

MODERATING MONOPOLIES

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ABSTRACT

Industrial organization predetermines content moderation online. At the core of today's dysfunctions in the digital public sphere is a market power problem. Meta, Google, Apple, and a few other digital platforms control the infrastructure of the digital public sphere. A tiny group of corporations governs online speech, causing systemic problems to public discourse and individual harm to stakeholders. Current approaches to content moderation build on a deeply flawed market structure, addressing symptoms of systemic failures at best and cementing ailments at worst.

Market concentration creates monocultures for communication susceptible to systemic failures and raises the stakes for individual content moderation decisions, like takedowns of posts or bans of individuals. As these decisions are inherently prone to errors, those errors are magnified by the platforms' scale and market power. Platform monopolies also harm individual stakeholders: persisting monopolies lead to higher prices, lower quality, or less innovation. As platforms' services include content moderation, degraded services may increase the error rate of takedown decisions and over-expose users to toxic content, misinformation, or harassment. Platform monopolies can also get away with discriminatory and exclusionary conduct more easily because users lack voice and exit opportunities.

Stricter antitrust enforcement is imperative, but contemporary antitrust doctrine alone cannot hope to provide sufficient relief to the digital public sphere. First, a narrowly understood consumer welfare standard overemphasizes easily quantifiable, short-term price effects. Second, the levels of concentration necessary to trigger antitrust scrutiny far exceed those of a market conducive to pluralistic discourse. Third, requiring specific anticompetitive conduct, the focal point of current antitrust doctrine, ignores structural dysfunction mightily bottlenecks create in public discourse, irrespective of the origins or even benevolent exercise of their power.

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In this Article, I suggest three types of remedies to address the market power problem behind the dysfunctions in the digital public sphere. First, mandating active interoperability between platforms would drastically reduce lock-in effects. Second, scaling back quasi-property exclusivity online would spur follow-on innovation. Third, no-fault liability and broader objectives in antitrust doctrine would establish more effective counterweights to concentrating effects in the digital public sphere. While these pro-competitive measures cannot provide a panacea to all online woes, they would lower the stakes of inevitable content moderation decisions, incentivize investments in better decision-making processes, and contribute to healthier pluralistic discourse.

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I. INTRODUCTION

Today's dysfunction of the digital public sphere¹ is, at its core, a market power problem. A total of three companies—Apple, Google, and Meta—control the most relevant bottlenecks for digital communication.² Facebook (owned by Meta) retains a firm grip on social media; YouTube (owned by Google) dominates video sharing; Google runs, by far, the most utilized general search engine; and Apple and Google control the two relevant app stores in the United States. These platforms govern discourse as gatekeepers.³ The resulting market conditions fail at “providing an environment conducive to the preservation of our democratic political and social institutions”⁴ and create a wide range of troubles.

Market concentration raises the stakes of individual content moderation decisions, like takedowns or bans. As these decisions are inherently prone to

1. See Jack M. Balkin, *How to Regulate (and Not Regulate) Social Media*, 1 J. FREE SPEECH L. 71, 72 (2021) (defining the digital public sphere as a “space in which people express opinions and exchange views that judge what is going on in society”) [hereinafter Balkin, *How to Regulate (and Not Regulate) Social Media*]. For accounts of dysfunction, see generally, for example, DANIELLE KEATS CITRON, *HATE CRIMES IN CYBERSPACE* (2014) (analyzing how digital networks have become tools for harassment and how individuals and online mobs disproportionately target women); SAFIYA UMOJA NOBLE, *ALGORITHMS OF OPPRESSION: HOW SEARCH ENGINES REINFORCE RACISM* (2018) (detailing discrimination by search engines); ZEYNEP TUFEKCI, *TWITTER AND TEAR GAS: THE POWER AND FRAGILITY OF NETWORKED PROTEST* 221–31 (2017) (emphasizing threats to discourse, including from censorship “as a denial of attention, focus, and credibility”); SIVA VAIDHYANATHAN, *ANTISOCIAL MEDIA: HOW FACEBOOK DISCONNECTS US AND UNDERMINES DEMOCRACY* (2018); TIM WU, *THE ATTENTION MERCHANTS: THE EPIC SCRAMBLE TO GET INSIDE OUR HEADS* (2017) (identifying the consequences of attention scarcity); Jack M. Balkin, *Free Speech is a Triangle*, 118 COLUM. L. REV. 2011, 2016–21 (2018) (focusing on collateral censorship and prior restraint) [hereinafter Balkin, *Free Speech is a Triangle*]; Bobby Chesney & Danielle Citron, *Deep Fakes: A Looming Challenge for Privacy, Democracy, and National Security*, 107 CALIF. L. REV. 1753, 1771–85 (2019) (detailing harms from deep fakes); Zeynep Tufekci, *YouTube, the Great Radicalizer*, N.Y. TIMES (Mar. 3, 2018), <https://www.nytimes.com/2018/03/10/opinion/sunday/youtube-politics-radical.html> (identifying YouTube's algorithm as a driver of radicalization online).

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

3. See Thomas Kadri, *Digital Gatekeepers*, 99 TEX. L. REV. 951 (2021); Kate Klonick, *The New Governors, The People, Rules, and Processes Governing Online Speech*, 131 HARV. L. REV. 1598 (2018); Rory Van Loo, *The New Gatekeepers: Private Firms as Public Enforcers*, 106 VA. L. REV. 467 (2020); Rory Van Loo, *Federal Rules of Platform Procedure*, U. CHI. L. REV. 829 (2021).

4. See *N. Pac. Ry. Co. v. United States*, 356 U.S. 1, 4 (1958) (defining the goals of antitrust law). But see more recently *NCAA v. Alston*, No. 20-512, slip op. at 5 (U.S. June 21, 2021) (dropping the reference to democratic institutions).

errors,⁵ the platforms' scale and market power magnifies any misjudgments and resulting error costs. On sensitive matters, we trust the instincts of one man, Mark Zuckerberg, to make correct decisions on content for 240 million American social media users, for example.⁶ President Trump was banned from the biggest social media platform on earth when Mark Zuckerberg wanted it—not earlier and not later. With that, Mark Zuckerberg's ability and integrity become single points of failure in the digital public sphere, undermining the resilience of democratic discourse. Similarly, market concentration creates monocultures for communication susceptible to systemic failures.⁷ For instance, foreign agents and profit-seeking teenagers have exploited Facebook's algorithms to spread misinformation.⁸ Facebook's dominant market position arguably elevates internal management failures and architectural flaws to systemic threats for democratic deliberation and the electoral process.

Platform monopolies also harm individual stakeholders.⁹ Generally, monopolies lead to higher prices, lower quality, and less innovation. The monetary prices for Facebook, YouTube, Google, and the app stores have remained at zero. But platform monopolies can degrade the services they provide in exchange for users' endurance of advertisements and provision of content and data. As platforms' services include content moderation, degraded services may increase the error rate of takedown decisions and overexpose users to toxic content, misinformation, or harassment. For perspective, Facebook's automated systems currently remove “posts that generated 3% to 5% of the views of hate speech on the platform, and 0.6% of all content that

5. evelyn douek, *Governing Online Speech: From “Posts-as-Trumps” to Proportionality and Probability*, 121 COLUM. L. REV. 759 (2021).

6. See Alexis C. Madrigal, *Mark Zuckerberg's Power Is Unprecedented*, ATLANTIC (May 9, 2019), <https://www.theatlantic.com/technology/archive/2019/05/how-powerful-mark-zuckerberg/589129/>; *Number of Facebook users in the United States from 2018 to 2027*, STATISTA, <https://www.statista.com/statistics/408971/number-of-us-facebook-users/> (last visited Oct. 17, 2022).

7. See *infra* Part II.A.

8. SELECT COMMITTEE ON INTELLIGENCE, *RUSSIAN ACTIVE MEASURES CAMPAIGNS AND INTERFERENCE IN THE 2016 U.S. ELECTION*, VOL. 4 (2020); 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>; Samantha Subramanian, *Inside the Macedonian Fake-News Complex*, WIRED (Feb. 15, 2017), <https://www.wired.com/2017/02/veles-macedonia-fake-news/>; Matthew Rosenberg, Nicholas Confessore & Carole Cadwalladr, *How Trump Consultants Exploited the Facebook Data of Millions*, N.Y. TIMES (Mar. 17, 2018), <https://www.nytimes.com/2018/03/17/us/politics/cambridge-analytica-trump-campaign.html>.

9. See *infra* Part II.B.

violated Facebook’s policies against violence and incitement.”¹⁰ Monopolies can also get away with discriminatory conduct more easily because users have nowhere else to go. This ranges from special treatment for influential celebrities harming ordinary users¹¹ to the disproportionate takedown of LGBTQ+ expression¹² and bias against African-American English in content analysis.¹³

Recent approaches to fixing content moderation build on a deeply flawed market structure; they provide the right answer to the wrong question. Take, for example, the Facebook Oversight Board (“Board”), a novel semi-autonomous entity charged with assessing questions related to takedowns of content, declinations of removal requests, and when referred by Facebook, bans of individuals. The Board necessarily operates within the boundaries defined by Facebook and the highly concentrated market. It cannot compensate for the lack of pluralistic structures and competitive pressures. It neither lowers the stakes of individual decisions on content, nor does it substitute exit opportunities. To a significant extent, the contemporary issue of content moderation only exists because of concentrated private sector control over the digital infrastructure. The focus on processes and new institutions to improve content moderation implicitly accepts the market and social structure in which digital platforms currently operate.¹⁴ It seeks to fortify

10. Deepa Seetharaman, Jeff Horwitz & Justin Scheck, *Facebook Says AI Will Clean Up the Platform. Its Own Engineers Have Doubts.*, WALL ST. J. (Oct. 17, 2021, 9:17 AM), <https://www.wsj.com/articles/facebook-ai-enforce-rules-engineers-doubtful-artificial-intelligence-11634338184>.

11. Jeff Horwitz, *Facebook Says Its Rules Apply to All. Company Documents Reveal a Secret Elite That’s Exempt.*, WALL ST. J. (Sep. 13, 2021, 10:21 AM), <https://www.wsj.com/articles/facebook-files-xcheck-zuckerberg-elite-rules-11631541353>; Marshall Steinbaum, *Establishing Market and Monopoly Power in Tech Platform Antitrust Cases*, 67 ANTITRUST BULLETIN 1, 13 (2022).

12. Ari Ezra Waldman, *Disorderly Content*, 97 WASH. L. REV. 907 (2022); see also Kendra Albert & Afsaneh Rigot, *Apple and Google Still Have an LGBTQ Problem*, WIRED UK (Aug. 16, 2021), <https://www.wired.co.uk/article/apple-google-lgbtq-apps>.

13. Thomas Davidson, Debasmitta Bhattacharya & Ingmar Weber, *Racial Bias in Hate Speech and Abusive Language Detection Datasets*, in PROCEEDINGS OF THE THIRD WORKSHOP ON ABUSIVE LANGUAGE ONLINE 25, 32 (Sarah T. Roberts et al. eds., 2019) (finding “substantial racial bias” “in hate speech and abusive language detection datasets”); Maarten Sap, Dallas Card, Saadia Gabriel, Yefin Choi & Noah A. Smith, *The Risk of Racial Bias in Hate Speech Detection*, in PROCEEDINGS OF THE 57TH ANNUAL MEETING OF THE ASSOCIATION FOR COMPUTATIONAL LINGUISTICS 1668, 1671 (Anna Korhonen et al. eds., 2019) (“AAE tweets are more than twice as likely to be labeled as ‘offensive’ or ‘abusive’”). See NOBLE, *supra* note 1.

14. Ethan Zuckerman, *The Case for Digital Public Infrastructure*, KNIGHT FIRST AMEND. INST. 6 (Jan. 17, 2020), <https://knightcolumbia.org/content/the-case-for-digital-public-infrastructure>.

the legitimacy of decision-making that should not require invocation in the first place.

Although antitrust law is a central element of constructing competitive markets,¹⁵ its current interpretation fails to compensate for the enormous, legally constructed and reinforced¹⁶ concentrating forces in the digital economy. First, it is concerned with effects on consumer welfare, an efficiency standard. Efficiency and pluralism, however, do not necessarily run hand in hand. Second, decades of increasing the thresholds for antitrust liability and weakening enforcement have diminished the framework's potential to serve as an effective check on private power. Third, and most importantly, antitrust doctrine requires anticompetitive conduct in addition to monopoly power. It takes no issue with organic growth or the mere existence of monopolies.¹⁷ As for public discourse, however, mighty bottlenecks create structural dysfunction, irrespective of their origins or the potentially innocent exercise of their power.

In this Article, I offer a cautious case for digital pluralism, acknowledging that it falls short of curing all ills. The best argument for a more pluralistic digital public sphere is its propensity to reduce the cost of errors by individuals designing ecosystems for communication and curating content. Without guaranteeing public-regarding actors and functioning institutions, the Madisonian principle¹⁸ can increase the resilience of public discourse and provide for a more inclusive and equitable digital public sphere. Additionally, a more competitive platform market will transfer surplus and funding to the content creation level, where it can support journalism, art, and other types of quality content production.

To end platform monopolies and strengthen digital pluralism, I argue for the adoption of interoperability frameworks.¹⁹ First, this requires mandates to open application programming interfaces (APIs), which allow the exchange of information between platforms. Implementing an interoperability framework would enable communication across the boundaries of platforms. Where interoperability mandates and open standards define the market, network effects no longer translate into market entry barriers. Second, we should

15. William N. Eskridge Jr. & John Ferejohn, *Super-Statutes*, 50 DUKE L.J. 1215, 1231–37 (2001) (identifying the Sherman Act as a super-statute); Thomas B. Nachbar, *The Antitrust Constitution*, 99 IOWA L. REV. 57, 60 (2013).

16. Nikolas Guggenberger, *Allocating Network Effects* (Apr. 2023) (unpublished manuscript on file with author).

17. *United States v. Grinnell Corp.*, 384 U.S. 563, 570–71 (1966).

18. *See* THE FEDERALIST NO. 10 (James Madison).

19. Michael Kades & Fiona M. Scott Morton, *Interoperability as a Competition Remedy for Digital Networks* 14, 33 (Sep. 23, 2020) (Wash. Ctr. for Equitable Growth, Working Paper).

remove some of the legal “bricks” that enclose platforms’ walled gardens. This entails reducing the level of exclusivity bestowed on digital platforms by restricting the reach of the Computer Fraud and Abuse Act (CFAA), limiting the state backing of terms of service, curbing intellectual property (IP) rights, and reorienting privacy protection. Furthermore, emphasizing structural considerations over specific anticompetitive behavior²⁰ and reestablishing antitrust law’s democracy-serving function can reestablish antitrust law as a meaningful check on private power.

This Article proceeds in four parts. Part II identifies the status quo of what Morgan Weiland aptly calls the “intermediated public sphere”²¹ as highly monopolized. Relying on two levers of power, network effects and the characteristics of data, three companies dominate the four bottlenecks of digital discourse, excreting outsized market power, political power, and cultural power. In Part III, I show how platforms’ position in the market harms public discourse and how content moderation fails to compensate for the flawed market structure. I also identify the systemic reasons for antitrust law’s compensatory failure. In Part IV, I lay out suitable interoperability remedies and recommend reestablishing structural notions of antitrust to create “an environment conducive to the preservation of our democratic political and social institutions.”²²

II. THE MONOPOLIZED DIGITAL PUBLIC SPHERE

While the U.S. economy as a whole is experiencing historic levels of consolidation, platform markets have become notorious for their concentration.²³ The accumulation of economic, political, and cultural power

20. See Donald F. Turner, *The Scope of Antitrust and Other Economic Regulatory Policies*, 82 HARV. L. REV. 1207, 1219–20 (1969).

21. Morgan N. Weiland, *The ‘Intermediated Public Sphere’* (2021) (unpublished manuscript) (on file with author).

22. See *N. Pac. Ry. Co. v. United States*, 356 U.S. 1, 4 (1958).

23. Council of Econ. Advisers, *Benefits of Competition and Indicators of Market Power* 4–7 (2016); THOMAS PHILIPPON, *THE GREAT REVERSAL: HOW AMERICA GAVE UP ON FREE MARKETS* (2019); David Autor, David Dorn, Lawrence F. Katz, Christina Patterson & John Van Reenen, *The Fall of the Labor Share and the Rise of Superstar Firms*, 135 Q.J. ECON. 645, 683, 663–65 (2020); Kenneth A. Bamberger & Orly Lobel, *Platform Market Power*, 32 BERKELEY TECH. L.J. 1051, 1067–71 (2017); Sara Calligaris, Chiara Criscuolo & Luca Marcolin, *Mark-Ups in the Digital Era* 13–18 (OECD Sci., Tech. & Indus. Working Papers No. 10, 2018) (focusing on mark-ups); Matias Covarrubias, Germán Gutiérrez & Thomas Philippon, *From Good to Bad Concentration? US Industries over the Past 30 Years*, 34 NBER MACROECON. ANN. 1 (2020); Jan De Loecker & Jan Eeckhout, *The Rise of Market Power and the Macroeconomic Implications*, 135 Q.J. ECON. 561, 574–605 (2020) (observing rising market power based on increasing markups and average profits); Jason Furman & Peter Orszag, *A Firm-Level Perspective*

in the hands of a few digital platforms has prompted proclamations of a Second Gilded Age²⁴—an ode to a time in which the oil, steel, and railroad barons of the second Industrial Revolution possessed similarly defining influence.²⁵ In that analogy, the modern-day Carnegies, Rockefellers, and Vanderbilts also command the crucial infrastructure and resources of their time, including social media and video sharing platforms, search engines, and app stores.²⁶ Today’s industrialists privately govern discourse in the digital public sphere.²⁷

That has not always been the case.²⁸ Sergey Brin and Larry Page did not found Google until 1998. And it was not until 2003 that Facebook launched. The creation of the World Wide Web in the early 1990s expanded the public sphere in a pluralistic manner. What started as a protocol to link files and organize information, accessible through a browser, soon morphed into online billboards, chat rooms and, eventually, a vibrant, albeit largely homogenous, blogger scene.

To be sure, digital platforms have existed since the dawn of the web. Some tried to create walled gardens of secluded and tightly protected private networks. Yet, these early walled gardens failed. Internet users, policy makers,

on the Role of Rents in the Rise in Inequality, in TOWARD A JUST SOCIETY: JOSEPH STIGLITZ AND TWENTY-FIRST CENTURY ECONOMICS 19, 33–38 (Martin Guzman ed., 2018); Germán Gutiérrez & Thomas Philippon, *Declining Competition and Investment in the U.S.*, (Nat’l Bureau of Econ. Rsch., Working Paper No. 23583 2017), <https://www.nber.org/papers/w23583>; Marc Jarsulic, *Antitrust Enforcement for the 21st Century*, 64 ANTITRUST BULL. 514 (2019); Mordecai Kurz, *On the Formation of Capital and Wealth: IT, Monopoly Power and Rising Inequality* (Stan. U., Working Paper No. 17-016 2017), <https://papers.ssrn.com/abstract=3014361> (linking technological progress, market power, and inequality).

24. See TIM WU, *THE CURSE OF BIGNESS: ANTITRUST IN THE NEW GILDED AGE* (2018); Jack M. Balkin, *The First Amendment in the Second Gilded Age*, 66 BUFF. L. REV. 979, 980–81, 1000 (2018) (“Instead of Rockefeller, and Vanderbilt, and Carnegie, we have Gates, and Zuckerberg, and Brin, and Schmidt.”); Steven C. Salop, *Dominant Digital Platforms: Is Antitrust Up to the Task?*, 130 YALE L.J.F. 563, 565 (2021); Sandeep Vaheesan, *Accommodating Capital and Policing Labor: Antitrust in the Two Gilded Ages*, 78 MD. L. REV. 766, 792–809 (2019) (discussing antitrust enforcement); Steven Davidoff Solomon, *Changing Old Antitrust Thinking for a New Gilded Age*, NY TIMES DEALBOOK (Jun. 22, 2014), <https://dealbook.nytimes.com/2014/07/22/changing-old-antitrust-thinking-for-a-new-gilded-age/> (discussing mergers).

25. See Andrew Atkeson & Patrick J. Kehoe, *The Transition to a New Economy After the Second Industrial Revolution* (Fed. Rsrv. Bank of Minn. July 2001).

26. All five of the most valuable U.S. companies operate digital platforms, provide software solutions, computing capacity, or IT hardware.

27. Klonick, *supra* note 3.

28. A. Michael Froomkin, *Habermas@Discourse.Net: Toward a Critical Theory of Cyberspace*, 116 HARV. L. REV. 749, 782–96 (2003) (detailing the evolution of the internet infrastructure); Alan Z. Rozenshtein, *Moderating the Fediverse: Content Moderation on Distributed Social Media*, 2 JOURNAL OF FREE SPEECH LAW 3–5 (forthcoming 2023).

and regulators rejected the idea that firms like AOL and the mighty telecommunication companies of the time could effectively partition the open internet into corporate subdivisions. At a pivotal moment, network neutrality requirements prevented telecommunication companies from leveraging their monopoly positions at the infrastructure level into the emerging application layer of the internet.²⁹

With the rise of digital superstars,³⁰ things have changed. As Julie Cohen aptly observes, “[i]n theory, the networked information infrastructure still known as the internet is ‘open’, and for some purposes, that characterization is accurate.” Countless blogs, local news sites, and businesses populate the web. “For most practical purposes, however,” Cohen continues, “the ‘network of networks’ is becoming a network of platforms.”³¹ In fact, a handful of digital platforms control the central chokepoints of the internet, provide the defining communication infrastructure, and govern discourse.³²

This transformation from an open internet to a network of platforms is full of contradictions. On the one hand, it is a story of innovation, expansion of access to information and communicative spaces, inclusion, and democratization of public discourse.³³ On the other hand, the sector’s maturation stands for rampant economic and political concentration of power, abusive and intrusive business models, mass surveillance, and rampant spread of misinformation. Google’s “mission . . . to organize the world’s information and make it universally accessible and useful,”³⁴ and Facebook’s recently revised goal to “[g]ive people the power to build community and bring the world closer together,”³⁵ have simultaneously succeeded and failed. In large

29. See BARBARA VAN SCHEWICK, INTERNET ARCHITECTURE AND INNOVATION (2010); Brett M. Frischmann & Barbara van Schewick, *Network Neutrality and the Economics of an Information Superhighway: A Reply to Professor Yoo*, 47 JURIMETRICS 383 (2007); Thomas B. Nachbar, *The Public Network*, 17 COMMLAW CONSPECTUS 67, 109–13 (2008); Barbara van Schewick, *Network Neutrality and Quality of Service: What a Nondiscrimination Rule Should Look Like*, 67 STAN. L. REV. 1 (2015).

30. See Autor et al., *supra* note 23 (describing “superstar firms” as drivers of concentration).

31. JULIE E. COHEN, BETWEEN TRUTH AND POWER: THE LEGAL CONSTRUCTIONS OF INFORMATIONAL CAPITALISM 41 (2019).

32. Andrea Prat & Tommaso M. Valletti, *Attention Oligopoly*, AM. ECON. J. MICROECON. (forthcoming 2022).

33. See TUFEKCI, TWITTER AND TEAR GAS, *supra* note 1, at 118–26; Gabe H. Miller, Guadalupe Marquez-Velarde, Apryl A. Williams & Verna M. Keith, *Discrimination and Black Social Media Use: Sites of Oppression and Expression*, 7 SOC. RACE & ETHNICITY 247, 252 (2021).

34. *Our Approach to Search*, GOOGLE, <https://www.google.com/search/howsearchworks/mission/> (last visited July 5, 2021).

35. *About Meta*, META, https://about.meta.com/company-info/?utm_source=about.facebook.com&utm_medium=redirect (last visited Nov. 5, 2022).

part, the development of the digital public sphere reflects the broader contradictions of the neoliberal project. The following sections focus on four bottlenecks of discourse and the origins of their economic, political and cultural power.

A. FOUR BOTTLENECKS OF DISCOURSE

Four main bottlenecks define the monopolistic structure of the digital public sphere's content layer: Facebook (owned by Meta) retains a firm grip on social media; YouTube (owned by Google) dominates video sharing; Google runs the most utilized general search engine; and Apple and Google control the most prominent app stores in the United States. Some of the platforms' features overlap, like the ability to share videos. Yet, the platforms' core functionalities and usage patterns remain sufficiently distinct to justify a categorical consideration.³⁶

1. *Social Media*

With its enormous social graph and its unparalleled reach, Meta has emerged as the most prominent and consequential social media conglomerate. The various platforms of the Menlo Park company, including Instagram, WhatsApp, and the core Facebook network, reach almost all demographic groups in the United States.³⁷ Approximately 235 million monthly active users populate the social network's core platform in the United States,³⁸ which amounts to a penetration rate of 70%.³⁹ Instagram attracts around 118 million active users⁴⁰—about 40% of the United States online population.⁴¹ The FTC

36. First Amended Complaint at 57–58, *FTC v. Facebook*, No. 1:20-cv-03590, Doc. 75-1 (D.D.C. Aug. 19, 2021).

37. John Gramlich, *10 Facts about Americans and Facebook*, PEW RSCH. CTR. (Apr. 1, 2021), <https://www.pewresearch.org/fact-tank/2021/06/01/facts-about-americans-and-facebook/>. See also NapoleonCat, *Distribution of Facebook users in the United States as of April 2021, by age group and gender*, STATISTA, <https://www.statista.com/statistics/187041/us-user-age-distribution-on-facebook/> (last visited July 6, 2021) (showing distribution by age group and gender).

38. *Forecast of the number of Facebook users in the United States from 2017 to 2025 (in millions)*, STATISTA, <https://www.statista.com/forecasts/1136345/facebook-users-in-the-united-states> (last visited Jan. 13, 2022).

39. *Facebook usage penetration in the United States from 2017 to 2025*, STATISTA, <https://www.statista.com/statistics/183460/share-of-the-us-population-using-facebook/> (last visited July 6, 2021).

40. eMarketer, *Number of Instagram users in the United States from 2019 to 2023 (in millions)*, STATISTA, <https://www.statista.com/statistics/293771/number-of-us-instagram-users/> (last visited July 6, 2021).

41. eMarketer & Forbes, *Instagram penetration rate in the United States from 2018 to 2023*, STATISTA, <https://www.statista.com/statistics/293778/us-instagram-penetration/> (last visited July 6, 2021).

provided a convincing account of Facebook's monopoly position in its recent amended complaint,⁴² addressing doubts previously articulated by the D.C. District Court.⁴³ Depending on the metric—daily active users, monthly active users, time spent on the platform, or advertising revenues—Facebook commands a market share of 65-80% of social media services.⁴⁴ For publishers, social media has become an essential channel for dissemination.⁴⁵ Likewise, corporate and political advertisers depend on the unique reach of Facebook's social graph.⁴⁶ Facebook has even emphasized small businesses' reliance on its services in a recent campaign against Apple's allegedly more privacy-protective default settings.⁴⁷

Unlike Facebook, Twitter's content focuses more on punditry, political messaging, and academic discourse. Where Facebook functions as an all-encompassing social networking site, Twitter biggest impact stems from its role as a content amplifier.⁴⁸ News outlets and cable TV frequently pick up viral Tweets and share them with their audiences. Despite that, even Twitter's indirect impact provides little substitute to Facebook's penetration rate; the difference in the number of active users and time spent on the medium is too large. Twitter's user base also lacks breadth, leaning toward young, politically

42. First Amended Complaint at 60–72, *FTC v. Facebook*, No. 1:20-cv-03590, Doc. 75-1 (D.D.C. Aug. 19, 2021).

43. Memorandum Opinion at 2, *FTC v. Facebook*, No. 1:20-cv-03590, Doc. 73 (D.D.C. 2021); Complaint, No. 1:20-cv-03590, Doc. 3 (D.D.C. Dec. 9, 2020).

44. *Desktop, Mobile & Tablet Social Media Stats United States Of America*, STATCOUNTER GLOBAL STATS, <https://gs.statcounter.com/social-media-stats/desktop-mobile-tablet/united-states-of-america> (last visited Oct. 17, 2021); First Amended Complaint at 63–68, *FTC v. Facebook*, No. 1:20-cv-03590, Doc. 75-1.

45. Lina M. Khan, *The Separation of Platforms and Commerce*, 119 COLUM. L. REV. 973, 1003–05 (2019).

46. See Anna Edgerton, *Facebook Is the Only Game in Town for Digital Political Ads*, BLOOMBERG BUSINESSWEEK (Oct. 5, 2022), <https://www.bloomberg.com/news/articles/2022-10-05/facebook-is-politicians-last-resort-for-2022-election-ads>.

47. Chaim Gartenberg, *Why Apple's New Privacy Feature is Such a Big Deal*, VERGE (Apr. 27, 2021), <https://www.theverge.com/2021/4/27/22405474/apple-app-tracking-transparency-ios-14-5-privacy-update-facebook-data>; Dan Levy, *Speaking Up for Small Businesses*, FACEBOOK FOR BUSINESS (Dec. 16, 2020), <https://www.facebook.com/business/news/ios-14-apple-privacy-update-impacts-small-business-ads>; Tom Warren, *Facebook Criticizes Apple's iOS Privacy Changes with Full-Page Newspaper Ads*, VERGE (Dec. 16, 2020), <https://www.theverge.com/2020/12/16/22178068/facebook-apple-newspaper-ads-ios-privacy-changes>. See also Geoffrey A. Fowler & Tatum Hunter, *When you 'Ask app not to track,' some iPhone apps keep snooping anyway*, WASH. POST (Sep. 23, 2021), <https://www.washingtonpost.com/technology/2021/09/23/iphone-tracking/>.

48. See Philip M. Napoli, *Social Media and the Public Interest: Governance of News Platforms in the Realm of Individual and Algorithmic Gatekeepers*, 39 TELECOMM. POL'Y 751, 752 (2015) (describing Twitter's role in facilitating reports from the protests following the shooting of Michael Brown).

active, high-income, high-education, and urban subscribers.⁴⁹ Other social media platforms lack any equivalent to Facebook or Twitter's impact on the digital public sphere.⁵⁰

As of 2021, Pinterest commands 12.1% of site visits⁵¹ and 34% of 18–64-year-old social media consumers use the platform regularly.⁵² The service, however, lacks Twitter's multiplier effect and any comparable power over political and cultural discourse. LinkedIn remains limited to job-related networking, recruiting, and professional topics, with an emphasis on white-collar users. Reddit offers a popular venue for subject-related discussions, but besides the occasional breakthrough (i.e., GameStop or Dogecoin price rallies) these chat rooms rarely shape public discourse in systemic ways, like Facebook or Twitter. Snapchat users mainly rely on the application for one-to-few communications that rarely reaches public channels. Snapchat's user base is also concentrated among teenagers and young adults,⁵³ and its overall appeal has decreased after several of Snapchat's characteristic features were incorporated by Instagram and Twitter.⁵⁴

49. AudienceProject, *Reach of leading social networking sites used by Baby Boomer and Senior online users in the United States as of 3rd quarter 2020*, STATISTA, <https://www.statista.com/statistics/309166/boomer-senior-social-networks/> (last visited Aug. 11, 2021). However, Twitter's newsfeeds show conservative bias. Wen Chen, Diogo Pacheco, Kai-Cheng Yang & Filippo Menczer, *Neutral Bots Probe Political Bias on Social Media*, 12 NATURE COMM'NS 5580 (2021).

50. *Which social networks do you use regularly?*, STATISTA, <https://www.statista.com/forecasts/997135/social-network-usage-by-brand-in-the-us> (last visited Nov. 15, 2022). YouTube and TikTok are here categorized as video sharing platforms.

51. StatCounter, *Leading social media websites in the United States as of September 2022, based on share of visits*, STATISTA, <https://www.statista.com/statistics/265773/market-share-of-the-most-popular-social-media-websites-in-the-us/> (last visited Nov. 15, 2022).

52. *Which social networks do you use regularly?*, STATISTA, <https://www.statista.com/forecasts/997135/social-network-usage-by-brand-in-the-us> (last visited Nov. 15, 2022).

53. AudienceProject, *Reach of Leading Social Networking Sites Used by Baby Boomer and Senior Online Users in the United States as of 3rd Quarter 2020*, STATISTA, <https://www.statista.com/statistics/309166/boomer-senior-social-networks/> (last visited Aug. 11, 2021); AudienceProject, *Reach of Leading Social Networking Sites Used by Teenage and Young Adult Online Users in the United States as of 3rd Quarter 2020*, STATISTA, <https://www.statista.com/statistics/199242/social-media-and-networking-sites-used-by-us-teenagers/> (last visited Aug. 11, 2021).

54. See Casey Newton, *Instagram's New Stories Are a near-Perfect Copy of Snapchat Stories*, VERGE (Aug. 2, 2016), <https://www.theverge.com/2016/8/2/12348354/instagram-stories-announced-snapchat-kevin-systrom-interview>.

2. Video Sharing

Video sharing platforms enable users to post, watch, and interact with video content. With 2.2 billion users globally, YouTube leads the field.⁵⁵ It generated \$28.8B in advertising revenue in 2021, marking a considerable increase from \$19.8B in 2020.⁵⁶ These figures do not include YouTube's subscription revenue.⁵⁷ In 2021, a staggering 81% of U.S. adults watched or shared videos on the platform, up from 73% in 2019.⁵⁸ Similar to Facebook, YouTube has become a truly intergenerational medium: while 18–29-year-olds are more likely to use YouTube (95%), roughly half of users over 65 also rely on Google's video sharing platform.⁵⁹ The platform reaches internet users across social classes, ethnicities, races, genders, educational backgrounds, and geographical locations within the United States.⁶⁰ YouTube's reach is incomparable to that of any other video sharing platform.

With an estimated 94.1 million users in the United States as of 2022,⁶¹ TikTok has emerged as the runner-up in the world of video sharing. TikTok's influence on cultural matters is conspicuous and ranges from displays of dance to comedy and sports. In the wake of the 2020 presidential election, TikTokers even made inroads in political discourse.⁶² Yet, like Snapchat, TikTok almost exclusively attracts young audiences. Only 11% of TikTok's users are 50 and

55. *Forecast of the Number of YouTube Users in the World from 2017 to 2025 (in Millions)*, STATISTA, <https://www.statista.com/forecasts/1144088/youtube-users-in-the-world> (last visited July 10, 2021).

56. Alphabet, Inc., *2021 Annual Report (Form 10-K)* 33 (Feb. 2022).

57. Abner Li, *Alphabet Reports Q4 2020 Revenue of \$56.9 Billion*, 9TO5GOOGLE (Feb. 2, 2021), <https://9to5google.com/2021/02/02/alphabet-q4-2020-earnings/>; Abner Li, *YouTube Music/Premium Has 20 Million Paid Subscribers, 2M for YouTube TV*, 9TO5GOOGLE (Feb. 3, 2020), <https://9to5google.com/2020/02/03/youtube-premium-subscribers/>.

58. Brooke Auxier & Monica Anderson, *Social Media Use in 2021*, PEW RSCH. CTR. (Apr. 7, 2021), <https://www.pewresearch.org/internet/2021/04/07/social-media-use-in-2021/>; Andrew Perrin & Monica Anderson, *Share of U.S. Adults Using Social Media, Including Facebook, is Mostly Unchanged since 2018*, PEW RSCH. CTR. (Apr. 10, 2019), <https://www.pewresearch.org/fact-tank/2019/04/10/share-of-u-s-adults-using-social-media-including-facebook-is-mostly-unchanged-since-2018/>.

59. Auxier & Anderson, *supra* note 58.

60. *Id.*

61. eMarketer, *Number of TikTok users in the United States from 2019 to 2024 (in millions)*, STATISTA, <https://www.statista.com/statistics/1100836/number-of-us-tiktok-users/> (last visited Jan. 13, 2022).

62. Sarah C. Haan, *Bad Actors: Authenticity, Inauthenticity, Speech, and Capitalism*, 22 U. PA. J. CONST. L. 619, 678–80 (2019); Taylor Lorenz, Kellen Browning & Sheera Frenkel, *TikTok Teens and K-Pop Stans Say They Sank Trump Rally*, N.Y. TIMES (Jun. 21, 2020), <https://www.nytimes.com/2020/06/21/style/tiktok-trump-rally-tulsa.html>.

above.⁶³ And while TikTok's three-minute limitation on the length of videos contributes to the platform's unique appeal as a fast-paced medium, it also limits TikTok's role in the digital public sphere. Many contributions from music videos to gaming streams and commentary require longer segments. Other video sharing platforms serve specific purposes for targeted audiences and therefore do not provide viable alternatives to YouTube. Twitch, a live streaming platform primarily for video gaming, falls into that category. Video on demand platforms, like Netflix, Amazon Prime, Hulu, HBO Max, and Disney+, provide no substitute to YouTube's user-generated content.

3. Search

Search engines index information online. Google's market share across platforms has consistently hovered just below 90% in the United States and just above 90% globally.⁶⁴ With 94% and 96% market share, respectively, Google holds an even tighter grip on the mobile search market in the United States and the world.⁶⁵ Google's indexing algorithm arguably provides the most influential central information directory ever created and, thus, the most powerful general-purpose gateway to information. Search engine optimization—the business of featuring content online so that it will be ranked higher by search engines—mainly involves adapting the display of information to Google's algorithms.

While popular content can undoubtedly attract direct traffic, other information would remain practically unnoticed if it were not included in Google's index. Thus, for a significant portion of online content, Google can unilaterally decide whether the information should be practically retrievable. It comes as no surprise that the most prominent battles over the accessibility of information online centers more on Google's indexing of information rather than the information itself. In *Google Spain*, the European Court of Justice picked up on that distinction not only because of a normative hierarchy in

63. App Ape, *Distribution of TikTok users in the United States as of March 2021, by age group*, STATISTA, <https://www.statista.com/statistics/1095186/tiktok-us-users-age/> (last visited Aug. 11, 2021).

64. *Search Engine Market Share United States Of America*, STATCOUNTER GLOBAL STATS, <https://gs.statcounter.com/search-engine-market-share/all/united-states-of-america> (last visited Nov. 16, 2022); *Search Engine Market Share Worldwide*, STATCOUNTER GLOBAL STATS, <https://gs.statcounter.com/search-engine-market-share> (last visited Nov. 16, 2022).

65. *Mobile Search Engine Market Share United States Of America*, STATCOUNTER GLOBAL STATS, <https://gs.statcounter.com/search-engine-market-share/mobile/united-states-of-america> (last visited July 20, 2021); *Mobile Search Engine Market Share Worldwide*, STATCOUNTER GLOBAL STATS, <https://gs.statcounter.com/search-engine-market-share/mobile/worldwide> (last visited July 20, 2021).

protecting speech rights between Google and the news source to which Google linked, but also the defining differences in reach.⁶⁶

4. *App Stores*

Finally, consider the Apple and Google app stores. These enable users to download and update mobile versions of social media, video sharing, search engines, and millions of other applications compatible with the two main operating systems—Apple iOS and Google Android. Outside China, Google and Apple remain the only relevant players. If the operators of the two app stores do not admit an app, there is no realistic alternative to get the app to market.⁶⁷ Since apps require specific programming based on the operating system, the two app stores are not necessarily substitutable.⁶⁸ Similarly, as many users tend to buy into only one of the smartphone ecosystems (single home), any developer who aims to reach certain users or user groups will be limited to the one app store that corresponds with the operating system that the users in question have adopted.⁶⁹ Only the most sophisticated users will “sideload” apps via third-party app stores, which could jeopardize existing warranties for the device.⁷⁰

Applications that provide communication infrastructure most likely depend on access to both app stores to enable sufficient coverage.⁷¹ Even the notoriously exclusive discussion platform, Clubhouse, ultimately had to offer an Android version in light of stagnating download numbers in addition to its initial focus on Apple customers.⁷² By deciding which applications to admit, the app stores also indirectly define their users’ communicative affordances.

66. Case C-131/12, *Google Spain SL v. Agencia Española de Protección de Datos*, 2014 ECLI:EU:C:2014:317; see also Robert C. Post, *Data Privacy and Dignitary Privacy: Google Spain, the Right to Be Forgotten, and the Construction of the Public Sphere*, 67 DUKE L.J. 981 (2018).

67. Nikolas Guggenberger, *The Essential Facilities Doctrine in the Digital Economy: Dispelling Persistent Myths*, 23 YALE J.L. & TECH. 301, 316–18 (2021).

68. Complaint at 16–19, *Epic Games, Inc. v Apple, Inc.*, 13. Aug. 2020 (N.D. Cal.).

69. Guggenberger, *supra* note 67, at 317.

70. *Id.*

71. Damien Geradin & Dimitrios Katsifis, *The Antitrust Case Against the Apple App Store*, J. COMPETITION L. & ECON. 37 (2021); Guggenberger, *supra* note 67, at 317–18.

72. Guggenberger, *supra* note 67, at 318 n.72; Cristina Criddle, *Clubhouse Launches on Android as App Downloads Collapse*, BBC NEWS (May 10, 2021), <https://www.bbc.com/news/technology-57058516>; Kim Lyons & Jon Porter, *Clubhouse Comes to Android after More than a Year of iOS Exclusivity*, VERGE, <https://www.theverge.com/2021/5/9/22424399/clubhouse-android-app-release-date-news-features> (last visited May 13, 2021).

B. TWO LEVERS OF POWER

The conventional wisdom⁷³ explaining market concentration in the digital economy centers on two, mutually reinforcing levers of power: network effects and data.⁷⁴ Network effects result from network externalities, which describe the value additional users generate for other participants by creating new connections and enabling additional transactions. In the 1970s, Roland Artle and Christian Averous based their model of the telephone network on this assumption,⁷⁵ shortly before Jeffrey Rohlfs formulated a more general version of the relationship between the number of users and the value generated by the network.⁷⁶ Put simply, the more users a network connects and transactions it enables, the more valuable it becomes.⁷⁷ Where platforms serve at least two different sides of a market, network effects also manifest indirectly. They manifest on opposite sides of the market. For instance, app developers benefit from a large smartphone user base, while smartphone users benefit from the diversity of offers in an app store.

To be clear, under the current legal framework, strong positive network effects do not generally prevent competition. Rather, the presence of network effects frontloads competition into a short period prior to the tipping of the market. Investments during that period tend to be large, with platforms subsidizing their services—oftentimes over years—before hoping to turn a (monopoly) profit. Lina Khan detailed this strategy for the e-commerce platform Amazon.⁷⁸ In a world teeming with rapid technological changes of whole industries, this sequence can theoretically lead to Schumpeterian cycles of innovation through replacement. Especially in an architecture like the internet, where innovation might be added as a new layer on top of existing infrastructure, the risk of innovation foreclosure is real.

73. See JOHN KENNETH GALBRAITH, *THE AFFLUENT SOCIETY* 6–16 (Houghton Mifflin 40th anniversary ed. 1998) (analyzing the dynamics of accepted narratives).

74. See DAVID SINGH GREWAL, *NETWORK POWER: THE SOCIAL DYNAMICS OF GLOBALIZATION* 26 (2008) (observing network power as a result of network effects and the crowding out of alternatives); Marco Iansiti, *The Value of Data and Its Impact on Competition* 3 (Harv. Bus. School NOM Unit Working Paper Nos. 22–002, 2021).

75. Roland Artle & Christian Averous, *The Telephone System as a Public Good: Static and Dynamic Aspects*, 4 BELL J. ECON. & MGMT. SCI. 89, 90, 97–98 (1973).

76. Jeffrey Rohlfs, *A Theory of Interdependent Demand for a Communications Service*, 5 BELL J. ECON. & MGMT. SCI. 16, 16 (1974) (“The utility that a subscriber derives from a communications service increases as others join the system.”).

77. Artle & Averous, *supra* note 75, at 90, 97–98 (building on telephone networks).

78. Lina M. Khan, *Amazon’s Antitrust Paradox*, 126 YALE L.J. 710 (2017).

Once the market tips in favor of the leading platform, the incentives of the platform shift—economically and politically.⁷⁹ As the network-effect-induced value gap between the incumbent platform and its rivals becomes an insurmountable market entry barrier, the quality of the service and innovation lose import: the advantages of size trump other features.⁸⁰ In the early stages, platforms often rely on open architectures, inviting downstream market participants into their ecosystems, to spur growth while competing for the market.⁸¹ Once they have passed the market tipping point, they tend to close in to increase the efficiency of high-volume transactions or profits by excluding competitors.⁸²

The second major lever of power is data. Sophisticated algorithms rely on huge data sets to draw inferences of value to the platforms,⁸³ enabling personalized content feeds to increase users' engagement and personalized advertisements to capitalize on that engagement. The incumbents' large data sets and their potential to continue collecting new data on an ongoing basis have become determining market entry barriers for nascent competitors.⁸⁴

Multiple factors contribute to the concentrating effects of data. Data collection and processing reveal powerful economies of scale; it comes at near-zero marginal costs. Adding to that, data are relational; they reflect relationships between people, things, or conditions.⁸⁵ In economic terms, data's social dimension explains why the aggregate of a data set can be much

79. Mark Armstrong, *Competition in Two-Sided Markets*, 37 RAND J. ECON. 668, 668–70 (2006); Nikolas Guggenberger, *Essential Platforms*, 24 STAN. TECH. L. REV. 237, 282–83 (2021).

80. First Amended Complaint at 3, *FTC v. Facebook*, No. 1:20-cv-03590, Doc. 75-1 (D.D.C. Aug. 19, 2021); GREWAL, *supra* note 74, at 29.

81. See Geoffrey Parker & Marshall Van Alstyne, *Innovation, Openness, and Platform Control*, 64 MGMT. SCI. 3015 (2018).

82. First Amended Complaint at 4–5, 12–14, *FTC v. Facebook*, No. 1:20-cv-03590, Doc. 75-1. Champions of the one-monopoly-rent-theorem doubt the ability to increase profits by crowding out downstream competitors. See ROBERT H. BORK, *THE ANTITRUST PARADOX: A POLICY AT WAR WITH ITSELF* 140–41; 372–75 (1978); Richard A. Posner, *The Chicago School of Antitrust Analysis*, 127 U. PA. L. REV. 925, 927, 937 (1979). Yet, the necessary condition for the theorem remain exceptional, especially in digital markets. See JONATHAN B. BAKER, *THE ANTITRUST PARADIGM: RESTORING A COMPETITIVE ECONOMY* 85–86 (2019); VAN SCHEWICK, *INTERNET ARCHITECTURE AND INNOVATION*, *supra* note 29, at 225–82 (focusing on internet access); Einer Elhauge, *Tying, Bundled Discounts, And the Death of the Single Monopoly Profit Theory*, 123 HARV. L. REV. 397, 400–401 (2009); Khan, *supra* note 45, at 1093–94.

83. Alicia Solow-Niederman, *Information Privacy and the Inference Economy*, 117 NW. U. L. REV. 357 (2022).

84. Zachary Abrahamson, *Essential Data*, 124 YALE L.J. 867 (2014); Salomé Viljoen, *Democratic Data: A Relational Theory For Data Governance*, 131 YALE L.J. 573, 587 (2021) (“greater access to high quality data is a key competitive advantage”).

85. Viljoen, *supra* note 84, at 603–13.

more valuable to a platform than its individual data points to the contributing users.⁸⁶ One user's contribution allows the platform to infer more information with higher accuracy about other users.⁸⁷

Data collection and network effects mutually reinforce each other.⁸⁸ On the one hand, data collection builds on and benefits from network effects; on the other hand, it exacerbates the power of networks. Large networks aggregate large amounts of data. If network effects tip the market, they also tip the potential for data collection. Similarly, data aggregation allows for better network management, reducing the impacts of congestion. More granular personalization of content can mitigate otherwise negative network effects, satisfying users' preferences against exposures to certain types of content or individuals.

The dynamics of market entry barriers based on the attributes of network effects and data outshine the more innocent explanation for concentration in the digital public sphere: innovation, quality, and price. A narrative only focusing on the platforms' services would have a hard time elucidating why nascent competition fails to make inroads despite novel or superior features and considerable capital backing. Google's attempt at creating its own social media platform, Google+, provides a prime example. It failed to gain noticeable traction relative to the already established Facebook network, causing Google to eventually gut the project.⁸⁹ Where emerging hopefuls come close to challenging the core business of the incumbent platforms, the incumbents have bought up the nascent competition. Instagram falls into that category, as do countless others.⁹⁰

Neither the presence of network effects nor the reliance on data-driven business models necessarily leads to market concentration. The level of concentration rather depends on the socio-legal framework shaping the market. Affordances of control, protections of ownership, and exclusivity play a major role, as they allow platforms to privatize the value of networks and

86. Dirk Bergemann, Alessandro Bonatti & Tan Gan, *The Economics of Social Data* (Feb. 2, 2021), <https://econpapers.repec.org/paper/cwlcwldpp/2203.htm>; Bruce Schneider, *The Myth of the "Transparent Society,"* WIRED (Jun. 3, 2000), <https://www.wired.com/2008/03/securitymatters-0306/> ("existing power as the exponent in an equation that determines the value . . . of more information").

87. Bergemann et al., *supra* note 86.

88. Daniel McIntosh, *We Need to Talk about Data: How Digital Monopolies Arise and Why They Have Power and Influence*, 23 J. TECH. L. & POLY 185, 193 (2019) (identifying "positive feedback loops").

89. First Amended Complaint at 61–62, *FTC v. Facebook*, No. 1:20-cv-03590, Doc. 75-1 (D.D.C. Aug. 19, 2021).

90. U.S. H.R. MAJORITY STAFF, INVESTIGATION OF COMPETITION IN DIGITAL MARKETS 423–30 (2020).

data.⁹¹ On the basis of the current socio-legal framework defining the digital economy, however, two levers of power, network effects and the characteristics of data, all but inevitably translate into elevated levels of concentration if not outright monopolization.

C. THREE DIMENSIONS OF BOTTLENECK POWER

The digital bottlenecks' levers of power extend to three dimensions: market power, political power, and cultural power. Generally, market power provides the basis for digital platforms' cultural and political influence, not least because markets are the defining organizational structure of the digital public sphere.⁹²

Market power is often defined as “the ability to raise prices profitably by restricting output.”⁹³ Monopoly power, the central condition for antitrust liability, describes the ability to raise prices substantially for a significant period—a double qualification of market power.⁹⁴ The question looming behind any assessment of market power encompasses the *potential* to act unconstrained by market forces; the actual exercise of that power remains irrelevant.⁹⁵ The notion of market power is usually tied to a relevant market, which describes the categorical and regional boundaries in which alternative offers can exert competitive pressures on the incumbents. Products and services fall into one market if they are “reasonably interchangeable” from the

91. Guggenberger, *supra* note 16.

92. See Khan, *supra* note 2, at 961; Marshall Steinbaum & Maurice E. Stucke, *The Effective Competition Standard: A New Standard for Antitrust*, 87 U. CHI. L. REV. 595, 603 (2020).

93. *Ohio v. Am. Express Co.*, 138 S. Ct. 2274, 2288 (2018); PHILLIP E. AREEDA & HERBERT HOVENKAMP, *ANTITRUST LAW: AN ANALYSIS OF ANTITRUST PRINCIPLES AND THEIR APPLICATION* ¶ 501 (5th ed. 2020). See *Am. Tobacco Co. v. United States*, 328 U.S. 781, 811 (1946) (concerning a combination: “power exists to raise prices or to exclude competition when it is desired to do so”); *United States v. Du Pont & Co.*, 351 U.S. 377, 391 (1956) (“the power to control prices or exclude competition”); *Fortner Enterprises v. U.S. Steel*, 394 U.S. 495 (1969), 394 U.S. 495, 503 (1969); *Jefferson Parish Hospital Dist. No. 2 v. Hyde*, 466 U.S. 2, 13–14 (1984) (“some special ability . . . to force a purchaser to do something that he would not do in a competitive market”). See also *Eastman Kodak Co. v. Image Tech. Servs., Inc.*, 504 U.S. 451, 464 (1992); Thomas G. Krattenmaker, Robert H. Lande & Steven C. Salop, *Monopoly Power and Market Power in Antitrust Law*, 76 GEO. L.J. 241, 525 (1987); Richard A. Posner & William M. Landes, *Market Power in Antitrust Cases*, 94 HARV. L. REV. 937, 946 (1981).

94. AREEDA & HOVENKAMP, *supra* note 93, ¶¶ 500–501; Einer Elhauge, *Defining Better Monopolization Standards*, 56 STAN. L. REV. 253, 257–58 (2003); Daniel J. Gifford & Robert T. Kudrle, *The Law and Economics of Price Discrimination in Modern Economies: Time for Reconciliation*, 43 U.C. DAVIS L. REV. 1235, 1245 (2010).

95. *Am. Tobacco Co. v. United States*, 328 U.S. at 811.

perspective of the customer.⁹⁶ While antitrust doctrine developed tools aiming to concretize that assessment, the Supreme Court in *Cellophane* acknowledged the necessarily indefinite nature of the underlying criteria.⁹⁷ As shown above, Facebook, YouTube, Google Search, and the app store operators all possess significant leeway to act independent of market forces.⁹⁸ Despite the “actual market realities,”⁹⁹ however, none of that guarantees that courts will recognize the companies’ positions as sufficient to constitute monopoly power under current antitrust doctrine.¹⁰⁰

Second, consider the political dimension of digital platforms’ power, resulting from their control over crucial mediums of communication.¹⁰¹ Within the subcategory of communicative governance, this power includes setting and enforcing rules for communication via terms of service. January 2021 provided a remarkable demonstration of control: after a violent attack on the U.S. Capitol, Facebook and Twitter banned former President Trump from using their platforms.¹⁰² With their unprecedented move, two companies, tightly controlled by two men, Mark Zuckerberg and Jack Dorsey, singlehandedly redefined national discourse.¹⁰³ YouTube followed suit and shut down Mr. Trump’s channel.¹⁰⁴ By several accounts, the deplatforming

96. *United States v. Du Pont & Co.*, 351 U.S. at 395–96 (“no more definite rule can be declared than that commodities reasonably interchangeable by consumers for the same purposes make up that ‘part of the trade or commerce,’ monopolization of which may be illegal.”).

97. *Id.* The most common approach relies on the SSNIP test, asking whether a small, but significant increase in price by a hypothetical monopolist providing the product or service would cause customers to opt for an alternative, see Sean P. Sullivan, *Modular Market Definition*, 55 U.C. DAVIS L. REV. 1091 (2021). The price does not need to reflect a monetary payment.

98. *See Order, Epic Games, Inc. v. Apple, Inc.*, No. 4:20-cv-05640, Doc. 48 (N.D. Cal. 2020); Complaint, 13. Aug. 2020; Complaint, *Epic, Inc. v. Google, LLC*, 13. Aug. 2020 (N.D. Cal.); First Amended Complaint at 60–72, *FTC v. Facebook*, No. 1:20-cv-03590, Doc. 75-1 (D.D.C. Aug. 19, 2021).

99. *Eastman Kodak Co. v. Image Tech. Servs., Inc.*, 504 U.S. 451, 466–67 (1992); *Ohio v. Am. Express Co.*, 2018 138 S. Ct. 2274, 2285.

100. *See infra* Part III.E.

101. *See* C. EDWIN BAKER, *MEDIA CONCENTRATION AND DEMOCRACY: WHY OWNERSHIP MATTERS* 18 (2007) (pointing at “the ‘Berlusconi’ effect” enabling a candidate with no political platform to leverage his media empire).

102. Steven Levy, *A Trump Ban Is Easy. Fixing Facebook and Twitter Will Be Hard*, WIRE (Aug. 1, 2021), <https://www.wired.com/story/plaintext-trump-ban-easy-fixing-facebook-twitter-hard/>.

103. Prasad Krishnamurthy & Erwin Chemerinsky, *How Congress Can Prevent Big Tech from Becoming the Speech Police*, THEHILL (Feb. 18, 2021), <https://thehill.com/opinion/judiciary/539341-how-congress-can-prevent-big-tech-from-becoming-the-speech-police>.

104. Kari Paul, *YouTube Extends Ban on Trump amid Concerns about Further Violence*, GUARDIAN (Jan. 26, 2021), <http://www.theguardian.com/us-news/2021/jan/26/youtube-trump-ban-suspension>.

worked¹⁰⁵—at least in the short run. Disinformation related to the election immediately plummeted on mainstream platforms. While fringe platforms did experience increased popularity, they were unable to match Facebook and Twitter’s reach.

Numerous other examples paint the same picture of centralized political power over discourse. Facebook, YouTube, and Twitter have inhabited central roles during recent social movements, including the Arab Spring, #MeToo, and the BlackLivesMatter protests for social justice.¹⁰⁶ They successfully slowed the spread of the *New York Post*’s story on Hunter Biden in the lead-up to the 2020 Presidential election.¹⁰⁷ Facebook’s voter drive campaigns have significant impacts on voter turnout¹⁰⁸—especially in competitive elections. Facebook also relies on its reach to directly exert political power. Recent reporting revealed that Mark Zuckerberg signed off on “Project Amplify,” an attempt “to show people positive stories about the social network” in their newsfeeds.¹⁰⁹ It remains to be seen whether the campaign improves the company’s image. Regardless, Meta’s executives presumably deemed the potential public backlash against the company’s self-promotion worthwhile considering the campaign’s promise.

Third and finally, digital bottlenecks wield cultural power. This actual and alleged cultural power represents one of the most contested and criticized aspects of platforms’ role in discourse. Allegations of viewpoint bias in moderation practices and content amplification have become commonplace. While anti-conservative bias is not proven and right-wing commentators

105. Adrian Rauchfleisch & Jonas Kaiser, *Deplatforming the Far-Right: An Analysis of YouTube and BitChute* (Jun. 15, 2021), <https://papers.ssrn.com/abstract=3867818>.

106. TUFEKCI, *TWITTER AND TEAR GAS*, *supra* note 1, at 118–26; Jonathan M. Cox, *The Source of a Movement: Making the Case for Social Media as an Informational Source Using Black Lives Matter*, 40 *ETHNIC AND RACIAL STUDIES* 1847, 1852 (2017) (“[the] majority of the students in the study indicated that they got their ‘facts’ about the BLM movement from social media”); Miller et al., *supra* note 33, at 251; Marcia Mundt, Karen Ross & Charla M. Burnett, *Scaling Social Movements Through Social Media: The Case of Black Lives Matter*, 4 *SOC. MEDIA + SOC’Y* 1 (2018).

107. Elizabeth Dvoskin, *Facebook and Twitter Take Unusual Steps to Limit Spread of New York Post Story*, *WASH. POST* (Oct. 15, 2020), <https://www.washingtonpost.com/technology/2020/10/15/facebook-twitter-hunter-biden/>.

108. Niraj Chokshi, *Facebook Helped Drive a Voter Registration Surge, Election Officials Say*, *N.Y. TIMES* (Oct. 12, 2016), <https://www.nytimes.com/2016/10/13/us/politics/facebook-helped-drive-a-voter-registration-surge-election-officials-say.html>.

109. Ryan Mac & Sheera Frenkel, *No More Apologies: Inside Facebook’s Push to Defend Its Image*, *N.Y. TIMES* (Sept. 21, 2021), <https://www.nytimes.com/2021/09/21/technology/zuckerberg-facebook-project-amplify.html>.

dominate charts of Facebook's most viewed contributions,¹¹⁰ it is also clear that a universal platform that curates content cannot be neutral in a general sense.¹¹¹ After all, any admission and ranking of content involves evaluations of content.

The dominant platforms define many social norms of communication, providing incubators for cultural trends and movements.¹¹² Admittedly, some of these norms, like the prohibition of nudity and certain types of harassment, mirror preexisting social norms. But as new media has matured, the new norms have become more than just a replica of their offline ancestors. Facebook's community standards directly frame what can be said, how it can be said, and what exposure that content receives. Instagram has enabled an entirely new profession, that of the *influencer*. YouTube's algorithm, its compensation scheme, and moderation practices forge incentive structures for troves of artists and entertainers.

The ability to drive cultural developments through design choices is a form of cultural power. As danah boyd explains, architectural choices matter for deliberation, drawing a parallel to seating arrangements in classrooms.¹¹³ These design choices may consist of features, like Instagram's filters or YouTube's recommendation algorithm. Given the scale of the incumbent platforms, small changes in the architecture can influence entire patterns of human behavior, knowledge, and expectations, which reverberate in a society's cultural downstream. Moreover, the medium itself shapes content, as Neil Postman shows regarding television.¹¹⁴ Even where impulses come from individual users and are adopted in a bottom-up fashion,¹¹⁵ users ultimately lack power to determine their implementation.

110. Miles Parks, *Outrage As A Business Model: How Ben Shapiro Is Using Facebook To Build An Empire*, NPR (July 19, 2021), <https://www.npr.org/2021/07/19/1013793067/outrage-as-a-business-model-how-ben-shapiro-is-using-facebook-to-build-an-empire>.

111. Anupam Chander & Vivek Krishnamurthy, *The Myth of Platform Neutrality*, 2 GEO. L. TECH. REV. 400 (2018).

112. See Amy Adler & Jeanne C. Fromer, *Memes on Memes and the New Creativity*, 97 N.Y.U. L. REV. 453, 478 (2022) (discussing “memes as paradigmatic of contemporary cultural expression”).

113. DANAH BOYD, *IT'S COMPLICATED: THE SOCIAL LIVES OF NETWORKED TEENS* 10 (2014).

114. NEIL POSTMAN, *AMUSING OURSELVES TO DEATH: PUBLIC DISCOURSE IN THE AGE OF SHOW BUSINESS* 7–10, 46–59, 76, 144–45 (1985). See also MARSHALL MCLUHAN, *UNDERSTANDING MEDIA: THE EXTENSIONS OF MAN* 7–21 (1994).

115. The now notorious use of hashtags to organize information, for example, was introduced by Chris Messina, as a lone user suggestion. Twitter, meanwhile, had insisted, “These things are for nerds. They’re never going to catch on,” before eventually adopting the technique. Elana Zak, *How Twitter’s Hashtag Came to Be*, WALL ST. J. (Oct. 3, 2013), <https://www.wsj.com/articles/BL-DGB-29742>.

In sum, incumbent platforms benefit from two levers of power—network effects and data—that confer market power, political power, and cultural power. The most prominent transmission of that power is witnessed in platform design, content management, and content moderation.

III. MONOPOLY HARM AND CONTENT MODERATIONS' SYSTEMIC SHORTCOMINGS

Digital monopolies cause dysfunction in the digital public sphere. They undermine cultural and democratic discourse and hurt stakeholders. I address a selection of monopoly harms in the following sections.

A. THREATS TO PUBLIC DISCOURSE

Digital monopolies threaten functional discourse as a means of political and cultural self-governance and of exercising personal liberty, autonomy, and agency. First, and most importantly, individual content moderation decisions are inherently prone to errors,¹¹⁶ and monopolistic structures amplify the errors' salience. In essence, the platforms' dominant positions raise the stakes of every individual content moderation decision. Whether humans or machines ultimately moderate online content, they are inherently fallible.¹¹⁷ Each might miss context, misidentify clues, or simply misjudge content, as they have done in the past.¹¹⁸ Entrusting monopolies with assessments of information on an unlimited array of subjects and across myriad nuances can transform minute errors into systemic failures. Moreover, quality content moderation does not scale as well as the rest of the network. While platforms try to outsource the process to machine-learning algorithms,¹¹⁹ only human

116. douek, *supra* note 5. See, e.g., Alex Heath, *A Facebook Bug Led to Increased Views of Harmful Content over Six Months*, VERGE (May 31, 2022), <https://www.theverge.com/2022/3/31/23004326/facebook-news-feed-downranking-integrity-bug?s=09> (“Instead of suppressing posts from repeat misinformation offenders that were reviewed by the company’s network of outside fact-checkers, the News Feed was instead giving the posts distribution, spiking views by as much as 30 percent globally.”).

117. douek, *supra* note 5, at 792 (“It is not just hard to get content moderation right at this scale; it is impossible.”); James Grimmelman, *To Err Is Platform*, KNIGHT FIRST AMEND. INST. (Apr. 6, 2018), <https://knightcolumbia.org/content/err-platform> (“Platforms make mistakes about which user-generated content is legal.”).

118. E.g., Mark Scott & Mike Isaac, *Facebook Restores Iconic Vietnam War Photo It Censored for Nudity*, N.Y. TIMES (Sep. 9, 2016), <https://www.nytimes.com/2016/09/10/technology/facebook-vietnam-war-photo-nudity.html>.

119. Lisa Parks, *Dirty Data: Content Moderation, Regulatory Outsourcing, and The Cleaners*, 73 FILM Q. 11, 12 (2019).

moderators can offer sub-surface awareness of culture, humor, irony, and language that quality content moderation requires.¹²⁰

Former President Trump's ban from social media might be the most well-known example of an individual moderation decision with extreme salience. In a catch-22 whirlwind, Facebook handed off responsibility for articulating a rationale for the indefinite ban to its Oversight Board, which, in turn, requested that Facebook revisit the case within two years and establish clearer guidelines to site bans.¹²¹ Other world leaders, like German Chancellor Angela Merkel and UK Prime Minister Boris Johnson, articulated their concerns about the ban,¹²² while condemning President Trump's incitement of insurrection.¹²³ World leaders' unease with the decision focused on the character of the decision-making entities as private monopolies. Indeed, it is important to distinguish different dimensions of the decision: the choice to ban the President, the decision-making mechanism of the platforms, and the platforms' position in the marketplace. On substance, there are good arguments to deny any head of state or government a private digital megaphone through which they can amplify misinformation or stoke public rage and political violence. These arguments may be borne out of concern for the integrity of democratic institutions or reflect anticipated user preferences not to be exposed to this kind of content. Leaving such decisions to two tightly controlled corporations, however, places too much trust in too few hands.

January 2021 provided another example of digital platforms¹²⁴ outsized power in public discourse: Apple and Google removed Parler, a social media platform (in)famous for its right-wing conspiratorial content, from their app stores due to insufficient content moderation in the wake of the storming of the U.S. Capitol.¹²⁵ Apple and Google's concerted banning of Parler effectively shut the social network down. Even as Parler eventually secured subpar web

120. Cambridge Consultants, *Use of AI in Online Content Moderation*, OFCOM 5–6 (July 18, 2019), <https://www.ofcom.org.uk/research-and-data/internet-and-on-demand-research/online-content-moderation>.

121. Former President Trump's suspension, 2021-001-FB-FBR, OVERSIGHT BOARD, <https://www.oversightboard.com/decision/FB-691QAMHJ>.

122. Charlie Cooper, *Johnson Urges Social Media 'Debate' after Trump Twitter Ban*, POLITICO (Jan. 13, 2021), <https://www.politico.eu/article/boris-johnson-urges-social-media-debate-after-trump-twitter-ban/>.

123. *Capitol Riots: Boris Johnson Condemns Donald Trump for Sparking Events*, BBC NEWS (Jan. 7, 2021), <https://www.bbc.com/news/uk-politics-55580806>.

124. Julie E. Cohen, *Law for the Platform Economy*, 51 U.C. DAVIS L. REV. 133, 143 (2017) ("Platforms represent infrastructure-based strategies for introducing friction into networks.").

125. Jack Nicas, *Parler Pitched Itself as Twitter Without Rules. Not Anymore, Apple and Google Said*, N.Y. TIMES (Jan. 9, 2021), <https://www.nytimes.com/2021/01/08/technology/parler-apple-google.html>.

hosting services for its website from a fringe provider,¹²⁶ it has remained severely limited without access to the app stores. The unilateral decisions of two companies redefined the affordances of the digital public sphere. One might, with good reason, disapprove of Parler, its content, or its users. However, two men, Sundar Pichai and Tim Cook, effectively determining the fate of an entire communication ecosystem is indicative of immense concentration of unaccountable power over public discourse¹²⁷ and places outsized trust in the infallibility and integrity of too few individuals.

Second, the monopolized digital public sphere results in regulatory, architectural, and algorithmic monocultures, susceptible to systemic failures.¹²⁸ Regardless of malicious intent, central control of discourse by a handful of digital platforms introduces fragility and vulnerability into democratic processes. Consider the flaws in Facebook's architecture that allowed for widespread election interference in the 2016 U.S. Presidential election. Foreign agents, domestic interest groups, campaigns, and profit-seeking teenagers exploited Facebook's algorithms, leading to rampant misinformation.¹²⁹ While Facebook has since addressed some of the architectural flaws,¹³⁰ the 2020 Presidential election again saw misinformation campaigns facilitated by Facebook's reach and targeting options.¹³¹ Private regulatory monoculture further contributes to systemic fragility. When one platform controls a bottleneck of discourse through its terms of service, any conceptual flaws in that framework create systemic repercussions. The size of the platform

126. Parler contracted with "Epik, a registrar known for providing a haven to 'deplatformed' far-right-friendly sites" after it had been suspended by Amazon Web Services. Adi Robertson, *Parler is Back Online after a Month of Downtime*, VERGE (Feb. 15, 2021), <https://www.theverge.com/2021/2/15/22284036/parler-social-network-relaunch-new-hosting>.

127. See Krishnamurthy & Chemerinsky, *supra* note 103 (discussing the ban of then President Trump); Kevin Roose, *In Pulling Trump's Megaphone, Twitter Shows Where Power Now Lies*, N.Y. TIMES (Jan. 9, 2021), <https://www.nytimes.com/2021/01/09/technology/trump-twitter-ban.html>; Eugene Volokh, *Treating Social Media Platforms Like Common Carriers?*, 1 J. FREE SPEECH L. 377, 392 (2021).

128. Dan Geer, Rebecca Bace, Peter Gutmann, Perry Metzger, Charles P. Pfleeger, John S. Quarterman & Bruce Schneier, *CyberInsecurity: The Cost of Monopoly* (2003), <https://cryptome.org/cyberinsecurity.htm>; Khan, *supra* note 45, at 1073–74.

129. SELECT COMMITTEE ON INTELLIGENCE, *supra* note 8; Confessore, *supra* note 8; Subramanian, *supra* note 8; Rosenberg et al., *supra* note 8. See also Heath, *supra* note 116.

130. Joseph Menn, *Exclusive: Facebook to Ban Misinformation on Voting in Upcoming U.S. Elections*, REUTERS (Oct. 16, 2018), <https://www.reuters.com/article/us-facebook-election-exclusive-idUSKCN1MP2G9>.

131. Davey Alba, *On Facebook, Misinformation Is More Popular Now Than in 2016*, N.Y. TIMES (Oct. 12, 2020), <https://www.nytimes.com/2020/10/12/technology/on-facebook-misinformation-is-more-popular-now-than-in-2016.html>; Vera Bergengruen & Billy Perrigo, *Facebook Acted Too Late to Tackle Misinformation on 2020 Election, Report Finds*, TIME (Mar. 23, 2021), <https://time.com/5949210/facebook-misinformation-2020-election-report/>.

amplifies potential harm, whereas pluralistic arrangements could serve as hedges and circuit-breakers.

Third, market concentration invites governments to instrumentalize platforms for surveillance and suppression as extended bureaucracies,¹³² or as megaphones for propaganda.¹³³ Centralized private control eases enforcement of state interests. It provides the state with one counterparty and allows government to leverage the reach of the platform. Take the Trump Administration's attempt to bully social media platforms into abstaining from labeling false information, for example. Its potential impact hinged on concentrated markets. While the authoritarian maneuver of tying threats of regulatory changes to demands for ongoing amplification of propaganda failed, a subsequent administration might show more competence. A future administration's deliberately "selective antitrust enforcement"¹³⁴ could serve as a vehicle to force platforms' political collaboration.

The instrumentalization of platforms is part of a broader phenomenon that Jack Balkin calls "New School Speech Regulation."¹³⁵ In contrast to the dominant 20th-century approach of direct state imperatives on discourse, New School Speech Regulation is characterized by three features: "collateral censorship," "public/private cooperation or cooptation," and "private governance by infrastructure owners."¹³⁶ The European Right to be

132. Jack M. Balkin, *Free Speech in the Algorithmic Society: Big Data, Private Governance, and New School Speech Regulation*, 51 U.C. DAVIS L. REV. 1149, 1180–81 (2018) ("Companies like YouTube and Facebook, for example, have created algorithms and policies that decide what is posted or taken down. They have also created private bureaucracies to govern their end-user communities in the interests of the community [and the company's profits]. As these technical abilities and bureaucracies develop, they are subject to cooptation by states; indeed, these bureaucracies develop in part in response to pressure and complaints by states.") (footnotes omitted); Hannah Bloch-Wehba, *Content Moderation as Surveillance*, 36 BERKELEY TECH. L.J. 1297, 1303–31 (2022) (detailing the ways in which policing influences platforms and platforms influence policing); Sangeeta Mahapatra, *Digital Surveillance and the Threat to Civil Liberties in India*, GERMAN INST. FOR GLOB. & AREA STUD. (2021), <https://www.giga-hamburg.de/en/publications/24697659-digital-surveillance-threat-civil-liberties-india/>.

133. See Muiyi Xiao, Paul Mozur & Gray Beltran, *Buying Influence: How China Manipulates Facebook and Twitter*, N.Y. TIMES (Dec. 20, 2021), <https://www.nytimes.com/interactive/2021/12/20/technology/china-facebook-twitter-influence-manipulation.html>.

134. See Darrell M. West & Nicol Turner-Lee, *What to Expect from a Second Trump-Pence Term on Regulation, Antitrust, Online Hate, and China*, BROOKINGS (Aug. 28, 2020), <https://www.brookings.edu/blog/techtank/2020/08/28/what-to-expect-from-a-second-trump-pence-term-on-regulation-antitrust-online-hate-and-china/> (expecting "selective antitrust enforcement" from a second Trump term).

135. Balkin, *Free Speech is a Triangle*, *supra* note 1, at 2015–21; Balkin, *supra* note 132, at 1172–82.

136. Balkin, *supra* note 132, at 1175–76; Balkin, *Free Speech is a Triangle*, *supra* note 1, at 2015.

Forgotten¹³⁷ and the German Network Enforcement Act (“NetzDG”),¹³⁸ the latter of which defines procedures that social media platforms must implement to take down illegal content, fall into that category.¹³⁹ Both regulatory regimes bank on concentrated markets, with problematic consequences for civil liberties. They tend to cause collateral censorship and “raise[] many of the same problems as prior restraint.”¹⁴⁰

Especially where the platforms’ interests are aligned with state demands for surveillance or suppression, it is likely futile to hope they will use their market, political, or cultural power to balance overreaching governments.¹⁴¹ It comes as little surprise that up until recently, none of the platforms within the scope of NetzDG challenged the law in court, despite reasonable expectations of success and users’ lack of standing.¹⁴² While some considered taking legal action against NetzDG when it was originally passed, they ultimately refrained for political reasons. Recently, Alphabet became the first to sue, however, its complaint remained limited to newly added amendments to the law, which required platforms to share user data and further information pertaining to certain takedown decisions with law enforcement agencies.¹⁴³ Overall, the concentrated structures invite cooperation with and cooptation by the state, while providing insufficient assurances that the platforms utilize their power in the best interest of their users’ civil liberties.

Fourth, concentrated private control is incompatible with democratic conceptualizations of public discourse.¹⁴⁴ It exacerbates the threat of bad actors, and undermines the role of the media as a check on power. As network effects quash users’ threat to exit, users also lose say in the definition of the

137. Case C-131/12, *Google Spain SL v. Agencia Española de Protección de Datos*, 2014 ECLI:EU:C:2014:317. See also Post, *supra* note 66.

138. Nikolas Guggenberger, *Das Netzwerkdurchsetzungsgesetz in Der Anwendung [The Network Enforcement Act in Practice]*, 70 NJW 2577 (2017); Nikolas Guggenberger, *Das Netzwerkdurchsetzungsgesetz – Schön Gedacht, Schlecht Gemacht [The Network Enforcement Act – Well Intended, Poorly Done]*, 50 ZRP 98 (2017).

139. Balkin, *Free Speech is a Triangle*, *supra* note 1, at 2029–32.

140. *Id.* at 2016.

141. But see Nicole Perloth, *Apple Sues Israeli Spyware Maker, Seeking to Block Its Access to iPhones*, N.Y. TIMES (Nov. 23, 2021), <https://www.nytimes.com/2021/11/23/technology/apple-nso-group-lawsuit.html>.

142. See NICO GIELEN, NIKOLAS GUGGENBERGER, MAXIMILIAN HEMMERT-HALSWICK, TRISTAN JULIAN TILLMANN, VERENA VOGT, CASPAR ALEXANDER WEITZ & LUCAS WERNER, NETZDG: IM ZWEIFEL GEGEN DIE MEINUNGSFREIHEIT [THE NETWORK ENFORCEMENT ACT: IN DOUBT CONTRA FREE SPEECH] (Nikolas Guggenberger ed., 2020).

143. Daniel Holznagel, *YouTube vs. das NetzDG*, VERFASSUNGSBLOG (July 27, 2021), <https://verfassungsblog.de/youtube-vs-netzdg/>.

144. Krishnamurthy & Chemerinsky, *supra* note 103 (“That private technology platforms exert unparalleled power over political discourse is deeply undemocratic.”).

digital public sphere.¹⁴⁵ Voice, the ability to bring about change from within an organization, provides no equivalent in the platform economy.¹⁴⁶ In the words of FDR's chief antitrust enforcer Thurman Arnold, "[t]he power of great organizations . . . may sometimes be exercised benevolently, but, nevertheless, it is a dictatorial power subject to no public responsibility, which is the antithesis of our democratic tradition."¹⁴⁷ Andrea Prat distinguishes digital media from other industries based on its "indirect effect on welfare through information externalities imposed on the policy process," and warns that, "[c]oncentration may be damaging not only because it has a direct effect on prices and quantities but also because media owners may be able to manipulate democratic decision-making."¹⁴⁸ And what holds for traditional media also applies to digital platforms: concentrated markets facilitate capture, which diminishes democratic accountability in the political economy.¹⁴⁹

Fifth, monopolies exacerbate already problematic incentive structures resulting from platforms' engagement driven business model: tolerating or even amplifying divisive content can attract user attention and stoke engagement. Elevated levels of engagement translate into prospects for more advertising dollars. Platforms, therefore, have incentives to protect divisive figures' spreading of toxic content and misinformation.¹⁵⁰ And because monopolists know that marginal users face enormous switching costs due to network effects, they are hardly constrained by those users' exit potential. Only when the size of a disgruntled group of users within a platform's network approaches a critical mass does that group develop a credible threat of exit or voice.¹⁵¹ The incentives of the platform may then change towards accommodating the majoritarian demand for action, alluding to the advertisement revenues and engagement generated for the platform. In a hypothetical market that is not constructed atop concentrating network effects, many users would presumably have switched to other platforms earlier. Here, the average users' threat of exit is enhanced, forcing platforms to correct their business model's negative consequences.

145. See ALBERT O. HIRSCHMAN, *EXIT, VOICE, AND LOYALTY: RESPONSES TO DECLINE IN FIRMS, ORGANIZATIONS, AND STATES* 21–29 (Harvard University Press 2004).

146. See *id.* at 30–34.

147. Thurman Arnold, *An Inquiry into the Monopoly Issue*, N.Y. TIMES, (Aug. 21, 1938), <https://www.nytimes.com/1938/08/21/archives/an-inquiry-into-the-monopoly-issue-thurman-arnold-holds-that.html>.

148. Andrea Prat, *Media Power*, 126 J. POL. ECON. 1747, 1747 (2018).

149. Andrea Prat, *Measuring and Protecting Media Plurality in the Digital Age: A Political Economy Approach*, KNIGHT FIRST AMEND. INST. 4–7 (Aug. 20, 2020), <https://knightcolumbia.org/content/measuring-and-protecting-media-plurality-in-the-digital-age>.

150. See Horwitz, *supra* note 11.

151. Rozenshtein, *supra* note 28.

Sixth, monopolistic structures impose centrally managed homogeneity of design choices upon discourse, which limits opportunities and stifles innovation.¹⁵² This results in a narrow paradigm for discourse, wedded to attention extraction and private surveillance. Facebook's newsfeed, features, and design choices shape American discourse. YouTube's algorithm defines our video consumption patterns. The monopoly on design choices limits the experimentation with new formats of deliberation. While large platforms constantly run A/B testing on their users to optimize the interface, one can hardly expect discrete improvements or dynamic innovation from these practices. After all, these experiments occur within the paradigm defined by the existing platform and its business model.

B. HARMS TO STAKEHOLDERS

Beyond threats to public discourse, market concentration also harms individual stakeholders. These harms can aggregate at the level of the market or society at large but remain distinct from the more normative conceptualizations of healthy discourse discussed above, as they build on the sum of individual preferences. I detail three dimensions of harm to stakeholders.

First, monopolistic platforms can restrict output to increase prices and profits, leading to worse content moderation, more advertisements, and less privacy across the board.¹⁵³ Whether they know it or not, all users enter into a barter with the online platforms. Users endure advertisements, produce content, engage others, and provide their data—either through deliberate sharing or unconscious extraction of digital traces users leave as byproducts of their online activities. In exchange, platforms provide spaces for communication, organizing information, and moderating content. To increase profits, the platforms can degrade the quality of their services, while maintaining a nominal monetary price of zero vis-à-vis end users.¹⁵⁴ This entails substandard content moderation and excessive advertising. Lower grade content moderation increases the risk of erroneous takedown decisions

152. See Mark A. Lemley & Lawrence Lessig, *The End of End-to-End: Preserving the Architecture of the Internet in the Broadband Era*, 48 UCLA L. REV. 925, 930–31 (2001) (arguing that the lack of central control unleashed innovation on the internet).

153. See John M. Newman, *Antitrust in Attention Markets: Definition, Power, Harm* (U. Miami, Rsch. Paper No. 3745839, 2021), <https://papers.ssrn.com/abstract=3745839>; Prat & Valletti, *supra* note 32.

154. See John M. Newman, *Antitrust in Zero-Price Markets: Applications*, WASH. U. L. REV. 49, 53–82 (2016) (discussing the application of regular market analysis principles in zero price markets); John M. Newman, *Antitrust in Zero-Price Markets: Foundations*, U. PA. L. REV. 149, 158–74 (2015).

harming speakers and viewers alike. And currently, Facebook’s automated systems, for example, detect only “a low-single-digit percent” of content that violates its community standards, exposing users to toxic and violent content.¹⁵⁵

Likewise, monopoly harm may materialize as “attention overcharge,”¹⁵⁶ an exposure to advertisements above competitive levels, which can be understood as an increase in price or degrading of quality.¹⁵⁷ This should not come as a surprise. Consolidation in the local radio market following the 1996 Telecommunications Act allowed for more penetration with advertisements.¹⁵⁸ Assessments that observe an attention oligopoly on the advertisement side of the market and a resulting output reduction in the form of less user attention for advertisers only seemingly contradict the attention overcharge of users.¹⁵⁹ If platforms hold monopoly positions on both sides of the two-sided markets, they can extract too much attention from users—relative to the value of the services they offer—while restricting advertisers’ access to users below competitive levels.¹⁶⁰ At a systemic level, attention overcharge can exacerbate the side-effects of attention-driven business models, including clickbait and addictive dark patterns, which diminish the quality of public discourse overall.

A similar effect unfolds for privacy.¹⁶¹ Monopoly positions allow companies to extract more data than they otherwise could, relative to the value of services they provide. As soon as Facebook had consolidated its position in the market, the company deteriorated privacy protections for users.¹⁶² And the same mechanism that translates large quantities of data into market entry barriers—data’s social dimension¹⁶³—exacerbates the potential for privacy

155. Seetharaman et al., *supra* note 10. To illustrate the problems with video recognition, see Ryan Mac, *Facebook Apologizes After A.I. Puts ‘Primates’ Label on Video of Black Men*, N.Y. TIMES (Sept. 3, 2021), <https://www.nytimes.com/2021/09/03/technology/facebook-ai-race-primates.html>.

156. Newman, *supra* note 153, at 31–35.

157. There is a long-lasting debate on the value of advertisements to consumers. I assume here that the presence of advertisements imposes a net-cost on users.

158. Newman, *supra* note 153, at 34.

159. Prat & Valletti, *supra* note 32.

160. First Amended Complaint at 74–75, FTC v. Facebook, No. 1:20-cv-03590, Doc. 75-1 (D.D.C. Aug. 19, 2021); Prat & Valletti, *supra* note 32. *See also* Newman, *supra* note 153 at 31–35 (but rejecting the conceptualization as two-sided markets).

161. Dina Srinivasan, *The Antitrust Case Against Facebook: A Monopolist’s Journey Towards Pervasive Surveillance in Spite of Consumers’ Preference for Privacy*, 16 BERKELEY BUS. J. 40, 69–81 (2019).

162. *Id.*

163. *See supra* Part I.A.2.

harm. Overall, evermore intrusive surveillance can undermine personal autonomy and chill discourse participation.

Now recall that many digital platforms constitute two-sided markets. Facebook and Google provide advertisers with potential user attention; the app stores connect app developers and app users. Monopoly rent extraction can occur on both sides of the market. This means monopolistic platforms can overcharge advertisers and underpay content creators from vloggers and newspapers to app developers relative to hypothetical competitive conditions.¹⁶⁴ While monopoly rent extraction on the user side of digital platform can lead to lower quality of discourse, attention overcharge, and deteriorating privacy protections, it can also erode the funding base for quality content creation by professional journalists and app developers.

Second, monopolization facilitates discrimination between high-valued and low-valued user groups,¹⁶⁵ exacerbating inequalities in public discourse. As platforms barter with users, they can degrade their services selectively. Two factors play a role here: the users' value to the platform, and the users' ability to switch to alternatives. Celebrities and influencers create more traffic on the platform than ordinary users, and, thus, draw in more revenues from advertisers.¹⁶⁶ These users also tend to have an easier time switching services and inducing others to follow. Influencers tend to be more likely to frequent social circles of early adopters, which reduces the switching costs stemming from network effects. They can choose between Google's Android ecosystem and Apple's more expensive version, accessing applications exclusive to one platform.¹⁶⁷ Even if the high-valued users lack realistic exit options altogether, they tend to command more cultural and political influence, making an investment in their goodwill worthwhile to the platforms.¹⁶⁸

The Wall Street Journal revealed that Facebook “has given millions of . . . high-profile users special treatment,” expressly motivated by the celebrity

164. See RonNell Andersen Jones, *Litigation, Legislation, and Democracy in a Post-Newspaper America*, 68 WASH. U. L. REV. 557, 617–24 (2011) (observing shrinking financial means of newspapers).

165. Steinbaum, *supra* note 11, at 13 (describing discriminatory content moderation as evidence of market power). See also PHILIP M. NAPOLI, AUDIENCE ECONOMICS: MEDIA INSTITUTIONS AND THE AUDIENCE MARKETPLACE 96–111 (2003) (detailing factors defining the value of audiences to advertisers); Philip M. Napoli, *The Audience as Product, Consumer, and Producer in the Contemporary Media Marketplace*, in MANAGING MEDIA FIRMS AND INDUSTRIES 261, 263–66 (2016) (focusing on demographics and gender).

166. Steinbaum, *supra* note 11, at 13.

167. Lyons & Porter, *supra* note 72 (detailing how the social audio platform Clubhouse had been exclusively available on iOS for more than one year).

168. Steinbaum, *supra* note 11, at 13 (referring to “greater bargaining power vis-à-vis the platform”).

users' political influence.¹⁶⁹ A program named XCheck exempted these users from regular content moderation rules.¹⁷⁰ While some of the celebrity users have been "whitelisted," others "are allowed to post rule-violating material pending Facebook employee reviews."¹⁷¹ Complaints about content from high-profile users were routed "into a separate system, staffed by better-trained, full-time employees, for additional layers of review."¹⁷² As content moderation is part of the Facebook's service, XCheck is a form of third-degree price discrimination.¹⁷³ Higher-valued groups of users receive better services.¹⁷⁴ Based on the same logic, subpar investments in content moderation of African American English¹⁷⁵ or minority foreign languages can also be understood as price discrimination.¹⁷⁶ The lack of transparency in the underlying barter relationship between the platform and its users mitigates the risk of public backlash.

To be sure, price discrimination may be possible to some extent in competitive markets with high fixed costs.¹⁷⁷ Even in the digital economy, there remains, however, a strong link between price discrimination and concentration,¹⁷⁸ or market power in the economic sense.¹⁷⁹ Concentration

169. Horwitz, *supra* note 11.

170. *Id.*

171. *Id.*

172. *Id.*

173. Steinbaum, *supra* note 11, at 13. See Gifford & Kudrle, *supra* note 94, at 1241–42.

174. Steinbaum, *supra* note 11, at 13. Alternatively, the practice could be interpreted as product differentiation with some users paying more for a better product.

175. Davidson et al., *supra* note 13, at 32 (finding "substantial racial bias" "in hate speech and abusive language detection datasets"); Sap et al., *supra* note 13, at 1671 ("AAE tweets are more than twice as likely to be labelled as 'offensive' or 'abusive'").

176. Alternatively, one might see different products in different language versions.

177. William J. Baumol & Daniel G. Swanson, *The New Economy and Ubiquitous Competitive Price Discrimination*, 70 ANTITRUST L.J. 661, 667 (2003) ("Just as a negatively-sloping demand curve is not necessarily valid proof of market power, prices above marginal cost do not necessarily indicate the presence of market power, particularly where scale economies are present.").

178. Jonathan B. Baker, *Competitive Price Discrimination: The Exercise of Market Power without Anticompetitive Effects*, 70 ANTITRUST L.J. 643, 644–45, 650 (2003) ("the link between price discrimination and market power is well established"). That said, the precise effects of competition on price discrimination remain highly contested. Ambarish Chandra & Mara Lederman, *Revisiting the Relationship between Competition and Price Discrimination*, 10 AM. ECON. J.: MICROECON. 190, 193 (2018) (identifying a "U-shaped relationship between competition and price decreases").

179. I am concerned with market concentration, irrespective of the qualifiers upon which antitrust doctrine relies. See Gifford & Kudrle, *supra* note 94, at 1243–47.

eases price discrimination, contributing to inequality in public discourse, and price discrimination facilitates the maintenance of monopoly positions.¹⁸⁰

Third, monopolistic market structures can exacerbate exclusionary tendencies in the digital public sphere. The disproportionate takedowns of LGBTQ+ expression on digital platforms provide ample evidence of ongoing marginalization.¹⁸¹ Facebook's position in the marketplace converts racist and sexist biases in ad delivery algorithms¹⁸² from individual discriminatory harm into systemic exclusion. No doubt, the digital revolution has broadened participatory opportunities in discourse and created space for underrepresented voices and marginalized concerns compared to the twentieth century media landscape.¹⁸³ However, benchmarks for access and inclusion should reference today's technological possibilities and not the affordances of twentieth century media. By that metric, today's digital public sphere falls short of what pluralistic structures could provide. At least since the 1990s, digital technology has redefined costs and scarcities in the communicative process.¹⁸⁴ As entry barriers to participation can no longer be blamed on technology or costs, market structure becomes the decisive barrier. While the long history of race and gender-based discrimination debunks the notion that functioning markets sufficiently punish and organically eliminate such discrimination,¹⁸⁵ monopolized markets fare worse.

180. Herbert Hovenkamp, *Market Power and Secondary-Line Differential Pricing*, 71 GEO. L.J. 1157, 1166–67 (1983).

181. Waldman, *supra* note 12 (“nonnormative and LGBTQ+ sexual expression is disproportionately taken down, restricted, and banned.”). *See also* Albert & Rigot, *supra* note 12.

182. *See* Muhammad Ali, Piotr Sapiezynski, Miranda Bogen, Aleksandra Korolova, Alan Mislove & Aaron Rieke, *Discrimination through Optimization: How Facebook's Ad Delivery Can Lead to Biased Outcomes*, 3 PROCEEDINGS OF THE ACM ON HUMAN-COMPUTER INTERACTION 1 (2019); Haan, *supra* note 62, at 656–58; Jinyan Zang, *How Facebook's Advertising Algorithms Can Discriminate By Race and Ethnicity*, TECH. SCI. (Oct. 19, 2021), <https://techscience.org/a/2021101901/>. On the financial and exclusionary harm of algorithmic bias more generally, see Jane Chung, *Racism In, Racism Out*, Public Citizen (2021).

183. Miller et al., *supra* note 33, at 248, 250–52 (describing social media as “additional outlet for coping with the negative effects of racial discrimination”). *See* Leonard M. Baynes, *White Out: The Absence and Stereotyping of People of Color by the Broadcast Networks in Prime Time Entertainment Programming*, 45 ARIZ. L. REV. 293 (2003); Froomkin, *supra* note 28, at 805–07 (detailing the male dominance in internet governing bodies).

184. Richard L. Hasen, *Cheap Speech and What It Has Done (To American Democracy)*, 16 FIRST AMEN. L. REV. 200 (2018); Eugene Volokh, *Cheap Speech and What It Will Do*, 104 YALE L.J. 1808 (1995).

185. *See* MILTON FRIEDMAN, CAPITALISM AND FREEDOM 108–18 (University of Chicago Press 40th anniversary ed. 2002).

C. ANTITRUST DOCTRINE'S COMPENSATORY FAILURE

Contemporary antitrust doctrine fails to compensate for the concentrating effects in the digital economy, and thus to mitigate monopoly harm. This omission, in turn, contributes to the legal construction of digital monopolies. Since the 1970s, courts and the Department of Justice have become increasingly lenient toward mergers.¹⁸⁶ Unilateral conduct faced decreasing scrutiny until the recent lawsuits against Facebook and Google.¹⁸⁷ But even if these lawsuits prove successful, without a broader shift in the current antitrust paradigm, enforcement actions alone will not effectuate pluralistic discourse. Antitrust doctrine fails to offset the concentrating effects for three main reasons.

The first source of failure is contemporary antitrust law's exclusive spotlight on consumer welfare effects,¹⁸⁸ which tolerates significant levels of concentration.¹⁸⁹ The Supreme Court has long embraced a purely efficiency-centered approach over protecting "diffused industry structures"—despite indications of Congressional intent to the contrary when passing the Sherman Act.¹⁹⁰ When the Court recently articulated the grounding of antitrust law in

186. Mark Glick, Catherine Ruetschlin & Darren Bush, *Big Tech's Buying Spree and the Failed Ideology of Competition Law*, 72 U.C. HASTINGS L.J. 465, 505–06 (2021).

187. See Complaint, United States v. Google, LLC, No. 1:20-cv-03010-APM, Doc. 1 (D. D.C. Oct. 20, 2020); Complaint, Texas v. Google, LLC, No. 4:20-cv-00957 (E.D. Tex. Dec. 16, 2020); Complaint, FTC v. Facebook, No. 1:20-cv-03590, Doc. 3 (Dec. 9, 2020); Memorandum Opinion, No. 1:20-cv-03590, Doc. 73 (D.D.C. 2021); see also Jonathan B. Baker, *The Case for Antitrust Enforcement*, 17 J. ECON. PERSP. 27, 33–35 (2003) (observing that "[t]he antitrust enforcement agencies pursue relatively few monopolization cases at any given time"); William E. Kovacic, *Designing Antitrust Remedies for Dominant Firm Misconduct*, 31 1285, 1287–88 n.23 (1999) (providing an account of monopolization case brought by federal antitrust agencies over time); Steinbaum & Stucke, *supra* note 92, at 599; Fiona Scott Morton, *Modern U.S. Antitrust Theory and Evidence amid Rising Concerns of Market Power and Its Effects: An Overview of Recent Academic Literature*, EQUITABLE GROWTH 6 (2019), <http://www.equitablegrowth.org/research-paper/modern-u-s-antitrust-theory-and-evidence-amid-rising-concerns-of-market-power-and-its-effects/>.

188. See BORK, *supra* note 82, at 51 (expressly urging to focus on consumer welfare, but, on substance, conflating consumer welfare with total welfare).

189. WILLIAM N. ESKRIDGE & JOHN A. FERREJOHN, A REPUBLIC OF STATUTES: THE NEW AMERICAN CONSTITUTION 121 (2010); Prat, *supra* note 149, at 9. See also BAKER, *supra* note 101, at 56–60; BENJAMIN M. COMPAINE & DOUGLAS GOMERY, WHO OWNS THE MEDIA? COMPETITION AND CONCENTRATION IN THE MASS MEDIA INDUSTRY 547 (3d ed. 2000) (distinguishing between the "conventional antitrust standard" and the "sociopolitical standard," but arguing that the former is meant to promote the latter).

190. ESKRIDGE & FERREJOHN, *supra* note 189, at 121, 126–27; Eleanor M. Fox, *Modernization of Antitrust: A New Equilibrium*, 66 CORNELL L. REV. 1140, 1146–55, 1182 (1981); Maurice E. Stucke, *Reconsidering Antitrust's Goals*, 53 B.C. L. REV. 551, 559–62 (2012); Sandeep Vaheesan, *The Profound Nonsense of Consumer Welfare Antitrust*, 64 ANTITRUST BULL. 479, 480–

“the theory that market forces ‘yield the best allocation’ of the Nation’s resources” in *NCAA v. Alston*,¹⁹¹ it omitted recognizing any function in service of democracy as emphasized in earlier precedents.¹⁹² Efficiency and pluralism, however, are neither interchangeable nor necessarily correlated.¹⁹³

Myriad nuances complicate the picture, including distinctions between consumer welfare and total welfare, where the latter considers the economic effects on society at large, resulting in more regressive distributions of surplus.¹⁹⁴ And in practice, the application of the consumer welfare standard can be murky. In *Ohio v. American Express*, for example, the Court reviewed and upheld the credit card company’s provisions prohibiting merchants from trying to steer customers to credit cards with lower transaction fees.¹⁹⁵ But in doing so, the Court neglected the harmful effects on cash-paying customers, who inevitably cross-subsidized the card company’s loyalty program.

Second, the levels of concentration necessary to trigger antitrust scrutiny far exceed those of a market conducive to pluralistic discourse. There are two main paths to establish monopoly power. One approach relies on proxies, where market share provides the central parameter.¹⁹⁶ Courts have provided various accounts as to when they consider market shares to indicate monopoly power.¹⁹⁷ Writing for the Second Circuit in 1945, Judge Hand posited that a market share of over ninety percent “is enough to constitute a monopoly; it is doubtful whether sixty or sixty-four percent would be enough; and certainly

84 (2019). *But see* Robert H. Bork, *Legislative Intent and the Policy of the Sherman Act*, 9 J.L. & ECON. 7, 48 (1966) (erroneously arguing the legislative intent behind the Sherman Act was limited to consumer welfare concerns).

191. *NCAA v. Alston*, No. 20-512, slip op. at 5 (U.S. Jun. 21, 2021) (citing *NCAA v. Board of Regents of the Univ. of Okla.*, 468 U.S. 85, 104, n.27 (1984)).

192. *NCAA v. Board of Regents of the Univ. of Okla.*, 468 U.S. 85, 104 n.27; *N. Pac. Ry. Co. v. United States*, 356 U.S. 1, 4 (1958); @johnmarknewman, TWITTER (June 21, 2021, 9:01 AM), <https://web.archive.org/web/20210622054605/https://twitter.com/johnmarknewman/status/1407005889798709254>.

193. Prat, *supra* note 149, at 9–10.

194. Total wealth is more unequally distributed than consumption. *See* Board of Governors of the Federal Reserve System (US), *Distribution of Household Wealth in the U.S. since 1989*, FED. RSRV., <https://www.federalreserve.gov/releases/z1/dataviz/dfa/distribute/chart/#quarter:121;series:Corporate%20equities%20and%20mutual%20fund%20shares;demographic:networth;population:1,3,5,7;units:shares;range:1989.3,2021.1> (last visited Aug. 17, 2021).

195. *Ohio v. Am. Express Co.*, 2018 138 S. Ct. 2274, 2277.

196. *Eastman Kodak Co. v. Image Tech. Servs., Inc.*, 504 U.S. 451, 464 (1992); Elhauge, *supra* note 94, at 259–60.

197. *United States v. Aluminum Co. of Am.*, 148 F.2d 416, 424 (2nd Cir. 1945); AREEDA & HOVENKAMP, *supra* note 93, ¶ 532.

thirty-three per cent is not.”¹⁹⁸ The Supreme Court adopted Judge Hand’s analysis, citing the ninety figure as a clear indicator of monopoly power.¹⁹⁹

The adopted framework still stands today.²⁰⁰ In *Kolon*, for example, the Fourth Circuit stipulated, “the Supreme Court has never found a party with less than 75% market share to have monopoly power,” before proceeding to rely on other precedent that locates the lower boundary at 70 percent.²⁰¹ Philip Areeda and Herbert Hovenkamp consider it “rare indeed to find that a firm with half of a market could individually control price over any significant period” and “presume[s] that market shares below 50 or 60 percent do not constitute monopoly power.”²⁰² Additional metrics may complement the picture to heighten or lower the minimum market shares.²⁰³ The point is that high thresholds preventing antitrust enforcement where only two platforms divide the market can hardly guarantee a pluralistic environment conducive to democratic discourse. The second approach infers monopoly power from actual behaviors that would not have been possible absent monopoly power—direct evidence for monopoly harm.²⁰⁴ But in *American Express*, the Supreme Court all but foreclosed this route.²⁰⁵

Third, antitrust doctrine “requires proof of both power and ‘exclusionary’ or anticompetitive conduct before any kind of relief is appropriate.”²⁰⁶ Many of the troubling developments in the digital public sphere, however, lack direct links to such conduct. General antitrust doctrine takes no issue with market monopolization “from growth or development as a consequence of a superior product, business acumen, or historic accident.”²⁰⁷ As currently understood,

198. *United States v. Aluminum Co. of Am.*, 148 F.2d at 424. *See also* U.S. DEP’T OF JUSTICE, COMPETITION AND MONOPOLY: SINGLE-FIRM CONDUCT UNDER SECTION 2 OF THE SHERMAN ACT, 21 (2008), <https://www.justice.gov/sites/default/files/atr/legacy/2009/05/11/236681.pdf> (withdrawn).

199. *Am. Tobacco Co. v. United States*, 328 U.S. 781, 814 (1946) (citing *United States v. Aluminum Co. of Am.*, 148 F.2d 416, 429 (2d Cir. 1945)).

200. U.S. DEP’T OF JUSTICE, *supra* note 198, at 21–22; AREEDA & HOVENKAMP, *supra* note 93, ¶ 532a-c.

201. *Kolon Indus. Inc. v. E.I. DuPont de Nemours & Co.*, 748 F.3d 160, 174 (4th Cir. 2014) (citing *E.I. du Pont de Nemours & Co. v. Kolon Indus., Inc.*, 637 F.3d 435, 450 (4th Cir. 2011)). *See also* *White Bag Co. v. Int’l Paper Co.*, 579 F.2d 1384, 1387 (4th Cir.).

202. AREEDA & HOVENKAMP, *supra* note 93, at 532c.

203. *Id.* ¶ 532. *See* Darren Bush & Salvatore Massa, *Rethinking the Potential Competition Doctrine*, 2004 WIS. L. REV. 1035, 1043–1126 (2004) (detailing the role of potential competition in antitrust doctrine).

204. *Ohio v. Am. Express Co.*, 2018 138 S. Ct. 2274, 2284–85.

205. *See id.*

206. AREEDA & HOVENKAMP, *supra* note 93, ¶ 650a. *See* Donald F. Turner, *Antitrust Policy and the Cellophane Case*, 70 HARV. L. REV. 281, 282 (1956).

207. *United States v. Grinnell Corp.*, 384 U.S. 563, 570–71 (1966).

antitrust is not strictly antimonopoly; it only limits behaviors that protect or expand a monopoly position. In *Trinko*, the Supreme Court reiterated this understanding by praising Schumpeterian cycles of monopolization “and the concomitant charging of monopoly prices, [as] not only not unlawful; it is an important element of the free-market system.”²⁰⁸ Implicit in the Court’s determination is that the market will self-correct in the absence of condemned behavior—despite indicators to the contrary.²⁰⁹

Historically, courts have recognized few exceptions to the general requirement of specific conduct. The essential facilities doctrine, a subcategory of antitrust-based duties to deal, provides one example of this rare species. The doctrine provides competitors with access rights to facilities controlled by monopolists to the extent that these competitors depend on those facilities and cannot reasonably duplicate them.²¹⁰ In *Trinko*, however, the Supreme Court all but closed the door on antitrust-based access rights.²¹¹

Antitrust lacks a legal sunset mechanism for monopoly rent extraction, which is taken for granted where exclusive rights incentivize innovation.²¹² In the absence of specific exclusionary or anticompetitive conduct, courts generally take no issue with a market’s limitation to a single social media provider, a single video sharing platform, a single search engine, or a single app store controlling access to discourse. In contrast to the relevant EU standard of abuse control, even unified central control over the entire digital public sphere and extracting monopoly rents would not trigger antitrust scrutiny of unilateral conduct.²¹³ Despite its legal and policy underpinning, so-called “organic growth” leading to market monopolization remains unaddressed, notwithstanding its equivalent impact on the governance of discourse.²¹⁴ For the digital public sphere, however, there are no good monopolies.²¹⁵

208. *Verizon Commc'ns Inc. v. L. Offs. of Curtis V. Trinko, LLP*, 540 U.S. 398, 407 (2004) (concluding that “possession of monopoly power will not be found unlawful unless it is accompanied by an element of anticompetitive conduct.”).

209. *See supra* Part I.B.

210. *MCI Commc'ns Corp. v. Am. Tel. & Tel. Co.*, 708 F.2d 1081, 1132–33 (7th Cir. 1983); Guggenberger, *The Essential Facilities Doctrine in the Digital Economy: Dispelling Persistent Myths*, *supra* note 67, at 303, 307–8; Sandeep Vaheesan, *Reviving an Epithet: A New Way Forward for the Essential Facilities Doctrine*, 2010 UTAH L. REV. 911, 911 (2010).

211. *Trinko*, 540 U.S. at 412.

212. Guggenberger, *supra* note 79, at 306–14; Turner, *supra* note 20, at 1219–20.

213. *See* Phillip Areeda, *Essential Facilities: An Epithet in Need of Limiting Principles*, 58 ANTITRUST L.J. 841, 846–47 (1989).

214. *See* Turner, *supra* note 20, at 1219–20 (demonstrating equivalent results, irrespective of the original source of monopoly).

215. *See* Edward S. Mason, *Monopoly in Law and Economics*, 47 YALE L.J. 34, 34 (1937) (stressing antitrust doctrine’s focus on “‘bad’ trusts”).

The standard differs for mergers, as the act of merging itself provides a trigger for antitrust scrutiny. The criteria leading to the blocking of a merger centers on structural considerations and potential future impact on competition, “where . . . the effect . . . may be substantially to lessen competition, or to tend to create a monopoly.”²¹⁶ Merger control can provide a powerful instrument contributing to open markets. Currently though, many of the most problematic acquisitions cluster just under the relevant value threshold for FTC notification.²¹⁷ And even where acquirers do not directly stifle innovation, the lack of alternative exit strategies for start-ups worsens the monopoly problem and hampers technology diffusion.²¹⁸

IV. REFRAMING THE DIGITAL PUBLIC SPHERE

Cultural and political democracy rests on a basic level²¹⁹ of pluralism—that is, a system reliant upon a diverse array of actors, while controlling the effects of factions.²²⁰ Justice Black perfectly captures the value of pluralistic discourse in *Associated Press* when he identifies “the widest possible dissemination of information from diverse and antagonistic sources [as] essential to the welfare of the public.”²²¹ This understanding arguably holds regardless of the underlying theory of free speech—cultural or political self-governance, protection of speakers or listeners, or knowledge creation.

In the 1960s and ’70s, the Federal Communications Commission (FCC) applied the pluralistic ideal to broadcasting, invoking “the maximum diversity of ownership that technology permits in each area” as a policy goal.²²² Today,

216. 15 U.S. Code § 18(1). See Glick et al., *supra* note 186, at 475–86.

217. Colleen Cunningham, Florian Ederer & Song Ma, *Killer Acquisitions*, 129 J. POL. ECON. 649, 653–54 (2020).

218. Mark A. Lemley & Andrew McCreary, *Exit Strategy*, 101 B.U. L. REV. 1, 61–66 (2021).

219. See Genevieve Lakier, *The Non-First Amendment Law of Freedom of Speech*, 134 HARV. L. REV. 2299, 2351–55 (2021) (“the right to freedom of speech is far more majoritarian in its operation than we usually recognize”).

220. THE FEDERALIST NO. 10, *supra* note 18.

221. *Associated Press v. United States*, 326 U.S. 1, 20 (1945). The Supreme Court frequently relies on the metaphor of a “marketplace of ideas.” See, e.g., *United States v. Rumely*, 345 U.S. 41, 56 (1953). This conceptualization builds on Justice Holmes’ dissent in *Abrams* endorsing a “free trade of ideas—that the best test of truth is the power of the thought to get itself accepted in the competition of the market.” *Abrams v. United States*, 250 U.S. 616, 630 (1919) (Holmes, J., dissenting). Despite the inaptitude of a literal understanding of the marketplace metaphor, Darren Bush, *The Marketplace of Ideas: Is Judge Posner Chasing Don Quixote’s Windmills*, 32 ARIZ. ST. L.J. 1107, 1109–10, 1120–44 (2000), the analogy conveys a core message of decentralized power to enable healthy discourse, see Stanley Ingber, *The Marketplace of Ideas: A Legitimizing Myth*, 1984 DUKE L.J. 1, 16–48 (1984).

222. *In re Amend. of Sections 73.35, 73.240 & 73.636 of the Comm’n Rules Relating to Multiple Ownership of Standard, FM & Television Broad. Stations.*, 22 F.C.C.2d 306, 311

Justice Black's concern about diverse and antagonistic sources of information extends to social media, video sharing, search, and app stores.²²³ These platforms all shape our exposure to knowledge and define our communicative environments.²²⁴

In practice, digital pluralism requires decentralized gateways to the digital public sphere instead of monopolistic bottlenecks, and a variety of communicative spaces instead of algorithmic monocultures. Distributed economic, cultural, and political power become most important where platforms immediately shape discourse via architectural choices or content moderation decisions. The following sections offer a cautious case for digital pluralism and a roadmap of policy prescriptions to help get us there.

A. THE CAUTIOUS CASE FOR DIGITAL PLURALISM

A pluralistic digital public sphere can provide the basis for open, accessible, diverse, and equitable online deliberation. It also lowers the stakes.²²⁵ Pluralistic structures reduce the cost of errors by individuals in designing communicative ecosystems and curating content. Regardless of the market structure, content moderation remains difficult—especially in the fast-paced, low-friction environment supported by the internet. Industrial organization cannot alleviate the operators of digital platforms from tough choices and close calls. Should a platform ban a head of state or tolerate the spread of dangerous lies and misinformation? Should a nude picture be taken down? If, however, every actor retains only minimal influence over the digital public sphere, their errors will become less systemically relevant. Pluralism, therefore, hedges against unavoidable errors or malfunctions. Moreover, if content moderation decisions are inherently hard, lowering the stakes might be the best medicine available.²²⁶ The same logic applies to design choices, whether they relate to socio-architectural environments or algorithmic tools. Likewise, application of the Madisonian principle²²⁷ can increase the resilience of public discourse, protecting against undue state or private interference with democratic deliberation.

To be sure, open and pluralistic structures do not guarantee functional online discourse. First, although “competitive incentives are a crucial driver of

(1970). *See also* Pol'y Statement on Compar. Broad. Hearings, 1 F.C.C.2d 393, 394 (1965) (“a maximum diffusion of control”); BAKER, *supra* note 101, at 7–8.

223. *See* Balkin, *How to Regulate (and Not Regulate) Social Media*, *supra* note 1, at 78–79.

224. *Id.* at 75.

225. *See* Rozenshtein, *supra* note 28 (referring to “content moderation subsidiarity”).

226. *See id.*

227. *See* THE FEDERALIST NO. 10, *supra* note 18.

ideological diversity,”²²⁸ alternative platforms do not necessarily translate into pluralistic, quality content.²²⁹ Odds are that competitive markets will produce more of the same, instead of a variety of affordances and arrangements.²³⁰ Also, agreements between platforms on the handling of certain types of content may pose similar problems as unilateral monopoly positions do.²³¹ Yet, pluralistic communicative spaces still increase the chances of pluralistic content.²³² Online environments are arguably more conducive to sustaining diverse communication channels than legacy media. While a traditional newspaper is limited by high fixed costs and geographic constraints, digital platforms are not.

Additionally, quality content and diversity are public goods, which markets chronically underproduce.²³³ Yet, there is some reason to hope that a more competitive platform market will transfer surplus to the next level up in the digital stack and support quality content production. Digital pluralism on its own will not assure the emergence of an institutional framework necessary to produce knowledge and healthy self-governance.²³⁴ For instance, the right-wing conspiracy outlet, InfoWars, certainly contributes to a set of diverse and antagonistic sources of information, but “its goal is to destroy trust” by means of misinformation.²³⁵ To a lesser extent, this also holds for Parler and Gettr. Only additional regulation and professional norms can fill that void and enhance public trust.²³⁶

Second, the dominant attention and data-based business models might continue to provide incentives detrimental to public interest. Competition can provide alternatives to addictive applications harming users’ mental health.²³⁷

228. Matthew Gentzkow, Jesse M. Shapiro & Michael Sinkinson, *Competition and Ideological Diversity: Historical Evidence from US Newspapers*, 104 AM. ECON. REV. 3073, 3107 (2014).

229. BAKER, *supra* note 101, at 15; BORIS P. PAAL, MEDIENVIELFALT UND WETTBEWERBSRECHT 143–47 (2010).

230. See Andreas Heinemann, *Digitale Medien und das Kartellrecht*, in MEDIEN UND DIREKTE DEMOKRATIE 45, 46 (Daniel Kübler ed., 2018) (referring to the view as “holländische Schule” [Dutch School]).

231. See evelyn douek, *The Rise of Content Cartels*, KNIGHT FIRST AMEND. INST. (Feb. 11, 2020), <https://knightcolumbia.org/content/the-rise-of-content-cartels>.

232. BAKER, *supra* note 101, at 15; PAAL, *supra* note 229, at 143–47.

233. Gentzkow et al., *supra* note 228, at 3073.

234. Balkin, *How to Regulate (and Not Regulate) Social Media*, *supra* note 1, at 79–80.

235. *Id.*

236. *Id.* at 79. See ROBERT POST, DEMOCRACY, EXPERTISE, AND ACADEMIC FREEDOM: A FIRST AMENDMENT JURISPRUDENCE FOR THE MODERN STATE 34 (2012) (stressing the importance of “democratic competence” and “a disciplinary authority that distinguishes good ideas from bad ones”).

237. James Niels Rosenquist, Fiona M. Scott Morton & Samuel N. Weinstein, *Addictive Technology and Its Implications for Antitrust Enforcement*, 100 N.C. L. REV. 431 (2022).

These alternatives would benefit many users—even though a broader range of offerings may also expose vulnerable individuals to more addictive concepts. The latter, in fact, lends itself more to a justification for regulation than as an argument in favor of monopoly structures.²³⁸ Personalized services and dark patterns would allow for much of the same result even under monopoly conditions. Thus, monopolistic structures cannot even claim to provide a second-best in lieu of regulation.²³⁹

Third, when assessing the impacts of pluralism on political polarization and partisanship in discourse, the twentieth-century media landscape offers a false comparison. Any form of linear medium faces some trade-off between market coverage and alignment of its content with individual users or user groups. This provides one explanation for why many regionally monopolistic newspapers positioned themselves in the mainstream of the political spectrum, despite the market entry barriers in the newspaper business.²⁴⁰ For digital platforms—specifically social media, video sharing, and online news outlets—this calculus differs.²⁴¹ Fixed start-up costs have diminished. The ability to personalize content solves the coverage and alignment trade-off limiting traditional media. Data generated because of the platforms' scope enable even more granular personalization and, thus, potential for divergent and partisan media diets. In essence, the politically moderating effects of 20th-century linear media monopolies have diminished due to technological changes. Facilitating external pluralism would not necessarily exacerbate that development.

Relatedly, consider the market structure's impact on filter bubbles and echo chambers.²⁴² These are mechanisms that reinforce biases and facilitate the spread of conspiracy theories via selective exposure to content. They can be based on individuals' self-sorting in line with ideological priors and

238. See Daniel A. Crane, *Harmful Output in the Antitrust Domain: Lessons from the Tobacco Industry*, 39 GA. L. REV. 321, 336–86 (2005) (endorsing net harm antitrust standards for harmful economic output, like tobacco products).

239. See Peter J. Hammer, *Antitrust beyond Competition: Market Failures, Total Welfare, and the Challenge of Intramarket Second-Best Tradeoffs*, 98 MICH. L. REV. 849, 853–63 (2000).

240. *Local Monopoly in the Daily Newspaper Industry*, 61 YALE L.J. 948, 949, 957 (1952).

241. Rebecca Tushnet, *Power without Responsibility: Intermediaries and the First Amendment*, 76 GEO. WASH. L. REV. 986, 990 (2008).

242. See Julie E. Cohen, *What Privacy is For*, 126 HARV. L. REV. 1904, 1917 (2013); Cohen, *supra* note 124, at 150; Philip M. Napoli & Fabienne Graf, *Social Media Platforms as Public Trustees: An Approach to the Disinformation Problem* 9 (TPRC48, Dec. 14, 2020), <https://papers.ssrn.com/abstract=3748544> (describing the effect of market fragmentation on the spread of misinformation as “purely speculative”); Zeynep Tufekci, “Not This One”: *Social Movements, the Attention Economy, and Microcelebrity Networked Activism*, 57 AM. BEHAVIORAL SCIENTIST 848, 851 (2013); Ethan Zuckerman, *The Internet's Original Sin*, ATLANTIC (Aug. 14, 2014), <https://www.theatlantic.com/technology/archive/2014/08/advertising-is-the-internets-original-sin/376041/>.

identities, algorithmic sorting, or simply the ease of connection online. While the contribution of these mechanisms to the dysfunction of discourse is not entirely clear, there is evidence to suggest that they exacerbate misinformation. If one accepts that premise, more fragmented markets seem problematic. After all, these mechanisms could allow for even more sorting, supercharging existing echo chambers. But leaping to this conclusion is highly questionable, as personalization of online experiences already enables sorting within *monopolistic* structures. Moreover, the ringfencing of conspiratorial content within smaller structures might be preferable to echo chambers within large networks, where spillover effects remain more likely.

Misinformation and hateful content might be harder to counter in a pluralistic market.²⁴³ After all, no central entity, like a monopolistic platform, could take decisive central action.²⁴⁴ However, betting on the benevolent private monopolists and powerful private governors of discourse to safeguard healthy discourse instead would be misguided. Monopoly power, to quote Thurman Arnold, “may sometimes be exercised benevolently, but, nevertheless, it is a dictatorial power subject to no public responsibility, which is the antithesis of our democratic tradition.” Platform monopolists’ and society’s interests are misaligned. Content moderation policies can be changed at any point to maximize corporate profits. Trust in specific individuals is equally misplaced because people and their loyalties change. Moreover, Elon Musk’s acquisition of Twitter serves as an example of how quickly control over an important platform can shift and presumably reverse Twitter’s approach to hateful content. Finally, neither of the incumbent platforms has proven a record as good steward of healthy public discourse. Facebook, for example, broke ties with former President Trump only after it became obvious that he would not lead the next administration.

Fourth, market structures for pluralism have gained import as the First Amendment speech protections have shifted toward emphasizing property and corporate interests.²⁴⁵ While it may be possible to construct a pluralistic public sphere on that basis, doing so requires even closer attention to market structure and asset distribution. Otherwise, the often-proclaimed nexus between market ordering and free discourse²⁴⁶ loses its grounding entirely.

Overall, there are two approaches to ensuring pluralism in public discourse: (1) external pluralism through alternatives in the marketplace and (2) internal pluralism enabled by governance structures within media

243. Rozenshtein, *supra* note 28.

244. *Id.*

245. See Lakier, *supra* note 219, at 2351–69.

246. FRIEDMAN, *supra* note 185, at 16–19.

organizations. The former approach often takes the shape of competition in market arrangements. Public broadcasting institutions, like the BBC in the UK or their German counterparts ARD and ZDF, practice the latter. Their boards include a variety of stakeholders from government and civil society, staffed with an eye on political balance. They enjoy varying degrees of autonomy from the state. In Germany, this is enshrined as the constitutional principle of “Staatsferne.” For structural, legal, and pragmatic reasons, I put more hope in the mechanisms of external pluralism as applied to the American digital public sphere.

In the U.S., the digital public sphere is almost entirely constructed as a market. The resulting structural and political path dependencies prove sticky. Establishing a BBC-style equivalent for social media, video sharing, search, or app-hosting to replace dominant private platforms remains politically unrealistic.²⁴⁷ Leaving politics aside, centralized public solutions would also create “at least potential tension” with democratic concerns over decentralized ownership and control.²⁴⁸ Moreover, if a government organization tried to provide the services of private platforms, it would become highly vulnerable to First Amendment challenges.²⁴⁹ Industrial policy for private-sector digital pluralism, complemented by public options for digital infrastructure, offers a more promising avenue for public involvement.²⁵⁰

B. INTEROPERABILITY

To enable digital pluralism, a reform agenda must address the sources of monopoly power. Law should reallocate network effects from private corporations to the level of the market or society at large.²⁵¹ Just as several areas of law currently allocate network effects by protecting exclusivity online,²⁵² various legal knobs can redistribute networks’ surplus. Key to that distribution is interoperability.²⁵³ At a technical level, interoperability describes the ability of a system to exchange or compile information originating from another system. At an organizational and functional level, interoperability

247. *But see* Zuckerman, *supra* note 14, at 5–6.

248. BAKER, *supra* note 101, at 9.

249. *See* Lyrissa Barnett Lidsky, *Government Sponsored Social Media and Public Forum Doctrine Under the First Amendment: Perils and Pitfalls*, 19 PUB. LAW. 2, 5–7 (2011) (providing an account of the legal challenges stemming from public forum doctrine).

250. *See infra* Part III.C.

251. OECD, DATA PORTABILITY, INTEROPERABILITY AND DIGITAL PLATFORM COMPETITION, 19–20 (2021), <http://oe.cd/dpic>; Kades & Scott Morton, *supra* note 19, at 14, 33.

252. For the concept of legal allocation of network effects, see Guggenberger, *supra* note 16.

253. Kades & Scott Morton, *supra* note 19, at 14, 33.

enables cross-platform collaboration by removing technical boundaries. Figuratively, it eliminates the walls around online ecosystems.

Interoperability can take several forms. Cory Doctorow distinguishes indifferent, cooperative, and adversarial interoperability based on the interest of the incumbent in the interconnection.²⁵⁴ And indeed, there are plenty of practical examples for all three categories, even for voluntary cooperation.²⁵⁵ One platform might open APIs to another platform, allowing for the exchange of standardized information. This enables users to import their contacts into other applications—for instance, seeing Facebook friends on a third-party fitness or dating app. The same idea lets third-party websites include “like” and “share” buttons so that visitors of that website can directly import these websites’ content into social networks and recommend it to their contacts.

The problem is that platforms will only allow others to interoperate when it is advantageous for them. They might be able to collect additional user data or increase their network effects.²⁵⁶ They may also gain valuable insights into other businesses, allowing them to appropriate business models or select potential targets for acquisitions. Moreover, granting the developers access to features and data encourages experimentation, from which the underlying platform might benefit in the medium and longer term. Where there is no such expected gain, interoperability may only empower nascent competitors and destabilize the monopolists’ position in the marketplace. As incumbent platforms will hardly be interested in forfeiting their dominant positions, interoperability to redistribute network effects requires mandates: legislation, regulation, or court orders. A regulator would need to set or supervise the standards and access conditions.²⁵⁷

Below, I distinguish active and passive interoperability—both in horizontal relationship between platforms.²⁵⁸ Active interoperability requires collaboration from the incumbent, while passive interoperability does not. To ensure the former, the law must mandate collaboration; to induce the latter, it is sufficient to loosen protections of exclusivity online.

254. Cory Doctorow, *Interoperability: Fix the Internet, Not the Tech Companies*, ELEC. FRONTIER FOUND. (July 11, 2019), <https://www.eff.org/deeplinks/2019/07/interoperability-fix-internet-not-tech-companies>.

255. *Id.*

256. See First Amended Complaint at 4–5, 12–14, *FTC v. Facebook*, No. 1:20-cv-03590, Doc. 75-1 (D.D.C. Aug. 19, 2021).

257. See Rory Van Loo, *Rise of the Digital Regulator*, 66 DUKE L.J. 1267 (2017); Rory Van Loo, *The Missing Regulatory State: Monitoring Businesses in an Age of Surveillance*, 72 VAND. L. REV. 1563 (2019).

258. See OECD, *supra* note 251, at 19–20.

1. *Active Interoperability*

To reduce switching costs on the side of users and enable a competitive marketplace, incumbent digital platforms should be forced to interconnect by offering open APIs—at least as it relates to their basic functionalities.²⁵⁹ For social media, that should entail messaging and posting across networks. Operating systems and app stores should be forced to allow sideloading of applications, resembling the 1968 FCC ruling in *Carterfone*, which broke up AT&T’s grip on devices and enabled AT&T customers to connect third-party telephones.²⁶⁰ The settlement in *Microsoft* likewise, forced the dominant provider of operating systems to enable interconnection between Windows and third-party software,²⁶¹ but failed to extend the same affordances to horizontal competitors in the market for operating systems.²⁶² Recent legislative initiatives have similarly focused on interoperability. In 2019, Sen. Mark R. Warner sponsored the Augmenting Compatibility and Competition by Enabling Service Switching Act of 2019; and in June 2021, Rep. Mary Gay Scanlon introduced a renewed version of that approach in the House.²⁶³ The bills would entrust the FTC to define the scope of interoperability and corresponding technical standards. To be effective, mandated interoperability must be bundled with definitions of “fair, reasonable, and nondiscriminatory terms,” as the recent proposals rightly emphasize.²⁶⁴ Only that kind of protection against circumvention can pave the way to Przemyslaw Palka’s *World of Fifty (Interoperable) Facebooks*.²⁶⁵

Open APIs and mandatory interconnection can be compatible with content moderation by the delivering platform. The horizontal must-carry element, which is necessarily part of the interoperable regime, does not need to include a blanket check for third-party content. Facebook, for example, can apply the same rules to postings originating from competing platforms as it applies to posts stemming from Facebook users. Facebook’s discretion would end where it discriminates third-party content based on its origin instead of its

259. Harold Feld, *Case for the Digital Platform Act*, ROOSEVELT INST. 81–82 (2019).

260. See Nachbar, *supra* note 29, at 125–26.

261. Final Judgement at 4, *United States v. Microsoft Corp.*, No. 98-1232 (D.D.C. 2002).

262. Eben Moglen, *Shaking Up The Microsoft Settlement*, FREE SOFTWARE MATTERS (Jan. 28, 2002), <http://moglen.law.columbia.edu/publications/lu-18.html>.

263. Augmenting Compatibility and Competition by Enabling Service Switching Act of 2019 (ACCESS Act of 2019), S. 2658, 116th Cong. (2019); Augmenting Compatibility and Competition by Enabling Service Switching Act of 2021 (ACCESS Act of 2021), H.R. 3849, 117th Cong. (2021).

264. S. 2658; H.R. 3849 (“fair and nondiscriminatory”).

265. See Przemyslaw Palka, *The World of Fifty (Interoperable) Facebooks*, 51 SETON HALL L. REV. 1193 (2021).

content. Mindful of content moderation dimensions, Mike Masnick urges a focus on protocols instead of platforms.²⁶⁶ Masnick recalls the email protocol standards which enabled competing email services to co-exist and differentiate based on interfaces and features.²⁶⁷ Content moderation would benefit from that reorientation, as a “protocol-based system . . . moves much of the decision making away from the center and gives it to the ends of the network.”²⁶⁸

As a result, the output of platform services would increase, and digital platforms could no longer extract the same monopoly rents. Interoperability requirements would redistribute surplus from the platform layer of the digital stack to the content layer.²⁶⁹ On video sharing platforms, this mechanism may benefit artists on social media and news outlets. This redistribution of surplus can have diffuse, positive effects through the creation of public goods on top of open structures.²⁷⁰ On the other hand, shifts in surplus may decrease the incentives for dynamic innovation in the platform market. Nonetheless, some rebalancing toward more incentives for allocative efficiency and innovation *on platforms* appears overdue.

Most importantly, interoperability requirements prevent network effects at the infrastructure level from shaping content management. As network surplus no longer translates into market entry barriers, digital platforms can no longer use network effects as levers for economic, political, or cultural power exertion. To be clear, interoperability mandates between platforms preserve the structural nexus between platform and content management; they simply facilitate competition between vertically integrated content-shaping platforms.

Some scholars point to tensions between competition-enhancing reforms and privacy frameworks.²⁷¹ These tensions stand out especially in the context

266. Mike Masnick, *Protocols, Not Platforms: A Technological Approach to Free Speech*, KNIGHT FIRST AMEND. INST. (Aug. 21, 2019), <https://knightcolumbia.org/content/protocols-not-platforms-a-technological-approach-to-free-speech> (envisioning novel business models, including based on cryptocurrencies and digital tokens).

267. *Id.* at 15.

268. *Id.* at 17. *See also* Rozenshtein, *supra* note 28.

269. *But see* Genevieve Lakier, *The Limits of Antimonopoly Law as a Solution to the Problems of the Platform Public Sphere*, KNIGHT FIRST AMEND. INST. 4 (Mar. 30, 2020), <https://knightcolumbia.org/content/the-limits-of-antimonopoly-as-a-solution-to-the-problems-of-the-platform-public-sphere> (“[A]ggressive enforcement of the antitrust laws against big tech [would not] do anything about” the distribution of advertising dollars.”).

270. *See* Andersen Jones, *supra* note 164, at 631–37 (discussing public funding for journalism as a public good); Brett M. Frischmann, *An Economic Theory of Infrastructure and Commons Management*, 89 MINN. L. REV. 917, 973–74 (2005) (focusing on infrastructure commons).

271. *See* Erika M. Douglas, *The New Antitrust/Data Privacy Law Interface*, 130 YALE L.J. F. 647 (2021).

of active interoperability. Enhanced data sharing and information exchange fuel these concerns. Users entrust their data and information with one platform, be it Facebook, Google, or Apple. If a mandate obliges that entity to share information with third parties, users' privacy would be further impacted. Yet, the same concern holds against contemporary control-centered frameworks. As ample scandals and widespread private surveillance indicate, this framework has not been overly successful in protecting individuals' privacy, even in a highly centralized environment. Alternative approaches may yield more promising conceptualizations of privacy protection online, whether they include moving toward "Data as a Democratic Medium,"²⁷² systemically addressing externalities,²⁷³ limiting data usage, or establishing fiduciary duties.²⁷⁴ Even control and consent-based approaches can allow for opt-in interoperability.

2. *Passive Interoperability*

Second, there is passive adversarial interoperability.²⁷⁵ The concept does not require collaboration between platforms. Instead, it alleviates some of the legal building blocks protecting online monopolies, emphasizing the contribution of reverse engineering.²⁷⁶ In his analysis of the approach, Cory Doctorow provides numerous examples, including Apple's challenge to Microsoft Word by creating compatible office software, the development of web crawlers, and "[s]ervers of every kind."²⁷⁷ To some extent, nascent platforms can follow similar methods. The *hiQ v. LinkedIn* case exemplifies just one dimension of affordances based on access to data.²⁷⁸

Frequently, however, legally protected exclusivity stands in the way of reverse engineering.²⁷⁹ Recall that, among other laws, the CFAA creates data silos,²⁸⁰ and terms of service may limit access to data or features. Broad patent

272. Viljoen, *supra* note 84, at 634–53.

273. See Omri Ben-Shahar, *Data Pollution*, 11 J. LEGAL ANALYSIS 104 (2019); Bergemann et al., *supra* note 86; Lina M. Khan & David E. Pozen, *A Skeptical View of Information Fiduciaries*, 133 HARV. L. REV. 497 (2019).

274. Balkin, *Free Speech is a Triangle*, *supra* note 1; Jack M. Balkin, *Information Fiduciaries and the First Amendment*, 49 U.C. DAVIS L. REV. 1185 (2016).

275. Cory Doctorow, *Adversarial Interoperability: Reviving an Elegant Weapon From a More Civilized Age to Slay Today's Monopolies*, ELEC. FRONTIER FOUND. (June 7, 2019), <https://www.eff.org/deeplinks/2019/06/adversarial-interoperability-reviving-elegant-weapon-more-civilized-age-slay>; Cory Doctorow, *Adversarial Interoperability*, BOINGBOING, <https://boingboing.net/2019/10/02/plugin-and-play.html> (last visited June 28, 2021).

276. Doctorow, *supra* note 275.

277. *Id.*

278. *hiQ Labs, Inc. v. LinkedIn Corp.*, 938 F.3d 985 (9th Cir. 2019).

279. See *supra* Part II.C.

280. Kadri, *supra* note 3, at 971–74.

protection may also directly inhibit replications of processes or indirectly exert control via credible threats of costly litigation. This specifically applies to the protection of APIs.²⁸¹ Dialing back state-enforced exclusivity can ease some of these challenges. Suitable remedies include limiting the CFAA, refusing to enforce exclusive terms of service, scaling back intellectual property and trade secrecy, and shifting toward privacy regimes that put less emphasis on individual user control.

Concrete suggestions by various scholars and the Electronic Frontier Foundation include reforming the CFAA and eliminating the criminal provision that sanctions exceeding the authorization to access protected computers.²⁸² To address efforts replacing the CFAA's affordances through terms of service, federal legislation would be required to pre-empt state contract law.²⁸³ Intellectual property protections for APIs, including process patents, could be abandoned, or made available according to FRAND conditions.²⁸⁴ While this reduces the immediate reward for innovation,²⁸⁵ significant incentives for technological progress remain. Improved interfaces enable interconnection which can be extremely valuable to nascent competitors. Furthermore, the state could limit its enforcement of terms of service—especially as they concern restrictions on reverse engineering and interconnection. This includes restrictions on commercial access to platforms and scraping. Shifting gears in data protection regulation away from user control would support passive interoperability and better protect against the perils of corporate surveillance. These reforms can and should be complemented by focusing on structural notions of antitrust and considerations of common carriage and access rights.

281. Mark A. Lemley & David McGowan, *Legal Implications of Network Economic Effects*, 86 CALIF. L. REV. 479, 533–34 (1998).

282. Kadri, *supra* note 3, at 988–93; Cindy Cohn, Mark Jaycox & Marcia Hofmann, *EFF's Initial Improvements to Aaron's Law for Computer Crime Reform*, ELEC. FRONTIER FOUND. (Jan. 17, 2013), <https://www.eff.org/deeplinks/2013/01/effs-initial-improvements-aarons-law-computer-crime-reform>; Jennifer Granick, *Thoughts on Orin Kerr's CFAA Reform Proposals: A Great Second Step*, CTR. FOR INTERNET & SOC'Y STAN. L. SCH. (Jan. 23, 2013), <https://cyberlaw.stanford.edu/blog/2013/01/thoughts-orin-kerrs-cfaa-reform-proposals-great-second-step>; Orin Kerr, *Proposed Amendments to 18 U.S.C. 1030*, VOLOKH CONSPIRACY (Jan. 20, 2013), <https://volokh.com/2013/01/20/proposed-amendments-to-18-u-s-c-1030/>.

283. *See Sw. Airlines Co. v. Kiwi.com, Inc.*, No. 21-00098, slip op. at 6 (N.D. Tex. Sep. 30, 2021).

284. *See* Pamela Samuelson, *Are Patents on Interfaces Impeding Interoperability?*, 93 MINN. L. REV. 1943, 1945–46 (2009) (arguing for cautious and targeted changes, including closer scrutiny of patents on interfaces). *But see* Michael J. Schallop, *The IPR Paradox: Leveraging Intellectual Property Rights to Encourage Interoperability in the Network Computing Age*, 28 AIPLA Q. J. 195, 199–200 (2000).

285. Lemley & McGowan, *supra* note 281, at 533–34.

C. ANTITRUST DOCTRINE FOR DIGITAL PLURALISM

Concerns about market concentration have given rise to calls for antitrust reform and enforcement, both as part of tightened merger control and enhanced scrutiny of unilateral behavior.²⁸⁶ Doctrinal pivots within the existing antitrust paradigm have the potential to improve the digital public sphere's market structure. The recent lawsuits against Big Tech will show how far, if at all, courts are willing to deviate from the Chicago School consensus. The lawsuits may undo mergers (Facebook)²⁸⁷ and unbundle exclusive webs of contracts (Google).²⁸⁸ Both could revitalize competition. However, the extent to which these measures would suffice to sustain competition despite enduring privatization of network effects remains to be seen.²⁸⁹ For instance, the EU Commission's successful enforcement actions against Google's exclusive contracting failed to fundamentally change market conditions. To ensure sustainable competition, divestitures should be combined with interoperability requirements, as in the 2020 House Report on Competition in Digital Markets suggests.²⁹⁰ A renewed focus on direct harm to consumers—instead of requiring proof of both harm and monopoly power in a distinct market—could overcome constraints stemming from the attempt to squeeze converging digital markets into rigid doctrine.²⁹¹

I do not suggest that consumer welfare considerations in antitrust cannot contribute to digital pluralism. They can. Several cases against the operators of digital bottlenecks allege harm to consumers and demand remedies that would render the market structure more conducive to digital pluralism. With its lawsuit against Facebook, the FTC is testing a litigation strategy combining charges of monopolization with acquisitions that ordinarily fall under the merger control threshold—reviving the logic behind older precedents, predating modern merger control.²⁹² The Commission claims that Facebook's pattern of acquisitions amounts to exclusionary behavior in violation of

286. Glick et al., *supra* note 186, at 505–10.

287. First Amended Complaint, *FTC v. Facebook*, No. 1:20-cv-03590, Doc. 75-1 (D.D.C. Aug. 19, 2021).

288. Amended Complaint, *United States v. Google, LLC*, No. 1:20-cv-03010, Doc. 94 (D. D.C. Jan. 15, 2021).

289. See Francis Fukuyama, Barak Richman, Ashish Goel, Marietje Schaake, Roberta R. Katz & Douglas Melamed, *Report of the Working Group on Platform Scale* 20–21 (2020), <https://cyber.fsi.stanford.edu/publication/report-working-group-platform-scale>; Donald F. Turner, *The American Antitrust Laws*, 18 MOD. L. REV. 244, 253 (1955) (writing, in 1955, “[t]he promise of the Standard Oil case faded nearly away for quite a long time”).

290. U.S. H.R. MAJORITY STAFF, *supra* note 90, at 377–87.

291. Herbert Hovenkamp, *Digital Cluster Markets*, 2022 COLUM. BUS. L. REV. 246, 271–77 (2022).

292. See Turner, *supra* note 289, at 251–52.

Section 2 of the Sherman Act.²⁹³ If ultimately successful, the argument could loosen the requirement of specific anticompetitive conduct slightly, and more concretely, reestablish Facebook and Instagram as competing networks.²⁹⁴ But even then, an extremely high bar for antitrust liability would persist and concentration from organic growth based on the legal allocation of network effects would remain unaddressed. Systemic change requires more than the potential correlation of efficiency and pluralism.

Beyond current legal doctrine, some argue that strengthening structural notions of antitrust law could pave the way to more pluralistic markets.²⁹⁵ Recalling the Supreme Court decision in *Alcoa*,²⁹⁶ Donald Turner suggests “distinguishing between the acquisition of monopoly power . . . and the persistent retention of monopoly over a substantial period of time.”²⁹⁷ The latter should be seen as sufficient to trigger antitrust liability, “put[ting] a time limit on continuing monopoly power.”²⁹⁸ An end date to market monopolization does not serve as punishment, but rather a limitation on the reward for initial innovation.²⁹⁹ To be effective, antitrust reform should thus incorporate notions of no-fault liability³⁰⁰ as a basis for structural changes and access rights.³⁰¹ For today’s digital monopolies, concerns about healthy discourse further support Turner’s approach.³⁰² Anticompetitive conduct could remain an indicator of monopoly power, but should cease to serve as a necessary condition for liability.³⁰³

Recognizing goals of antitrust law beyond maximizing consumer welfare could advance antitrust law’s contribution to a pluralistic digital public sphere³⁰⁴—an approach other jurisdictions have consistently upheld, despite

293. First Amended Complaint at 76, *FTC v. Facebook*, No. 1:20-cv-03590, Doc. 75-1 (D.D.C. Aug. 19, 2021) (“Facebook has willfully maintained its monopoly power through its course of anticompetitive conduct consisting of its anticompetitive acquisitions.”).

294. See Complaint, *FTC v. Facebook*, No. 1:20-cv-03590, Doc. 3 (D.D.C. Dec. 9, 2020).

295. Khan, *supra* note 78, at 803.

296. *United States v. Alcoa*, 377 U.S. 271 (1964).

297. Turner, *supra* note 20, at 1219.

298. *Id.*

299. *Id.* at 1219–20, 1222 (distinguishing criminal liability).

300. CARL KAYSEN & DONALD F TURNER, ANTITRUST POLICY 266 (1958) (“Possession . . . of unreasonable market power in trade and commerce . . . is hereby declared to be injurious to such trade or commerce.”); Turner, *supra* note 20, at 1219–20.

301. On remedies, ZEPHYR TEACHOUT, BREAK ‘EM UP: RECOVERING OUR FREEDOM FROM BIG AG, BIG TECH, AND BIG MONEY (2020); Guggenberger, *supra* note 79, at 327–37; Rory Van Loo, *In Defense of Breakups: Administering a “Radical” Remedy*, CORNELL L. REV. 1955 (2020).

302. See *supra* Part II.A.

303. Turner, *supra* note 206, at 289–90.

304. BAKER, *supra* note 101, at 59–60.

some reorientation toward a “more economic approach” during the 1990s.³⁰⁵ Pre-Chicago School precedent in the United States specifically invoked the democracy-serving function of antitrust law,³⁰⁶ and enabling digital pluralism certainly falls into that category. Eleanor Fox’s proposal to revive the “historical goals of antitrust” would shift doctrine in a pluralistic direction,³⁰⁷ as would the Effective Competition Standard favored by Marshall Steinbaum and Maurice Stucke.³⁰⁸ Both approaches emphasize open markets (“opportunities for competitors”) and decentralization of power.³⁰⁹ Where platforms govern discourse, Thomas Nachbar’s understanding of antitrust law as a rule against private regulation offers additional guidance.³¹⁰ Practically, a renewed, broader understanding of antitrust law’s goals could be implemented by fully replacing the consumer welfare standard or complementing it with an additional layer of scrutiny.³¹¹

Antitrust doctrine could borrow from sector-specific competition policy, which already embraces structural perspectives. The National Television Station Ownership rule caps broadcasting television at an “aggregate national audience reach” of 39 percent.³¹² This threshold had been limited to 35 percent before the D.C. Circuit ordered the FCC to revisit its threshold.³¹³ The purpose of this limitation and similar restrictions for radio³¹⁴ lies in the protection of pluralism and diversity of content.³¹⁵ The FCC can impose these limitations on radio and broadcasting companies as part of their licensing regime. The agency lacks an equivalent link for online platforms because the Supreme Court has refused to extend the First Amendment doctrine

305. See LUDWIG ULMER, KARTELLVERBOT UND AUßERÖKONOMISCHE RECHTFERTIGUNG (2014); Stucke, *supra* note 190, at 567–68; Anne C. Witt, *The European Court of Justice and the More Economic Approach to EU Competition Law—Is the Tide Turning?*, 64 ANTITRUST BULL. 172, 174–76, 212–13 (2019).

306. *N. Pac. Ry. Co. v. United States*, 356 U.S. 1, 4 (1958).

307. Fox, *supra* note 190, at 1182. See also John J. Flynn, *The Reagan Administration’s Antitrust Policy, Original Intent and the Legislative History of the Sherman Act*, 33 ANTITRUST BULL. 259, 304–5 (1988).

308. Steinbaum & Stucke, *supra* note 92, at 601–03.

309. Fox, *supra* note 190, at 1182; Steinbaum & Stucke, *supra* note 92, at 602–03.

310. See Nachbar, *supra* note 15, at 88–93.

311. See Prat, *supra* note 149, at 10–14 (arguing for “two parallel reviews”).

312. 47 C.F.R. § 73.3555(e)(1). Switzerland, for example, limits companies to acquiring a maximum of two TV and two radio channels, Heinemann, *supra* note 230, at 46.

313. *Fox Television Stations, Inc. v. FCC*, 280 F.3d 1027, 1036, 1052–53 (D.C. Cir. 2002). See also the FCC’s former Diversity Index in Prat, *supra* note 149, at 8.

314. 47 C.F.R. § 73.3555(e)(1).

315. CONG. RSCH. SERV., FEDERAL COMMUNICATIONS COMMISSION (FCC) MEDIA OWNERSHIP RULES, No. R45338, 1 (Jun. 2021).

developed for broadcasting³¹⁶ to the internet.³¹⁷ Similar structural measures based on general antitrust law, instead of media pluralism regulation, however, could invoke precedent established in *Associated Press*.³¹⁸ There, the Court rejected the Associated Press' claim that the First Amendment immunizes it from needing to grant news organizations access to its network.³¹⁹ In doing so, the Court established a potent First Amendment carve-out for antitrust enforcement as a means for speech-relevant industrial organization.³²⁰ Likewise, expanding antitrust doctrine may prove more resilient against challenges rooted in the recently strengthened Takings Clause.³²¹

Finally, strengthening merger control can play a vital role by preventing “killer acquisitions”—takeovers of other nascent competitors to gut their products, ideas, or teams to protect the incumbents' position in the marketplace.³²² Tightening the standards would also broaden attainable exit options for start-ups and likely change their incentive structures to challenge market incumbents.³²³ Ultimately, the prospect of nascent competitors' scaling up would increase, and competitive pressure could emerge more readily.³²⁴

At the end of the day, the extent to which lawmakers should rely on sector-specific competition policy or reformed antitrust doctrine remains a question of political calculus and institutional preferences. Without legislative action, changes in antitrust doctrine would require a significant shift in the Supreme Court's jurisprudence. That shift, however, is anything but likely. Biden-era administrative agencies appear more open to directional pivots. But due to the entirely court-reliant antitrust enforcement process, federal agencies will remain limited to the space courts grant them. Meaningful reforms must ultimately emanate from legislatures. Bipartisan momentum has been growing in Congress.³²⁵ The same applies to state legislatures, which can play an

316. See *Red Lion Broad. Co. v. FCC*, 395 U.S. 367 (1969).

317. See *Reno v. ACLU*, 521 U.S. 844, 868–70 (1997).

318. See *Associated Press v. United States*, 326 U.S. 1 (1945).

319. See Gregory Day, *Monopolizing Speech*, 88 FORDHAM L. REV. 1315, 1355–57 (2020).

320. *Associated Press v. United States*, 326 U.S. at 20 (“The First Amendment affords not the slightest support for the contention that a combination to restrain trade in news and views has any constitutional immunity.”).

321. See *Cedar Point Nursery v. Hassid*, 141 S.Ct. 2063 (2021).

322. Lemley & McCreary, *supra* note 218, at 63–65, 90–101. On killer acquisitions, see Cunningham et al., *supra* note 217.

323. Lemley & McCreary, *supra* note 218, at 90–101.

324. *Id.*

325. Cecilia Kang, *Lawmakers, Taking Aim at Big Tech, Push Sweeping Overhaul of Antitrust*, N.Y. TIMES (June 11, 2021), <https://www.nytimes.com/2021/06/11/technology/big-tech-antitrust-bills.html>.

important role in advancing a reform agenda,³²⁶ as California has done in the field of privacy.

V. CONCLUSION

Platforms' market power lies at the core of the dysfunction of digital discourse and contemporary approaches to content moderation cannot compensate for the flawed market structure. While digital pluralism provides no panacea for dysfunctional discourse, it can effectively counterbalance systemic threats to democratic deliberation and lower the stakes of content moderation decisions. An industrial policy for digital pluralism requires interoperability mandates, forcing interconnection between platforms, and structural considerations and no-fault liability in antitrust doctrine. Access rights, common carriage obligations, and public infrastructure can further contribute to building a pluralistic and inclusive digital public sphere. The same holds for strengthening structural considerations and no-fault liability in antitrust doctrine. Together, these remedies can enhance the resilience of digital discourse.

326. Leah Nylen, *Apple, Google App Store Fights Move to the States*, POLITICO (Mar. 3, 2021), <https://www.politico.com/news/2021/03/03/apple-google-app-store-fights-move-to-the-states-473388>.

