17/technology/google-facebook-ad-deal-antitrust.html [https://perma.cc/2D6R-44K4].

286. Forced centralization of similar cases across different jurisdictions in a multidistrict litigation (MDL) has pros and cons for plaintiffs. Generally, they are more efficient and can be cheaper for the parties. However, MDLs litigate a few bellwether trials to inform all other cases about the legal and trial issues. If a plaintiff is not selected to be a bellwether plaintiff, their case may be hindered by the failures of the bellwether plaintiffs. *See* Rachel Abrams, *Multidistrict Litigation Consolidation: Pros and Cons*, PLAINTIFF MAG. (Jan. 2016), https://www.plaintiffmagazine.com/recent-issues/item/multidistrict-litigation-consolidation-pros-and-cons [https://perma.cc/GU7D-BXXS].

287. David McLaughlin, *U.S. DOJ Readying Google Antitrust Lawsuit Over Ad-Tech Business*, BLOOMBERG (Sept. 1, 2021), https://www.bloomberg.com/news/articles/2021-09-01/u-s-doj-readying-google-antitrust-lawsuit-over-ad-tech-business [https://perma.cc/5DGU-SL4K]; Leah Nylen, *DOJ Poised to Rebuff Google Concessions, Clearing the Way for Antitrust Suit*, BLOOMBERG (July 14, 2022), https://www.bloomberg.com/news/articles/2022-07-14/google-ad-tech-concessions-unlikely-to-avert-doj-antitrust-suit [https://perma.cc/LQ9V-5V39].

288. FTC v. Facebook, Inc., 581 F. Supp. 3d 34, 41 (D.D.C. 2022).

defining Facebook's relevant market as a personal social networking (PSN) market.[289] Nevertheless, the single market fallacy issue was not fatal to the FTC's case. In short, the FTC's complaint provided more concrete, third-party data to establish what market share Facebook had in the PSN market; a requirement for a Section 2 violation.[290] Although the FTC's litigation against Facebook is only in the pleading stages, it is instructive to antitrust litigation against Google or any other Big Tech firm because it lays out a roadmap for what courts demand in an antitrust case against Big Tech. However, mirroring the FTC's case against Facebook will be insufficient to remedy Big Tech's antitrust harms.

Of course, it would be unfair not to briefly discuss the merits of pending antitrust enforcement actions against Google. As of December 2022, a lawsuit led by the State Attorney General of Texas has seen its third amended complaint.[291] The most damning allegations are explicit and implicit collusion with Facebook in violation of Section 1 of the Sherman Act, and using its market power to obfuscate user data sent to website publishers in violation of Section 2—effectively meaning that Google knew more about a publisher's users than the publisher.[292] What is more, Google has allegedly offered the DOJ significant concessions to prevent the filing of a second DOJ antitrust lawsuit.[293] In one offer, Google proposed breaking off its online ad placement and auction business from its other divisions.[294] Notably, Google's ad

289. *Id.* at 52–55. For clarity, PSNs are distinct from more targeted social networks, like LinkedIn, a Microsoft product that is specifically for professional networking. *Id.* at 45.

290. *Facebook*, 581 F. Supp. 3d at 46–50; Copperweld Corp. v. Independence Tube Corp., 467 U.S. 752, 766–68 (1984) (explaining the difference between Section 1 and Section 2 of the Sherman Act); *see also* Ohio v. American Express, 138 S. Ct. 2274, 2285 n.7 (2018) (requiring market definition and showing of market share despite direct evidence of injury from anticompetitive conduct).

291. Third Amended Complaint, *In re* Google Digital Advert. Antitrust Litig., No. 1:21-md-03010-PKC (S.D.N.Y. Jan. 14, 2022), ECF No. 195, https://texasattorneygeneral.gov/sites/default/files/images/child-support/20220114_195_0_States%20Third%20Amended%20Complaint.pdf [https://perma.cc/3PGV-WDWP].

292. *Id.* at 89–103 (detailing Section 2 violation); *id.* at 141–50 (detailing collusion).

293. Miles Kruppa, Sam Schechner & Brent Kendall, *Google Offers Concessions to Fend Off U.S. Antitrust Lawsuit*, WALL ST. J. (July 8, 2022), https://www.wsj.com/articles/google-offers-concessions-to-fend-off-u-s-antitrust-lawsuit-11657296591 [https://perma.cc/ZF44-UJHV].

294. *Id.*

business would remain under the Alphabet umbrella. Given the DOJ's filing of a second antitrust lawsuit against Google in January 2023, it appears Google's concessions fell on deaf ears.[295]

Discussion of the DOJ's January 2023 complaint provides good insight into how its overarching campaign against anticompetitive digital companies is going, and also is a prime example of law enforcement again falling victim to the single-market fallacy. The lawsuit, joined by eight states, alleges Google monopolized key digital advertising technologies by "anticompetitive, exclusionary, and unlawful means to eliminate or severely diminish any threat to its dominance over digital advertising technologies."[296] Perhaps considering the single-market fallacy, the complaint cites three relevant markets for its claim: publisher ad servers for direct display ads, display ad inventory exchanges, and self-service advertiser display ad networks.[297] To show market power, the DOJ alleges that Google has had at least ninety percent market share for publisher ad servers, over fifty percent for ad exchanges, and seventy percent for advertiser display ad networks.[298] Although, as of this writing, this lawsuit is less than a month old, commentators have supported it as a complement to the DOJ's search advertising monopoly lawsuit against Google,[299] describing it as a shotgun approach where eventually, one allegation will be successful in curbing Google's conduct.[300]

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295. Complaint at 2–4, United States v. Google LLC, No. 1:23-cv-00108 (E.D. Va. Jan. 24, 2023) [hereinafter DOJ Complaint], https://www.justice.gov/opa/press-release/file/1563746/download [https://perma.cc/4GJG-6QF9]; Press Release, Dep't of Just., Justice Department Sues Google for Monopolizing Digital Advertising Technologies (Jan. 24, 2023), https://www.justice.gov/opa/pr/justice-department-sues-google-monopolizing-digital-advertising-technologies [https://perma.cc/XT73-SB7U].

296. DOJ Complaint, *supra* note 295, at 2.

297. *Id.* at 123–24, 126, 129.

298. *Id.* at 125, 127, 130.

299. Google Complaint*, supra* note 2.

300. David McCabe & Nico Grant, *U.S. Accuses Google of Abusing Monopoly in Ad Technology*, N.Y. TIMES (Jan. 24, 2023), https://www.nytimes.com/2023/01/24/technology/google-ads-lawsuit.html [https://perma.cc/E9PT-6DF7] (reporting former FTC chairman William Kovacic's comments that the lawsuit "adds another important complication to Google's efforts to deal with regulators worldwide," and that "[t]here's a chance one or more of these challenges is going to make its way through and hit the target"); *see also* Josh Sisco & Brendan Bordelon, *'A Hard Sell': Can Biden's DOJ Really Shatter Google's Grip on Digital Ads?*, POLITICO (Jan. 26, 2023), https://www.politico.com/news/2023/01/26/doj-google-antitrust-digital-ads-lawsuit-00079522 [https://perma.cc/MB5L-V96P] (providing Kovacic's comments that "[t]hese [allegations of harm] aren't

There are also serious skeptics, with one stating that some of the allegations "at least on traditional views—don't seem to violate *existing* law."[301] No matter how this digital display advertising case or the earlier filed search engine advertising case proceeds, it appears that the DOJ is taking a step in the right direction in both its broader allegations and relevant markets cited.

Compared to all other antitrust enforcement efforts waged against Google in the twenty-first century, these efforts appear to be significant successes. This is especially true when considering that the last major successful antitrust enforcement actions—the case against Microsoft[302] and the breakup of AT&T[303]—ended not by jury verdicts but by settlement. Yet, without a resolution to any of the contemporary government-led antitrust actions against Google, it is impossible to firmly conclude that antitrust enforcers have the tools and framing necessary to succeed against Google.

C. MODERN LEGISLATIVE EFFORTS

At least since Zuckerberg's 2018 Senate testimony, data aggregating firms have been in the congressional crosshairs, and several antitrust reform bills are currently moving through Congress.[304] These efforts originating in the House mirror key rec-

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strange concepts . . . . The case has a coherent story, and it's zeroing on missed opportunities from the past").

301. Sisco & Bordelon, *supra* note 300 (emphasis added).

302. *See generally* Harry First & Andrew I. Gavil, *Re-Framing Windows: The Durable Meaning of the Microsoft Antitrust Litigation*, 2006 UTAH L. REV. 641, 687–719 (2006) (discussing settlement after the remand in United States v. Microsoft Corp., 253 F.3d 34, 46–47 (D.C. Cir. 2001), and criticizing the lack of substantive results flowing from the settlement).

303. Khan, *supra* note 254, at 1049–51 (discussing United States v. AT&T Co., 524 F. Supp. 1336, 1354–57 (D.D.C. 1981)).

304. The most pertinent bills are the Ending Platform Monopolies Act, H.R. 3825, 117th Cong. (2021); the American Innovation and Choice Online Act, H.R. 3816, 117th Cong. (2022); the Platform Competition and Opportunity Act of 2021, H.R. 3826, 117th Cong. (2021); and the Augmenting Compatibility and Competition by Enabling Service Switching ("ACCESS") Act of 2021, H.R. 3849, 117th Cong. (2021). *See* Grunes & Moschella, *supra* note 36. The first two Acts concern banning platforms from engaging in self-preferencing conduct, the third Act shifts the burden to merging companies to defeat anticompetitive conduct allegations, and the fourth Act requires ease of data migration for consumers among digital services. In the Senate, a bill similarly named the American In-

ommendations from a majority staff report by the House Subcommittee on Antitrust.[305] Moreover, in June 2022, the Senate unanimously passed the State Antitrust Enforcement Venue Act of 2021,[306] which would prevent involuntary consolidation of antitrust actions initiated by state attorneys general in alternative federal district courts—a benefit that federal antitrust enforcers already enjoy.[307]

Nevertheless, it is notable that none of the major bills moving through Congress address the fundamental reforms to *antitrust* law as recommended by the House Subcommittee on Antitrust.[308] Although these federal measures provide optimism that necessary antitrust reform may be ahead, one should not hold their breath given the recent track record of Congress in passing revolutionary legislation.[309] Instead, while waiting for congressional action, there are strategy adaptations that antitrust enforcement officials can make to improve their campaign against monopolistic and anticompetitive data aggregators like Google.

III. DEFINING THE RELEVANT MARKET AND HOW TO REFORM

Litigation failure can pivot in two ways: failing parties either change tactics or change the law. This Part advocates both

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novation and Choice Online Act, S. 2992, 117th Cong. (2022), has received growing optimism about its passage, given bipartisan support from members of the crucial Senate Judiciary Committee. *See* Margaret Harding McGill & Ashley Gold, *Tech Antitrust Bills' Make or Break Moment*, AXIOS (Jan. 10, 2022) https://www.axios.com/2022/01/10/antitrust-bills-make-or-break-big-tech [https://perma.cc/3TME-ER6X]. However, these efforts have been strongly opposed by Big Tech, and this may influence the passage of the Act. *See* Emily Birnbaum, *Amazon and Google Deploy Their Armies to Thwart Antitrust Bills*, POLITICO (Jan. 4, 2022), https://www.politico.com/news/2022/01/04/amazon-google-thwart-antitrust-bills-526460 [https://perma.cc/SE9K-75BX].

305. MAJORITY REPORT, *supra* note 9, at 13–14.

306. S. 1787, 117th Cong. (2022). As of March 2023, the Act has yet to be passed by the House of Representatives.

307. Ben Brody & Hirsh Chitkara, *The Antitrust Bill Passed the Senate. (Not That One.)*, PROTOCOL (June 17, 2022), https://www.protocol.com/newsletters/policy/antitrust-senate-venue-coalition [https://perma.cc/Y46H-EYKH].

308. *See* MAJORITY REPORT, *supra* note 9, at 13–14.

309. *See* Ashley Gold, *Klobuchar Admits Tech Antitrust Vote Will Have to Wait*, AXIOS (July 31, 2022), https://www.axios.com/2022/08/01/klobuchar-tech-antitrust-vote [https://perma.cc/BGL6-G7HJ] (discussing that although bills are historically difficult to pass during fall midterm elections, other issues must take priority). Senator Klobuchar's bill, the American Innovation and Choice Online Act, was introduced in October 2021. *See* S. 2992, 117th Cong. (2022).

methods. First, antitrust law enforcement can overcome the narrow single market fallacy by analyzing Google in its true market of data aggregation rather than merely as a search engine or a mobile operating system host. Although this tactical shift requires changes in advocacy and views from the Supreme Court, it is the logical next step in antitrust jurisprudence to respond to the economy's evolution.[310] Second, Congress should clarify the goal of antitrust law that adequately encapsulates the anticompetitive harm from data aggregating firms,[311] as well as enact laws that make it easier for consumers to comprehend products in a zero-price market. Although these changes may not resolve all of Google's anticompetitive harms, they would be a step in the right direction.

A. DEFINING THE RELEVANT MARKET: DATA AGGREGATION

Though a few scholars argue that the relevant market definition requirement for most monopolization cases should be wholly discarded,[312] there is no indication from the Supreme Court or Congress that the requirement is going away. Thus, to adequately encapsulate the harms caused by Google's anticompetitive conduct[313] and achieve the remedies that antitrust enforcers seek,[314] the relevant market cited in litigation should be the newly defined data aggregation market.

1. A Case for the Data Aggregation Market

When a plaintiff has no direct proof that a defendant is profiteering from monopoly power, the modern antitrust regime requires they define a relevant market where the defendant exercises illegally entrenched monopoly market power.[315] Even a drastic overhauling of antitrust law would still likely require that a plaintiff establish a relevant market when there is no direct proof of a violation of law. Yet antitrust plaintiffs often succumb to the single market fallacy and, to raise their chance of

310. *See supra* Part II.B.

311. *See supra* Parts I.B.2–3 and Parts II.A–B.

312. *See, e.g.*, Louis Kaplow, Note, *Market Definition: Impossible and Counterproductive*, 79 ANTITRUST L.J. 361, 361–62 (2013).

313. *See supra* Parts I.B.2–3 and Parts II.A–B.

314. *See* Kruppa et al., *supra* note 293 (discussing the DOJ's desire to break up Google and how it is approaching that goal based on concessions made by Google).

315. *See* United States v. Microsoft Corp., 253 F.3d 34, 51 (D.C. Cir. 2001) (grappling with the definition of Microsoft's relevant market).

success, cite the most narrow market possible.[316] This strategy is flawed, as it (1) fails to truly represent the business model of defendant firms, and (2) potentially limits the scope of any remedy.[317] In the antitrust enforcement context, the relevant market for Google is the data aggregation market. Defining a relevant market as broadly as data aggregation in antitrust actions is risky. There has never been a successful antitrust action citing such a broad market.[318] But there also has never been a monopolistic, anticompetitive data aggregating firm like Google.

Defining the data aggregation market as the relevant market for an antitrust action presents multiple challenges. First, the data aggregation market must be sufficiently defined, a task that has already generated contentious debate.[319] Nevertheless, firms in the data aggregation market should have four high-level

316. *See, e.g.*, *In re* Digital Advert. Antitrust Litig., 555 F. Supp. 3d 1372, 1373 (J.P.M.L. 2021) (search advertising market); Utah Complaint, *supra* note 2 (mobile app market).

317. By framing an antitrust action in the data aggregation market, the scope of a remedy could be extended to all verticals of a data aggregation firm instead of limiting a remedy to a single vertical like online search advertising. In the case of Google, if an antitrust action is limited to online search advertising, then a remedy regarding Google's Cloud Services or any of its hardware products would not likely be authorized by a court.

318. It is possible that failure to cite a market as broad as data aggregation stems from the Cellophane Fallacy. In *United States v. E.I. du Pont de Nemours & Co.*, 351 U.S. 377 (1956), the Court found that du Pont's exclusive manufacturing of cellophane did not constitute a monopoly in any relevant market because if it were to raise its price, many consumers would switch to competing packaging materials as shown by market data. The Cellophane Fallacy, in essence, arose because the Court "was mistaking competition created by the exercise of market power for competition that can prevent the exercise of market power." Gregory J. Werden, *Demand Elasticities in Antitrust Analysis*, 66 ANTITRUST L.J. 363, 377 (1998). This mistake gave rise to the SSNIP test suggested by antitrust agencies, in that a market is correctly defined when a hypothetical monopolist could make a "small but significant and nontransitory increase in price" by five percent without the entry of new competitors or product substitution by consumers. U.S. DEP'T OF JUSTICE & FTC, HORIZONTAL MERGER GUIDELINES § 1.11 (1992) (internal quotations omitted). Yet, the SSNIP test has been criticized and is not applicable to zero-price markets. Jonathan T. Trexler, *Conglomerating Antitrust Policy by Comparative Example: A Conceptual Analysis of Merger Regulation in the United States, Japan, and the European Union*, 1 BYU INT'L L. & MGMT. REV. 111, 117 (2005); Newman, *supra* note 147, at 165 ("This test is flawed [because] it contemplates a rise in price from the current rate, which may already be a monopolistic one.").

319. *Supra* note 145.

characteristics: (1) direct relationship with consumers; (2) minimal marginal costs for serving consumers;[320] (3) demand-driven multi-sided networks with decreasing user acquisition costs as the firm services more consumers; and (4) the ability to effectively attract and serve users, suppliers, advertisers, developers, and limited market data aggregators (such as a real estate aggregator like Zillow or a local services aggregator like Yelp).[321] As demonstrated in Part II.A and throughout this Note, Google meets all of these characteristics.

Second, establishing sufficient data on a firm's market share in the data aggregation market is a relatively new objective that will need extensive research done by third-party firms like Comscore.[322] Alternatively, American antitrust enforcers could cooperate with their European counterparts in this research. Although conducting this research may be the most challenging aspect of citing the data aggregation market as the relevant market in an antitrust action against a firm like Google,

320. The term "consumer" is used to encapsulate not only people using an online search service to find new shoes, but also suppliers, advertisers, developers, and limited market data aggregators that all pay for access to a data aggregator like Google, whether in the form of money or data. These characteristics are largely based on the writing of Ben Thompson in *Defining Aggregators*, STRATECHERY (Sept. 26, 2017), https://stratechery.com/2017/defining-aggregators [https://perma.cc/35RU-GHE2].

321. A skeptic of this Note may ask why aggregating firms like Yelp or Amazon are not the poster child for the regulations advocated here. Although a data aggregator, Yelp is starkly more limited in the amount of data it consumes when compared to Google because it is limited to the Yelp platform and purchased third-party information. Moreover, Yelp's relationship with Google is often as a supplier (at minimum, supplying search results to be used on Google's search page, and at worst, supplying images and reviews illegally scraped) and as a customer (purchasing ad space on Google platforms). In contrast, Google acts as a customer for few other data aggregating firms. Regarding Amazon, the firm may be a near peer of Google, but its value is not centered on data aggregation, but rather on the dominance of its ecommerce and cloud services. Meaghan Yuen, *Amazon Annual Revenue Breakdown by Segment in 2022*, INSIDER INTEL. (Feb. 11, 2022), https://www.insiderintelligence.com/insights/amazon-revenue [https://perma.cc/QUN7-2M4P]. Further, there is no evidence that Amazon has enough data to create market intelligence similar to Google's.

322. Comscore is a cross-platform measurement company that measures audiences, brands, and consumer behavior. *See About*, COMSCORE, https://www.comscore.com/About [https://perma.cc/U9V9-WEQN]. Comscore was used by the FTC in its successful complaint against Facebook to demonstrate market share. FTC v. Facebook, Inc., 581 F. Supp. 3d 34, 46–47 (D.D.C. 2022) (surviving motion to dismiss).

antitrust enforcement officials have shown that they can effectively adapt when required to provide more concrete information on a new and rapidly changing market.[323]

One of the most significant vulnerabilities of categorizing Google as part of the data aggregation market is that the substitution element of the overall antitrust argument is difficult to prove.[324] Grasping that all of Google's services and products are a single service in a single market is difficult enough.[325] Conducting such an analysis for every possible competitor, followed by a thorough comparison between Google and any realistic competitors, would be nearly impossible. However, such an analysis is required because of the modern antitrust regime's focus on monetary costs to the consumer, leading courts to incorporate the substitution effect in their analyses.[326] The substitution element is tested via the small but significant and nontransitory increase in price (SSNIP) test from the Horizontal Merger Guidelines, and it demonstrates that this emphasis on monetary costs is outdated.[327] Although deemphasizing the substitution element of traditional antitrust analysis may be radical for some, so too are Big Tech data aggregating firms. Accordingly, Part III.B.1 will discuss the codification of a consumer welfare standard that considers more than just monetary costs. Without the singular focus of antitrust on monetary costs, the emphasis on the substitution effect of competitors falls by the wayside. Consequently, data aggregation is shown to be the most accurate and helpful relevant market for enforcing against Google's anticompetitive conduct.

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323. *See Facebook, Inc.*, 581 F. Supp. 3d at 46–47 (surviving motion to dismiss after opportunity to amend complaint).

324. See *supra* note 318 and accompanying text for an explanation of the substitution element and its importance in the antitrust context.

325. *See* Mohan, *supra* note 161 (listing Google's current product offerings).

326. "'Because the ability of consumers to turn to other suppliers restrains a firm from raising prices above the competitive level,' the analysis of market power uses as its denominator all products 'roughly equivalent to another for the use to which [they are] put.'" *Facebook*, 581 F. Supp. 3d at 44 (first citing United States v. Microsoft Corp., 253 F.3d 34, 52 (D.C. Cir. 2001); and then citing Queen City Pizza, Inc. v. Domino's Pizza, Inc., 124 F.3d 430, 437 (3d Cir. 1997)).

327. *See supra* note 318 and accompanying text.

2. The Persistent Importance of the Relevant Market Definition and Its Ability to Evolve

Skeptics of the data aggregation relevant market framework may propose that antitrust is fundamentally broken and the relevant market requirement should be cast aside.[328] Further, skeptics may argue that pandering to the old regime by re-characterizing modern economic realities in a manner developed by a bygone judicial era is folly and unavailing. Yet, a relevant market definition remains important because (1) courts and scholars appear likely to find it important,[329] (2) enforcement agents use it for case development purposes,[330] and (3) it has proven it can evolve with changes in our economy.[331] At the end of the day, the courts are the only stakeholders that matter in whether relevant market definition should remain prevalent, and thus this Note will move on to address how market definition has evolved and can continue to do so.

Mechanisms for determining a relevant market definition have gone through at least four rounds of evolution since the enactment of the Sherman Act.[332] Of course, the first form assumed that the scope of competitive effects followed commodity lines, so relevant markets were defined as the "business of boating" or the "oil industry."[333] Moving into the 1950s, the Supreme Court set tests for market definition, such as that markets "must be

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328. *See, e.g.*, Louis Kaplow, *Why (Ever) Define Markets?*, 124 HARV. L. REV. 437, 440 (2010); Kaplow, *supra* note 312, at 361–62; *see also* Joshua Wright & Aurelien Portuese, *Antitrust Populism: Towards a Taxonomy*, 25 STAN. J.L. BUS. & FIN. 131, 171–75 (2020) (characterizing the kind of market definition reframing advocated by this Note and the European Commission as "gerrymandering of market definition"); Glasner & Sullivan, *supra* note 93, at 312 (noting markets are "mental constructs designed to help assess specific competitive concerns").

329. Glasner & Sullivan, *supra* note 93, at 296 (citing Ohio v. Am. Express Co., 138 S. Ct. 2274, 2285 (2018)); Sean P. Sullivan, *Modular Market Definition*, 55 U.C. DAVIS L. REV. 1091, 1117 (2021) ("Judges—who do not see antitrust cases every day—have proven unsurprisingly uncomfortable with the idea of simply skipping a step in Rule of Reason analysis as venerable as defining relevant markets.").

330. Glasner & Sullivan, *supra* note 93, at 296–97.

331. *See, e.g.*, *id.* at 319; Sullivan, *supra* note 329, at 1147–48; Patrick R. Ward, Comment, *Testing for Multisided Platform Effects in Antitrust Market Definition*, 84 U. CHI. L. REV. 2059, 2073 (2017).

332. *See* Sullivan, *supra* note 329, at 1098–117.

333. *Id.* at 1099–100 (first citing Palmer v. Stebbins, 20 Mass. (3 Pick.) 188, 188 (1825); and then citing Standard Oil Co. v. United States, 221 U.S. 1, 75 (1911)).

drawn narrowly to exclude any other product to which, within reasonable variations in price, only a limited number of buyers will turn; in technical terms, products whose 'cross-elasticities of demand' are small"[334] or that a "market is composed of products that have reasonable interchangeability for the purposes for which they are produced—price, use and qualities considered."[335] Yet, these tests remained limited to commodity concepts.[336] During the Warren Court, the test shifted to one of analyzing the "practical indicia"[337] or popular perception of an industry[338]—evolved to address non-economic concerns of concentrated economic power, limitations on consumer choice, and the prioritization of small private business of gargantuan sized business that mirrored state-run enterprises (and had the potential to become state-run enterprises).[339] With the rising prominence of the Chicago School came a transition to a focus on tests based on joint market power, like the hypothetical monopolist test found in the DOJ/FTC merger guidelines.[340] Today, the hypothetical monopolist test suffers great criticism,[341] with a new focus on analyzing the effects of eliminating all competition, yielding unilateral market power.[342]

Indeed, this historical review of how courts have defined relevant markets shows that not only is there a possibility for an evolution that incorporates the broad data aggregation market, but that courts also crave such evolution.[343]

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334. Times-Picayune Pub'g Co. v. United States, 345 U.S. 594, 612 n.31 (1953).

335. United States v. E.I. du Pont de Nemours & Co., 351 U.S. 377, 404 (1956).

336. Sullivan, *supra* note 329, at 1100–01.

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

338. Sullivan, *supra* note 329, at 1102–06.

339. *See id.* at 1106; Pitofsky, *supra* note 78, at 1052–58.

340. Sullivan, *supra* note 329, at 1107–10 (discussing how a market could only exist if when a significant group of competitors colluded, they could exercise market power).

341. *Id.*; *see also supra* Part III.A.1 and note 318 and accompanying text.

342. Sullivan, *supra* note 329, at 1111–18.

343. *See* Kimble v. Marvel Ent., LLC, 135 S. Ct. 2401, 2412–13 (2015) (noting the Supreme Court has "felt relatively free to revise [its] legal analysis as economic understanding evolves and . . . to reverse antitrust precedents that misperceived a practice's competitive consequences").

B. EXPANDING THE CONSUMER WELFARE STANDARD

Although much has been written about potential reforms to antitrust law, this Note limits itself to advocating for an affirmative reform that would likely need to be pursued by Congress. However, as most antitrust law is based in common law,[344] the courts could provide similar reform to the standards used in assessing harm in antitrust actions. When this reform is combined with citing the data aggregation market as the relevant market in cases of illegal monopolistic and anticompetitive conduct without direct proof, the success of such actions becomes much more likely.

1. Preserving Decades of Useful Precedent and Making Judges Friends, Not Enemies: Expand the Consumer Welfare Standard

Even though the origin of the consumer welfare standard is clear,[345] the path forward regarding the use of the standard is less so. It is debatable if the consumer welfare standard has more supporters than detractors in scholarship,[346] and it has yet to be rebuked by any court. Supporters for a departure from the consumer welfare standard vary in their solutions and how they are presented, ranging from the usage of a total welfare standard that considers competitors and suppliers[347] to adoption of a lower standard of harm.[348] Most importantly, however, is that there appears to be congressional appetite to move antitrust law beyond the consumer welfare standard. The House Majority Report

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344. *See* Katz & Melamed, *supra* note 48, at 2063.

345. *See generally* Crane, *supra* note 51; Stucke & Ezrachi, *supra* note 31.

346. *See, e.g.*, Elyse Dorsey, Geoffrey A. Manne, Jan M. Rybnicek, Kristian Stout & Joshua D. Wright, *Consumer Welfare & the Rule of Law: The Case Against the New Populist Antitrust Movement*, 47 PEPP. L. REV. 861, 879–905 (2020); Wright et al., *supra* note 82, at 300; *cf.* Greenfield et al., *supra* note 154 (discussing the progress made in adapting the consumer welfare standard to the challenges of the twenty-first century).

347. *See, e.g.*, Wilson et al., *supra* note 49, at 1460–69; Alan Devlin & Bruno Peixoto, *Reformulating Antitrust Rules to Safeguard Societal Wealth*, 13 STAN. J.L. BUS. & FIN. 225, 243–68 (2008).

348. Eleanor M. Fox, *Platforms, Power, and the Antitrust Challenge: A Modest Proposal to Narrow the U.S.–Europe Divide*, 98 NEB. L. REV. 297, 315–16 (2019); Nicolas Petit, *A Theory of Antitrust Limits*, 28 GEO. MASON L. REV. 1399, 1423–47 (2021); Weiss, *supra* note 223 (advocating for adoption of the abuse of dominance standard used in the European Union); Kevin Caves & Hal Singer, *Competing Approaches to Antitrust: An Application in the Payment Card Industry*, 27 GEO. MASON L. REV. 823, 851 (2020).

recommends that Congress reassert "the original intent and broad goals of the antitrust laws, by clarifying that they are designed to protect not just consumers, but also workers, entrepreneurs, independent businesses, open markets, a fair economy and democratic ideals."[349]

Given the harms and issues raised in this Note and the House Majority Report, as well as the common law history of antitrust law, an ideal congressional codification of a modified consumer welfare standard would be brief and contain the following tenets: (1) acknowledge that the goal of antitrust law is to protect the people of the United States from both monetary and nonmonetary harms arising out of anticompetitive behavior; and (2) acknowledge that illegal anticompetitive behavior includes conduct that obscures a consumer's ability to reasonably compare features of a firm against those of a competitor.[350]

For example, the second suggested Act could be accomplished similarly to how food manufacturers must provide nutrition facts so consumers can compare not only price but also the underlying features of an item, including the potential cost to their health.[351] Practically, data aggregators could provide potential users—before they begin using the data aggregator's services—an easy-to-understand chart that outlines (1) the primary

349. MAJORITY REPORT, *supra* note 9, at 392. However, as noted *supra* Part II.C, Congress has yet to propose legislation that would evolve the consumer welfare standard.

350. Although the Court has yet to rule on conduct that prevents consumer comparisons of competitors, it has dealt with anticompetitive withholding of consumer information. In *FTC v. Indiana Federation of Dentists*, 476 U.S. 447, 463–64 (1986), the Court held that a horizontal agreement to withhold personal consumer data from consumers is a violation of the Sherman Act by the Rule of Reason. Moreover, the Court vehemently denied the proposition that "an unrestrained market in which consumers are given access to the information they believe to be relevant to their choices will lead them to make unwise and even dangerous choices." *Id.* at 463. Making illegal efforts to obscure consumers' ability to gain competitor information for the purposes of comparison—vital information when evaluating features of competitors in zero-price markets—is the next logical extension of the *Indiana Federation of Dentists* holding.

351. Mandatory nutrition facts labeling exists to help consumers make informed and healthy food product decisions and to incentivize food manufacturers to improve ingredient quality. Stephanie Barnes, *Labeling Our Way to a Leaner America*, 12 J.L. SOC'Y 116, 131 (2010). Nutrition facts often inform consumers that items are abnormally high in sodium or sugar, each having the potential to cause health problems when consumed in excess. Joseph McAllister, *What Do Salt & Sugar Do to Your Body?*, LIVESTRONG (May 23, 2018), https://www.livestrong.com/article/461835-what-do-salt-sugar-do-to-your-body [https://perma.cc/8M5Q-L954].

advantages of the free data aggregating service, like personalized advertising, (2) the different sources data will be aggregated from (sources owned by the data aggregator and for which the data aggregator has purchased access), and (3) the way users can expect their data to be used by the data aggregator beyond enabling the advantages listed in the chart (like informing the next market the data aggregator should venture into). Of course, there would likely be a significant number of people who breeze past such information disclosed to them, similar to how people skip over the tsunami of terms and conditions agreed to on a day-to-day basis.[352] But that does not mean the information should not be available to consumers. Today, the underlying features and cost of Google usage are a black box to consumers.[353] Although codification incorporating these tenets would not solve all the harms raised regarding monopolistic and anticompetitive data aggregating firms, they would provide both the courts and antitrust enforcement officials with the guidance required to regulate better.

One should note that in passing the California Consumer Privacy Act of 2018 (CCPA),[354] the California state government has created a right to be informed about data collection and a right to access said data.[355] Although the CCPA applies only to California consumers, it catalyzed the adoption of compliance practices by most businesses in the United States.[356] Thus, the CCPA has begun to usher in the reforms and goals of the second suggested Act of this Note. Yet, the CCPA fails to fully meet the call of the second Act.

Relevant here, the CCPA's right to be informed only requires noticing consumers of what categories of personal information are collected and the purposes for collecting such information.[357] Further, "[u]nder the CCPA's right to access, a

352. *See* Tim Sandle, *Report Finds Only 1 Percent Reads 'Terms & Conditions*,*'* DIG. J. (Jan. 29, 2020), https://www.digitaljournal.com/business/report-finds-only-1-percent-reads-terms-conditions/article/566127 [https://perma.cc/NG9D-2WX4].

353. MAJORITY REPORT, *supra* note 9, at 52–53.

354. CAL. CIV. CODE §§ 1798.100–1798.199.100 (West 2020).

355. CAL. CIV. CODE §§ 1798.100(b), 1798.130(a), 1798.135 (West 2020) (right to be informed); CAL. CIV. CODE §§ 1798.100, 1798.110, 1798.130, 1798.145(g)(3) (West 2020) (right to access).

356. Blaire Rose, Note, *The Commodification of Personal Data and the Road to Consumer Autonomy Through the CCPA*, 15 BROOK. J. CORP. FIN. & COM. L. 521, 523 (2021).

357. CAL. CIV. CODE §§ 1798.100(b), 1798.130(a) (West 2020).

business must provide the individual with: (1) categories of personal information collected and sold, (2) categories of sources from which the information was collected, (3) the commercial purpose for collecting or selling the personal information, and (4) the categories of third parties with whom the information was disclosed."[358] However, the CCPA does not cover deidentified or aggregate data[359]—the data type enabling Google's prediction about social and economic trends and the focus of this Note. Moreover, even if the CCPA did regulate aggregate data, it still fails to require disclosure of the advantages of a free data aggregating service and how users can expect their data to be used.[360] In addition, there is insufficient data available to show how effective CCPA enforcement has been.[361] All in all, although the CCPA is a step in the right direction, Congress should pass legislation consistent with the second Act argued for by this Note to bring about more widespread benefits to consumers in a data aggregating market dominated by Google.

Opponents of updating antitrust laws have argued that because a regulatory structure exists to deter and remedy anticompetitive harm, "additional benefit to competition provided by antitrust enforcement will tend to be small."[362] Yet, it is also well understood that "judges must be open to clarifying and reconsidering their decrees in light of changing market realities"[363] and use an "enquiry meet for the case [because] . . . what we see may

358. Cathy Lee, Note, *The Aftermath of Cambridge Analytica: A Primer on Online Consumer Data Privacy*, 48 AIPLA Q.J. 529, 546 (2020) (citing CAL. CIV. CODE §§ 1798.100, 1798.110, 1798.130, 1798.145(g)(3) (West 2018)).

359. *Id.* at 536–37 (citing CAL. CIV. CODE §§ 1798.140(h), 1798.140(a) (West 2018)). Aggregate information means that an individual's data has been combined with others in such a way that no specific consumer is identified. *Id.*

360. One could argue that the CCPA does require disclosure of how a data aggregator will use a consumer's data. *See id.* (requiring disclosure of the commercial purpose for collecting the personal information). But, it is likely a data aggregator like Google could satisfy this notice requirement with a broad purpose, such as "to improve predictive recommendations for users."

361. *Has the California Consumer Privacy Act (CCPA) Been Effective?*, COMPLIANCE JUNCTION (Aug. 20, 2021), https://www.compliancejunction.com/has-the-california-consumer-privacy-act-ccpa-been-effective [https://perma.cc/B379-XM4D].

362. Verizon Commc'ns Inc. v. Law Offs. of Curtis V. Trinko, LLP, 540 U.S. 398, 412 (2004); *see also* Greenfield et al., *supra* note 154 (advocating that current regulatory structure is sufficient).

363. NCAA v. Alston, 141 S. Ct. 2141, 2166 (2021).

vary over time . . . ."[364] These latter holdings apply to both Section 1 and Section 2 violations of the Sherman Act. Moreover, these holdings remain true in the era of ubiquitous "free" products that Google and its peers peddle. Further, the Supreme Court has made clear that an alleged consumer preference for products at the lowest cost cannot justify anticompetitive behavior.[365] And although the Court has yet to adjudicate a case about anticompetitive conduct for zero-price markets,[366] this Note has shown that existing regulatory structures fail to deter or remedy anticompetitive harms that have been declared illegal. Price fixing at $0 is still price fixing.[367] So the additional benefit to competition by antitrust enforcement of this Note's suggested actions against Google and its peers is likely high.[368]

2. Evolution: Why the Consumer Welfare Standard Should Not Be Abandoned

Like relevant market definition, some have suggested that the consumer welfare standard should be wholesale abandoned.[369] To be sure, advocates of the consumer welfare standard are wrong in claiming that the standard's usage is well-settled law.[370] Although the Supreme Court's consistent adherence to the consumer welfare standard since the 1970s holds significant weight,[371] the same could be said for the non-economic considerations emblematic of the Court's decisions in the 1950s and

364. Cal. Dental Ass'n v. FTC, 526 U.S. 756, 781 (1999).

365. *NCAA*, 141 S. Ct. at 2167 (Kavanaugh, J., concurring) ("All of the restaurants in a region cannot come together to cut cooks' wages on the theory that 'customers prefer' to eat food from low-paid cooks.").

366. *See* Newman, *supra* note 147, at 165–72 (discussing horizontal price fixing in zero-price markets and in the context of information and attention markets).

367. *Id.*

368. At minimum, nascent competitors would have a fair chance of entering markets where Google is present or adjacent markets. *See supra* note 254 and accompanying text.

369. *See, e.g.*, Steinbaum & Stucke, *supra* note 94, at 595–97 (advocating for replacing the consumer welfare standard with an effective competition standard); Khan, *supra* note 33, at 971–76 (advocating for a refocusing on structural considerations distinct from net consumer effects).

370. Khan, *supra* note 33, at 964–65 (citing *Consumer Welfare Standard in Antitrust: Outdated or a Harbor in a Sea of Doubt?: Hearing Before the Subcomm. on Antitrust, Competition Policy and Consumer Rights*, 115th Cong. (2017)).

371. Dorsey et al., *supra* note 346, at 877–79.

1960s.[372] Moreover, the definition of "consumer welfare" remains in flux.[373] Yet, more nuanced opponents to the consumer welfare standard agree that instead of abandoning the standard,[374] and the wealth of caselaw flowing from it,[375] the correct path forward is to help the standard evolve—because it has proven it can.[376]

For example, the Supreme Court has adopted the consumer welfare standard in analyzing resale price restraints in the digital era, where price monitoring is significantly easier than it was when the standard became law.[377] In addition, antitrust enforcers have characterized the *Microsoft* case as an example of how the consumer welfare standard and current antitrust doctrine can evolve without a seismic shift.[378] To be sure, supporters of a total repudiation of the consumer welfare standard share many of the same concerns raised in this Note.[379] But given the Supreme Court shows no willingness to abandon the consumer welfare standard,[380] and given the standard has proven to be capable of evolution,[381] it remains a meritorious argument that the standard can be amended by statute with clear (and potentially new) considerations for courts to apply.

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372. *Supra* Part I.A.1 (describing the Populist School).

373. *Supra* Part I.A.3.

374. *See generally* Maureen K. Ohlhausen, *Liberty, Equality, and Fraternity: Evolution or Revolution in Antitrust?*, ANTITRUST, Summer 2021, at 25, 25 (advocating for incremental evolution of antitrust law rather than sudden revolution).

375. Dorsey et al., *supra* note 346, at 877–79.

376. *Id.* at 868–69, 882–83 (discussing how the Supreme Court has evolved the consumer welfare standard over time to meet the analytical needs of the controversies before it); Greenfield et al., *supra* note 154, at 397 (discussing how courts and antitrust enforcement agencies have evolved the consumer welfare standard sufficiently to meet the challenges of modern cases and to incorporate "new economic learning").

377. Leegin Creative Leather Prods. v. PSKS, Inc., 551 U.S. 877, 881–82 (2007).

378. Greenfield et al., *supra* note 154, at 410 (citing Makan Delrahim, Assistant Att'y Gen., Antitrust Div., U.S. Dep't of Justice, Keynote Address at the University of Chicago's Antitrust and Competition Conference: Don't Stop Believin': Antitrust Enforcement in the Digital Era (Apr. 19, 2018), https://www.justice.gov/opa/speech/assistant-attorney-general-makan-delrahim-delivers-keynote-address-university-chicagos [https://perma.cc/XJ3T-V57L]).

379. *See supra* Parts I.B.2–3 and Part II.

380. *See* NCAA v. Alston, 141 S. Ct. 2141, 2166 (2021); Ohio v. Am. Express Co., 138 S. Ct. 2274, 2289–90 (2018) (citing *Leegin*, 551 U.S. at 890–91).

381. *Supra* note 376 and accompanying text.

CONCLUSION

The benefits and ills of monopolistic and anticompetitive data aggregating firms like Google are increasing each day, as more users and data are fed into the firm's algorithms. However, public attitudes towards Google and its Big Tech peers have changed drastically just in the last few years.[382] So, too, has the attitude of American elected officials on both sides of the aisle.[383] And for good reason. The anticompetitive conduct of data aggregating firms has left consumers with no choice but to acquiesce to the bad bargain offered for their data.[384] But as interactions with these firms have become unavoidable[385] in a way never before seen in the American economy, perhaps we have reached a breaking point.

Antitrust enforcement against Google will likely continue until a favorable legal outcome is reached[386] or Congress steps up and creates a legislative solution to the harms caused by data aggregating monopolies.[387] And even if a favorable legal outcome is achieved, it would be prudent for Congress to continue working until a suitable regulatory regime is passed into law.[388] By focusing on the harms discussed in scholarship and the successes and failures seen in modern and old enforcement actions, this

382. *See supra* notes 18–21 and accompanying text.

383. *See supra* notes 25–28 and accompanying text.

384. Morey et al., *supra* note 196.

385. Hill, *supra* note 20.

386. *See* Lauren Feiner, *The DOJ's Antitrust Case Against Google Is Ambitious but Risky*, CNBC (Jan. 27, 2023), https://www.cnbc.com/2023/01/27/dojs-antitrust-case-against-google-is-ambitious-but-risky.html [https://perma.cc/7DDU-89CU] (reporting on the DOJ's January 2023 complaint against Google, in that "DOJ's antitrust chief Jonathan Kanter has indicated he's comfortable with taking risks, often saying in public remarks that it's important to bring cases that seek to challenge current conventions in antitrust law. He said he prefers more permanent remedies like breakups compared to promises to change behavior. That sentiment comes through in the DOJ's request in its latest lawsuit for the court to force Google to spin off parts of its ad business"); *see also supra* note 300 and accompanying text for a discussion about the DOJ alleging unconventional methods of anticompetitive harm by Google with the goal of breaking it up.

387. *See supra* Parts II.B–C.

388. *See, e.g.*, @BasedMikeLee, TWITTER (Jan. 24, 2023), https://twitter.com/BasedMikeLee/status/1617952787098374144 [https://perma.cc/LB79-E5XW] ("An antitrust lawsuit is good, but will take a long time and apply to only one company. We need to make sure competition works for everyone, and soon. I will be reintroducing the Competition and Transparency in Digital Advertising Act.") (tweet by Senator Mike Lee of Utah).

Note highlights impactful and attainable avenues of antitrust reform for antitrust enforcers, Congress, and the courts. Although no single solution may be sufficient to mitigate and cease the harms to Americans caused by data aggregating monopolies like Google, these solutions are a step in the right direction to bringing antitrust law into the twenty-first century, capable of regulating the firms emblematic of the advances of the modern age.