

XIV. ANTITRUST IN DIGITAL MARKETS

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* Thanks to Henry Hauser, Doug Melamed, and Chris Sprigman for helpful comments.

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A. Overview

This Chapter introduces one of the most high-profile and engaging areas of antitrust: its application to digital, platform, and high-tech markets. This topic is filled with puzzles and problems that will test your intuitions and challenge your understanding of core antitrust doctrines and principles. Does (or should) antitrust prohibit “self-preferencing” practices by dominant platforms, by which they give a hand up to their own businesses over those of rivals? Does access to data—or “Big Data”—imply market power? Must dominant businesses support or allow “multi-homing” or interoperability with rivals? Should we break up any of the Big Tech platforms? What should we do about algorithmic collusion, or personalized pricing? Do digital markets really need special rules—and what is a “digital market” anyway?

Tech antitrust gets plenty of public and political attention, and views differ deeply about the right approach in this area. Several factors might help to explain its role as a magnet for controversy. For one thing, almost everyone is a market participant. We have all had at least some first-hand experience—and often a lot more than “some”—with the markets and companies at the heart of the discussion. So choices about digital antitrust affect all of us! For another thing, the major tech platforms are very important to the economy. Many businesses rely on Big Tech products and services, so tech antitrust policy implicates some strong views and interests of those businesses. Some businesses might not even be profitable without, say, a flow of consumer traffic from Google Search, or the ability to make sales over Amazon’s e-commerce website.¹ And, for a third thing, many of our largest tech companies

¹ Of course, views differ sharply about the policy implications of this fact! On one view, it’s a measure of the remarkable social benefits of the big platforms; on another view, it’s a sign of an unhealthy concentration of power. *Compare, e.g.*, U.S. Chamber of Commerce, *Empowering Small Business: The Impact of Technology on U.S. Small Business*, <https://americaninnovators.com/wp-content/uploads/2023/09/Empowering-Small-Business-The-Impact-of-Technology-on-U.S.-Small-Business.pdf> (2022) with American Economic Liberties Project, *The Truth About Google, Facebook, and Small Businesses*, https://www.economicliberties.us/wp-content/uploads/2021/05/Corporate-Power-Quick-Takes_5_Final.pdf (May 2021).

play an important and sometimes controversial role in our society more generally: affecting how we receive information about the world, how we interact with others, and how we conduct political discourse. Some aspects of this concern are tech-specific; others relate more generally to powerful businesses, monopoly power, or the health of our politics. Policy concerns about inequality, polarization, political influence, fairness, freedom, market concentration, and supply-chain resilience have all had an impact on discussions of tech competition policy.² For these and plenty of other reasons, instincts about digital antitrust can be strong and conflicting.

Tech antitrust is not only controversial: it can also be complex and intricate. This is *not* to say that everything about tech antitrust is particularly arcane: price-fixing is still price-fixing, and horizontal mergers are still horizontal mergers! But the details can matter a lot, and first-order intuitions aren't always the end of the story. Some of these complexities flow from the fact that it can be hard to define or measure some of antitrust's traditional metrics—like price, quality, output, and market share—in some digital markets. For example, suppose that you were trying to work out whether a practice or transaction had caused an anticompetitive effect in a market for internet search services, or personal social networking services, or AI services of some kind. What would you measure to look for those effects? What plausible alternatives do you see? What if different metrics moved in different directions? And are those sensible market definitions anyway?

Other complexities can flow from the fact that some common practices or phenomena have ambiguous effects: that is, they may strike us as good or bad depending on the context and our prior assumptions. For example, “network effects” sometimes result from the fact that a product or service becomes more valuable as it acquires more (or more active) users.³ Such effects aren't unique to the “digital economy”—whatever that is—and aren't found in every tech market, but they do matter a lot in some such markets. How should antitrust treat such effects: for example, when a merger or acquisition, or an agreement or practice, significantly augments them? On the one hand, such effects represent improved value to consumers, which sounds like a classic antitrust benefit; on the other hand, they may make entry harder, which sounds like it could increase market power and exacerbate antitrust concerns. So: are network effects procompetitive or anticompetitive? Both? Neither? (And what does that question really mean?)

Likewise, plenty of digital-platform practices may be good for some users and bad for others. This means that tech antitrust often implicates particularly hard questions about whether and when—if ever—a defendant can attempt to justify harms to one set of trading partners (*e.g.*, consumers) by reference to benefits that flow to another set of trading partners (*e.g.*, merchants or workers). Should the cognizability of such benefits depend on whether or not both sides are included in the same antitrust market?⁴ Should the answer turn on whether the benefited or injured parties happen to be workers, consumers, advertisers, or members of some other sub-group?

A further set of challenges can flow from the fact that digital products and services can develop rapidly and unpredictably. Predicting the future of competition may be particularly tough when products and services can “go viral” or acquire significant scale—or lose it!—in a short period of time, and when products and services may be modified by their suppliers in order to roll out new features and functionalities to existing users. These complexities can blur the boundaries of antitrust markets, make it difficult to identify potential competitors or predict competitive effects, and increase the challenges of remedial design and implementation. And, to the extent that plaintiffs are the ones with the burden of proof, these uncertainties can generally make antitrust claims less likely to succeed.

² The spectrum of views is broad. *Compare, e.g.*, Zephyr Teachout, *BREAK 'EM UP: RECOVERING OUR FREEDOM FROM BIG AG, BIG TECH, AND BIG MONEY* (2020); Matt Stoller, *GOLIATH: THE 100-YEAR WAR BETWEEN MONOPOLY POWER AND DEMOCRACY* (2019) Ch. 18; Tim Wu, *THE CURSE OF BIGNESS: ANTITRUST IN THE NEW GILDED AGE* (2018) *with, e.g.*, Herbert Hovenkamp, *TECH MONOPOLY* (2024); Alden Abbott, *Antitrust Law Shouldn't Be Used To Break Up Big Tech*, *DISCOURSE* (Aug. 27, 2021); Cato Institute, *Big Is Not Always Bad: Why We Shouldn't Rush to Break up the Tech Giants* (June 6, 2019); Will Johnson, *Survey: Americans think Big Tech isn't so bad after all*, *TECHCRUNCH* (Dec. 10, 2020).

³ Network effects have come up several times already. In Chapter II, for example, we noted that the analysis of entry barriers may include the analysis of network effects. *See supra* § II.F.2. And in Chapter III we saw that the presence of significant “indirect” network effects linking merchants and cardholders played a role in the Supreme Court's controversial decision to break from traditional market-definition principles in the *AmEx* case. *See supra* § III.C.4.

⁴ *See supra* §§ IV.C.2. (discussing complexities in the formulation and application of the rule of reason, including the admissibility of “out of market” benefits), VIII.D.1. (discussing the role of “out of market” efficiencies in merger analysis).

Courts and commentators often emphasize the value of “innovation” in digital antitrust matters: that is, the socially beneficial development of new and better ways to do things. Almost everyone agrees that it is important to promote innovation in tech markets, and that that objective should affect the shape of antitrust doctrine and policy. But there is much *less* agreement on how to do so: that is, on what circumstances or what antitrust rules actually tend to promote innovation. For example: does a concern with innovation imply that we should be particularly cautious about interfering with novel business models and practices, lest we punish success and make invention less appealing? Or does it mean that we should be particularly *eager* to intervene when incumbent or dominant firms do things that make life harder for rivals in fast-moving tech markets? Do we generally think that valuable innovations are more likely to come from incumbent monopolists with scale and resources, or from upstarts and entrants that may have more to gain, and less to lose, from disruption? And what should we measure in order to figure out whether a practice or transaction has in fact harmed innovation, or will do so in future? Unfortunately, there are no easy answers to any of these questions. Scholars, policy advocates, judges, businesses, and citizens simply have different intuitions, experiences, and expectations about the kinds of innovations that will benefit society, and how to encourage them. That means that they often disagree about the best application of antitrust rules.

For all these reasons and more, tech antitrust is a fabulously rewarding field of study, bursting with unresolved questions about the future of technologies, markets, and the antitrust project itself. It offers a terrific forum to explore your own views about the best way to develop the antitrust project in the years to come. But it might be a frustrating area for those hoping for clear answers!

Are Digital Markets Special?

Throughout your study of digital antitrust, ask yourself periodically: should we have special antitrust rules for digital markets? Of course, in some sense antitrust *always* reflects the nature of individual industries and markets. Agencies and courts have to consider the realities of competition in a specific context in order to understand the effects of particular practices and transactions. It’s hard to imagine doing antitrust any other way! But, as we will see, many writers and advocates favor going further: for example, by recognizing special theories of harm in digital markets, or creating special obligations for some or all digital platform businesses.

This question will surface time and again. For example, should we treat “self-preferencing” by a search engine, involving preferential search rankings for its own businesses, differently from a supermarket that features its own brands more prominently than those of brand rivals? Should we treat practices involving algorithmic price-setting—including those involving tacit collusion of some kind—differently from those involving direct price-setting by humans? Should we treat the acquisition of digital-economy startup businesses differently from startup acquisitions in mature industries? And, in an increasingly tech-reliant world, what is a “digital market” anyway?

The rest of this Chapter gives an overview of antitrust’s digital frontier, along with a tasting menu of some of the issues and problems that make it distinctive. Section B introduces some common features of certain digital markets, including platforms, network effects, and data. Section C visits a series of tech sectors in turn, in order to showcase some classic problems in digital markets, from self-preferencing to algorithmic collusion. Section D considers some prominent tech remedies, as well as the case for a specialized digital regulator with a competition remit. At each step, we will focus on identifying the central issues and stakes, and on understanding why reasonable minds—and reasonable courts, writers, enforcers, citizens, and law students!—can and do take different views.

B. (Some) Features of (Some) Digital Markets

1. Networks, Systems, and Ecosystems

Networks and Network Effects

Some products or services become more valuable to a user as the number of other users, or the intensity of their activity, increases. For example, a telephone is of little use if no-one else has or uses one, but as telephones are

used more widely by others, each one becomes more valuable. “Network effects” of this kind are present in many markets for digital products and services.⁵ Social networking services, for example, tend to be more attractive to users when many others already use the service. After all, there is not much point in being the only user of a social network, or trying to do personal social networking when none of your friends and family are on the network with you!

As a result, launching a product or service that involves such effects requires solving a basic problem: how do you get users to participate?⁶ A network with no users is a hard sell. Early adopters must somehow be encouraged to join a network before it offers the value that the mature network would provide. And even after a network gets off the ground, users may under-participate, compared to a social optimum, because the social value of the participation of each member may be externalized to other network members.

To incentivize participation, network owners may offer low or negative prices early in the life of a network. They may also offer special inducements to users that are particularly likely to draw others: influencers or trend-setters. And they may also work to ensure that complements to the network product are available on favorable terms, either by “opening up” to third-party participation in ways that encourage favorable prices and quality, or by creating and offering those complements at low prices.⁷ Over time, as the network becomes more valuable to its users, the network owner may transition from subsidizing participation—which may involve significant losses—to a more sustainable and profitable model. So a network may start out low-priced, and only later raise its prices once the network is established and offering a valuable service. Or a network may start out fully open to third parties, and only later “close up” in various ways in order to extract profit through complementary products and services. (This is sometimes referred to as the “open early, close late” model.)

There is not necessarily anything sinister—at least from the perspective of traditional antitrust doctrine—about changing the price or other rules of a network after it enjoys some success.⁸ Doing so may be a natural and efficient way to run the business profitably in the long run, while encouraging participation early in the network’s lifecycle. In many plausible cases, if the network charged the full price from the beginning, it would never have got off the ground; if it charged the low price in perpetuity, it would never become profitable to have built the network! Moreover, antitrust does not generally prohibit price increases over time, nor does it impose obligations to deal with third parties in most cases.⁹ (Of course, we might have a different reaction to a network owner that deceives its trading partners: for example, by making false or misleading statements or promises in order to lure them onto the platform.¹⁰)

More generally, the presence of network effects is a mixed blessing. In essence, they are a special type of scale efficiency: they amount to a quality improvement arising from a larger user-base. This means that users receive additional value as network effects become more significant, and the result is a contribution to welfare. This is the kind of thing that we normally think of as an antitrust benefit, and it is not obvious that we should think about it differently just because electrons are involved.¹¹ But, like other scale efficiencies, network effects also tend to favor

⁵ See generally, e.g., Catherine Tucker, *Network Effects and Market Power: What Have We Learned in the Last Decade?*, 32 Antitrust 72 (2018); Oz Shy, *A Short Survey of Network Economics*, 38 Rev. Indus. Org. 119 (2011); Mark A. Lemley & David McGowan, *Could Java Change Everything? The Competitive Propriety of a Proprietary Standard*, 43 Antitrust Bull. 715 (1998); Nicholas Economides, *The Economics of Networks*, 14 Int’l J. Indus. Org. 673 (1996); Michael Katz & Carl Shapiro, *Systems Competition and Network Effects*, 8 J. Econ. Persp. 93 (1994).

⁶ See generally, e.g., Michael Katz & Carl Shapiro, *Systems Competition and Network Effects*, 8 J. Econ. Persp. 93, 100–05 (1994).

⁷ See, e.g., Gregory J. Werden, *Network Effects and Conditions of Entry: Lessons from the Microsoft Case*, 69 Antitrust L.J. 87, 92–93 (2001) (noting that the need for complementary products and services may make network entry “exceptionally difficult”).

⁸ Others take a different view. See, e.g., Brief of Amicus Curiae American Antitrust Institute in Support of Plaintiffs-Appellants, *New York v. Facebook, Inc.*, Case No. 21-7078 (D.C. Cir. filed Jan. 28, 2022) 4–5, 14–18 (suggesting that an “open early, close late” strategy is necessarily deceptive).

⁹ Of course, practices that satisfy antitrust’s very demanding criteria for predatory pricing or for an unlawful refusal-to-deal may result in liability. See generally *supra* §§ VII.C.3., VII.D.3. (considering applicable monopolization law).

¹⁰ See *supra* § VII.D.5. (noting that misrepresentation can give rise to liability for monopolization under appropriate circumstances).

¹¹ See generally, e.g., Howard Shelanski, Samantha Knox & Arif Dhilla, *Network Effects and Efficiencies in Multisided Markets*, OECD Note DAF/COMP/WD(2017)40/FINAL (Nov. 15, 2017) 7 (“Accounting for [cost-reducing] efficiencies requires consideration of relevant cross-network externalities.”).

incumbents over new entrants and thus serve as a barrier to successful entry or expansion by rivals.¹² Thus, even if a new entrant has incrementally superior technology, it may find it difficult or impossible to attract users if everyone else is on the incumbent network. Such difficulties may not be insurmountable: the new network may be able to offer favorable terms, in just the ways described above, to attract users and build scale.

The term “tipping” is sometimes used to describe the phenomenon in which a single network acquires a decisive advantage over its rivals from scale.¹³ A competitor may be willing to invest considerable resources and energy in ensuring that its network, and not those of its rivals, emerge victorious.¹⁴ This effect, as two scholars point out, “is neither inherently good nor bad,” as it may be inevitable and the lowest-cost solution, although “[the fact that] a market is best served by a single standard . . . does not always imply that the standard should be owned by a single firm, or even that the standard should be owned at all.”¹⁵

There are other complications too. For one, the presence of some positive network effects does not mean that all returns to scale are constant, or even that all additional scale is beneficial. In fact, beyond a certain point a network might start to experience congestion or interference effects, where the presence of additional users or activity inflicts a *negative* externality on other users.¹⁶ In addition, users may not regard the participation of every other user as equally valuable: for example, a user of a personal social network may highly value the presence on the network of close friends, may only modestly value the presence of more distant acquaintances, may be indifferent to the presence of people the user is unlikely to meet, and may even negatively value the presence of some others.¹⁷ (For example, a young adult user of a social network might actively disvalue their parents or grandparents joining their favorite social network or dating app!) These effects can complicate or negate the “bigger is better” principle.

More generally, the presence of some network effects need not mean that the result will necessarily be a single incumbent network. It may well be possible for multiple networks to coexist. For one thing, perhaps congestion and other effects may qualify the benefits of scale. For another, perhaps differentiation among products and differentiated preferences among customers may support the existence of multiple networks, each of which is specialized in some way. Thus, for example, perhaps one network might be best suited for users who prefer a high-quality, high-security network, and are willing to pay more for it; another might be best suited for users who prefer a low-priced and highly customizable network. Under such circumstances, both may sustainably co-exist even if network effects are very salient. Or perhaps one network may achieve pre-eminence in provision of a “general” service of some kind (such as search, retail, or social networking), while others may simultaneously maintain viable scale in various “niches” (such as travel or restaurant search, craft-based or auction retail, or interest-based personal social networking). (Can you think of examples?)

So we may observe competition *among* networks that provide a similar product or service. This might be: because a market has not yet tipped to a single dominant provider; because such tipping is not likely to happen because of limits to returns from scale; because differentiation and specialization support the existence of multiple networks; or for some combination of these or other reasons.

¹² See, e.g., *FTC v. Facebook, Inc.*, 581 F.Supp.3d 34, 51 (D.D.C. 2022) (“[T]here can be little doubt that network effects and switching costs are commonly recognized types of barriers to entry[.]”).

¹³ See, e.g., Özlem Bedre-Defolie & Rainer Nitsche, *When Do Markets Tip? An Overview and Some Insights for Policy*, 11 J. Eur. Comp. L. & Practice 610 (2020); Mark A. Lemley & David McGowan, *Could Java Change Everything? The Competitive Propriety of a Proprietary Standard*, 43 Antitrust Bull. 715, 721–24 (1998); Michael Katz & Carl Shapiro, *Systems Competition and Network Effects*, 8 J. Econ. Persp. 93, 105–06 (1994) (noting examples from pre-Big Tech industries).

¹⁴ For empirical testing of the salience of network effects, see, e.g., Michał Grajek, *Estimating Network Effects and Compatibility: Evidence from the Polish Mobile Market*, 22 Info. Econ. & Pol’y 130 (2010); David Dranove & Neil Gandal, *The Dvd-vs.-Divx Standard War: Empirical Evidence of Network Effects and Preannouncement Effects*, 12 J. Econ. & Mgmt. Sci. 363 (2003); Neil Gandal, *Competing Compatibility Standards and Network Externalities in the PC Software Market*, 77 Rev. Econ. & Stat. 599 (1995).

¹⁵ Mark A. Lemley & David McGowan, *Legal Implications of Network Economics Effects*, 86 Cal. L. Rev. 479, 497 (1998).

¹⁶ See, e.g., Catherine Tucker, *Network Effects and Market Power: What Have We Learned in the Last Decade?*, 32 Antitrust 72, 77–78 (2018) (emphasizing congestion, privacy-preference, and “cool people avoiding those they deem as uncool”); Oz Shy, *A Short Survey of Network Economics*, 38 Rev. Indus. Org. 119–20 (2011) (“congestion,” “interference,” “snobbism,” and “vanity”).

¹⁷ See, e.g., Mark A. Lemley & David McGowan, *Legal Implications of Network Economics Effects*, 86 Cal. L. Rev. 479, 494 (1998) (“[N]ot everyone on the Internet wants to be connected to everyone else; some would prefer that access to the Internet remain limited, or at least that they be able to shut themselves off from the masses in a private group.”); Catherine Tucker, *Network Effects and Market Power: What Have We Learned in the Last Decade?*, 32 Antitrust 72, 76 (2018) (“[I]n a world of scarce attention, users tend to focus only on connections and interactions that matter personally to them when deciding what platform or service to use.”).

When there is such competition among networks, switching costs (*i.e.*, costs that must be incurred by a user wishing to switch from one network to a competing alternative) may play an important role. These switching costs may include, for example, the time and effort required to extract and transfer information from one supplier to another, or the effort required to duplicate or re-generate it on the new network.¹⁸ When these costs are significant, we may speak of users being “locked in” to some extent.

In addition to competition among present rivals, competition may take place “for” the relevant network market: that is, competition to replace an existing incumbent with a step-change improvement that leaps forward in technology, design, or consumer appeal. This is sometimes described as “competition for the market,” or “Schumpeterian” competition, and it may involve the replacement of one monopolist by another.¹⁹ (The replacement of MySpace by Facebook is sometimes cited as a famous example of this kind of thing. Can you think of others?)

Multihoming, Interoperability, and Portability

Using an additional network need not always involve high, or even any, switching costs. Users may be able to “multihome”: that is, simultaneously use or participate in multiple different networks.²⁰ The ability to do this may make it easier for new entrants to build share despite the presence of an incumbent, because users need not surrender membership in the incumbent network in order to deal with the entrant. Sometimes multihoming may be easy: for example, a user might just install a second app or sign up to a second service. On other occasions, costs are higher: a user wishing to multihome might have to buy a second device or negotiate burdensome technological barriers. In some settings, third parties may create and offer multihoming tools that make it easier for users to access more than one service; depending on the circumstances, dominant platforms may or may not have incentives to try to deter or prohibit this practice.²¹

Likewise, under certain circumstances networks may exhibit “interoperability” or “interconnectivity”: that is, the networks may connect to one another in some way, such that a participant in any one network may enjoy benefits of membership and participation in the others. Some prominent proposals for regulatory intervention focus on requiring certain networks to interoperate with others.²² This raises some complex questions of policy and practice that we will consider below.²³

Similarly, network operators may permit or promote (or regulators might require!) “portability”: that is, reducing the difficulty and cost of switching from one network to another by allowing users to carry certain assets or investments over to a rival. What this involves will depend on the relevant technology and the nature of competition. One of the most famous examples of a portability remedy is the FCC rule requiring telephone number portability.²⁴ (What do you think would, or could, be required to achieve portability for a personal social network? A smartphone? A video game console? An e-reader? A dating app? An email provider?)

Systems, Ecosystems, and Standards

Some networks involve sets of products or services that are complementary to one another and commonly used together. For example, a supplier may offer a console with games, or an operating system with applications, or a

¹⁸ See, e.g., Joseph Farrell & Paul Klemperer, *Coordination and Lock-In: Competition with Switching Costs and Network Effects*, in Mark Armstrong & Robert H. Porter (eds.), 3 HANDBOOK OF INDUSTRIAL ORGANIZATION (2007).

¹⁹ See, e.g., Gregory J. Werden, *Network Effects and Conditions Of Entry: Lessons from the Microsoft Case*, 69 Antitrust L.J. 87, 91 (2001); Fiona Scott Morton, Gregory Crawford, Jacques Crémer, David Dinelli, Amelia Fletcher, Paul Heidhues & Monika Schnitzer, *Equitable Interoperability: The “Supertool” of Digital Platform Governance*, 40 Yale J. on Reg. 1013, 1020 (2023).

²⁰ See, e.g., European Commission, *Multi-Homing: Obstacles, Opportunities, Facilitating Factors*, Observatory for the Online Platform Economy Study (2019); Catherine Tucker, *Network Effects and Market Power: What Have We Learned in the Last Decade?*, 32 Antitrust 72, 75 (2018) (“Multihoming increases competition within [the relevant] market, as platforms may use price reductions or quality improvements to try to entice users to spend more time on their platforms rather than on others.”).

²¹ See, e.g., Susan Athey & Fiona Scott Morton, *Platform Annexation*, 84 Antitrust L.J. 677 (2022) (examining practices that reduce or deter multihoming).

²² See, e.g., Fiona Scott Morton, Gregory Crawford, Jacques Crémer, David Dinelli, Amelia Fletcher, Paul Heidhues & Monika Schnitzer, *Equitable Interoperability: The “Supertool” of Digital Platform Governance*, 40 Yale J. on Reg. 1013 (2023).

²³ See *infra* § XIV.D.1.

²⁴ See, e.g., FCC, *Wireless Local Number Portability (WLN)*, <https://www.fcc.gov/general/wireless-local-number-portability-wlnp>.

device with peripherals. The sets of complements (*e.g.*, console + games, or operating systems + applications) may be generally called “systems,” and networks of systems may be called an “ecosystem.”²⁵ (These terms are used in a variety of different ways in the literature: this is just one way of using them.²⁶) When the components of an ecosystem are wholly supplied by a single entity, in the presence of factors that mean that others cannot feasibly supply compatible products and services, we might call the ecosystem “closed”; when third parties can readily do so, we might call it “open.” An ecosystem might be “closed” for a variety of reasons, including because third parties need access to intellectual property, technical information, special inputs, commercial relationships, or anything else that is necessary to offer a complement, but difficult or impossible to come by.

In practice, many ecosystems are partly closed and partly open: for example, in the United States, at the time of writing, Apple’s iOS ecosystem is generally closed with respect to devices, operating systems, and app stores (only Apple supplies these), but somewhat open with respect to applications (they may be supplied by third parties, subject to review by Apple) and device peripherals like speakers and headphones (these may be supplied by third parties *without* Apple approval if they conform to the technical requirements of an interface with the device).

Participation in a single network or ecosystem often requires a certain degree of compatibility or interoperability among the various components. This may be more difficult to achieve and maintain when those components are supplied by multiple different entities, each of which may have different preferences, expectations, interests, and technical capabilities.²⁷ Some kind of “standardization” may therefore be necessary. The relevant standards or protocols may be unilaterally defined and amended by a single entity (*e.g.*, a network owner), or collectively through a standard-setting or standards-development organization. Such standards may be of any kind, from arcane technical requirements to functional criteria relating to quality, safety, design, consumer protection, privacy, and so on. When a network owner sets standards unilaterally, a wide variety of circumstances can determine whether it will have the ability and incentive to facilitate, permit, hinder, or prohibit the supply of compatible products by others.²⁸

The existence of a standard, however it is formulated, may have mixed effects.²⁹ On the one hand, it may promote or ensure effective interoperation, and so make it easier and cheaper to design and offer products that will work successfully with the network. The result can be higher quality products and services, and more efficient planning by market participants. On the other hand, though, standards may exert a drag effect on product quality by deterring or prohibiting quality improvements and innovations that would violate the standard. Needless to say, different participants in an ecosystem or network may have different preferences about the content of a standard, and those preferences may or may not align with the interests of some or all users, consumers, competitors, or other stakeholders. For example, a dominant incumbent may have an incentive to favor standards that make life harder for rivals and entrants! Take a look back at Chapter X for a discussion—and some examples—of how the use and abuse of standard-setting processes may raise competitive concerns.³⁰

²⁵ See, *e.g.*, Carmen Matutes & Pierre Regibeau, “*Mix and Match*”: *Product Compatibility Without Network Externalities*, 19 RAND J. Econ. 221 (1988) (defining “systems” as “lines of products where each good cannot, or usually is not, used separately but might still be purchased separately. Examples are photography, where the typical product line includes cameras, lenses, film and film processing services, and computers, where a system involves software and several hardware components.”); OECD, *Executive Summary of the Hearing on Competition Economics of Digital Ecosystems*, DAF/COMP/M(2020)2/ANN6/FINAL (Dec. 3, 2020) (“[D]igital ecosystems offer access to their consumers to a line of products and services with a technological linkage increasing the complementarity between them.”).

²⁶ See, *e.g.*, Masaharu Tsujimoto, Yuya Kajikawa, Junichi Tomita & Yoichi Matsumoto, *A Review of the Ecosystem Concept — Towards Coherent Ecosystem Design*, 136 Tech. Forecasting & Social Change 49, 49 (2018) (“[T]he term *ecosystem* seems to be used without clear definition or sound theoretical backing.”).

²⁷ See generally, *e.g.*, Michael Katz & Carl Shapiro, *Systems Competition and Network Effects*, 8 J. Econ. Persp. 93 (1994) (discussing a range of issues relating to intrasystem compatibility).

²⁸ See, *e.g.*, Oz Shy, *A Short Survey of Network Economics*, 38 Rev. Indus. Org. 119, 131 (2011); Jeffrey Church & Neil Gandal, *Platform Competition in Telecommunications*, in Martin E. Cave, Sumit Majumdar & Ingo Vogelsang (eds.), 2 HANDBOOK OF TELECOMMUNICATIONS ECONOMICS (2005); Stanley M. Besen & Joseph Farrell, *Choosing How to Compete: Strategies and Tactics in Standardization*, 8 J. Econ. Persp. 117 (1994).

²⁹ See generally, *e.g.*, Maureen Ohlhausen, *The Elusive Role of Competition in the Standard-Setting Antitrust Debate*, 20 Stan. Tech. L. Rev. 93 (2017); Richard Gilbert, *Competition Policy for Industry Standards*, in Roger D. Blair & D. Daniel Sokol (eds.), 2 OXFORD HANDBOOK OF ANTITRUST ECONOMICS (2015); Mark A. Lemley & David McGowan, *Legal Implications of Network Economics Effects*, 86 Cal. L. Rev. 479, 515–22 (1998).

³⁰ See *supra* § X.D.

2. Multisided Platforms

Some networks can be described as “multisided platforms.” Although there are many different definitions of this term in the economic literature, we can think of them as networks for which the users (or other trading partners) can be classified into multiple different groups, and for which the value of the network to users in at least one group is a function of the number and activity of users in *other groups*.³¹ Each group constitutes a “side” of the platform. Thus, for example, a credit card is a multisided platform that serves two groups of users: merchants and cardholders. The credit card becomes more valuable to each merchant as more cardholders carry the card; and more valuable to each cardholder as more merchants accept it. These value effects—which accrue from additional participation by users in a *different* group—are often called “indirect” network effects. They may be bidirectional, as in the case of a credit card, or only one-directional. Some suggest, for example, that in many ad-supported platform businesses the advertisers value the participation of more users, while the users do not value the participation of more advertisers.³² (Do you agree? Can you think of cases in which users do experience greater value from the participation of more advertisers, and cases in which they do not?)

The boundaries of the multisided platform category are not completely clear. Certainly it includes businesses that are not “high-tech” or “digital” in any sense. An ad-supported newspaper, for example, clearly falls into this category (users and advertisers); so may certain auction houses (buyers and sellers) and some art galleries (artists and art buyers). More generally, it is not quite clear whether and in what ways it is useful to think about traditional businesses as “platforms.” For example, a supermarket is arguably more valuable to consumers when it deals with more suppliers, and more valuable to suppliers when it has more consumers. Does this mean that we should think about supermarkets—and by extension many other businesses that have suppliers and customers—as “multisided platforms”? Is the concept still useful if we use it in settings like this?³³

Like other networks, new-entrant multisided platforms face a participation puzzle: how can an owner attract users to a network that does not (yet) have many participants? Multisided platforms face a particular version of this difficulty that is sometimes called the “chicken and egg” problem. Users of one type may not want to join a platform until users of other types are present; while those other users may not themselves want to join until users of the first type are present!³⁴ In the D.C. Circuit’s celebrated *Microsoft* case, the court identified just such a dynamic in the operating-system business: users don’t want to buy a computer operating system for which there is not an ample supply of applications; and app developers don’t want to build applications for which there is not a robust population of users.³⁵ To respond to this problem, platform owners may either participate directly on one side or the other to stimulate demand (*e.g.*, Apple, Google, and Microsoft supplying sets of their own apps to attract users which, in turn, attract more app developers), or may invest in incentivizing third parties to do so.

The fact that a platform business deals simultaneously with multiple different groups has some interesting implications for competition. Among other things, competitive conditions—including cost, demand, own-price elasticity, and the platform’s value and market share—may at any one moment differ very significantly from one side to the next. An ad-supported newspaper, for example may face intense competition on one side while enjoying a virtual monopoly on the other: such as if there were many other (paid-for) newspapers in a particular area but no other sellers of advertising, or vice versa. In particular, different sides of the platform may exhibit different price elasticities of demand at the same absolute price level: users on one side may be highly elastic while those on another side may be highly inelastic.

³¹ See generally, *e.g.*, Jean-Charles Rochet & Jean Tirole, *Platform Competition in Two-Sided Markets*, 1 J. Eur. Econ. Ass’n 990 (2003); David S. Evans, *The Antitrust Economics of Multi-Sided Platform Markets*, 20 Yale J. on Reg. 325 (2003).

³² See, *e.g.*, Richard Schmalensee & David S. Evans, *Multi-Sided Platforms* in THE NEW PALGRAVE DICTIONARY OF ECONOMICS (2017) (“[A]dvertisers value more users, but users don’t necessarily value more advertising.”).

³³ See, *e.g.*, Michael Katz & Jonathan Sallet, *Multisided Platforms and Antitrust Enforcement*, 127 Yale L.J. 2142, 2149–51 (2018) (“Almost any firm selling an input to a manufacturer would prefer that the manufacturer have more customers, as then the manufacturer will demand more of the input.”).

³⁴ See, *e.g.*, Bernard Caillaud & Bruno Jullien, *Chicken & Egg: Competition Among Intermediation Service Providers*, 34 RAND J. Econ. 309, 310 (2003).

³⁵ See, *e.g.*, *United States v. Microsoft Corp.*, 253 F.3d 34, 55 (D.C. Cir. 2001) (en banc).

It follows that a platform often will maximize demand, its own profits, and overall output by charging different prices to users on different sides.³⁶ In fact, the output-maximizing practice may be to charge a relatively high price on one side and a relatively low, or even negative, price on the other. This happens all the time. For example, an ad-supported personal social network may charge a relatively high price to advertisers, while charging an effective negative price to users by providing valuable social networking and other services for no charge. Economists call the relationship between the prices on a platform's various sides the platform's "price structure," and one technical definition of a platform business is that a change in price structure, without a change in overall price level, results in a change in demand for the platform.³⁷

One consequence of these dynamics is that some general principles about the relationships between prices, costs, output, and competition do not necessarily hold in the context of platform businesses. For example, the fact that a platform is charging a price significantly in excess of its costs on one side does not suggest anything about market power: the same platform may be charging a price significantly *below* its own costs on another side, and may be earning razor-thin (or even negative) profits overall, and facing vigorous competition. As a result, examining only one side—or fewer than all the sides—of a multisided platform may give a misleading picture of what is going on.³⁸

Despite what is sometimes supposed,³⁹ a multisided platform business can compete with other multisided platform businesses, with single-sided businesses, or with both. The set of competitors on one side of the platform may or may not overlap with the set of competitors on the other. For example, ad-supported newspapers may compete with one another and also with paid-for newspapers for the business of readers. They might also compete with one another and with other (non-newspaper!) forms of advertising for the business of advertisers.

The Supreme Court has, in its *AmEx* decision of 2018, labeled a certain subset of platform businesses "transaction platforms," and has indicated that such platforms qualify for special treatment under market definition rules.⁴⁰ Although the bounds of this category are notoriously uncertain, the *AmEx* Court seemed to have in mind services that are provided to a pair of transacting parties that purchase the product or service jointly and receive it simultaneously. Such services include, for example, payment processing services, or transaction handling / fulfilment services, when provided to buyer-seller pairs. It seems clear that any particular platform may provide *some* services that are transactional in nature, while also providing *other* services that are not.⁴¹

Interbrand Competition and Aftermarkets

As you may recall, antitrust doctrine has since the mid-1970s generally reflected a "primary" concern with so-called interbrand, rather than intrabrand, competition.⁴² This distinction is commonly exemplified by reference to manufacturers of competing brands of consumer goods. In that context, it reflects the prioritization of competition among different manufacturers, rather than competition among different retailers of the same manufacturer's goods. The basic idea is that many restraints on intrabrand competition can and should be

³⁶ See generally, e.g., Jean-Charles Rochet & Jean Tirole, *Two Sided Markets: A Progress Report*, 37 RAND J. Econ. 645, 648 (2006) ("Managers [in two-sided businesses] devote considerable time and resources to figuring out which side should bear the pricing burden, and commonly they end up making little money on one side (or even using this side as a loss leader) and recouping their costs on the other side[.]").

³⁷ See, e.g., Jean-Charles Rochet & Jean Tirole, *Two Sided Markets: A Progress Report*, 37 RAND J. Econ. 645, 651 (2006) ("We [have] defined two-sided markets as ones in which the price structure (. . . for a given price level . . .) affects the "economic outcome (volume, profits, and/or welfare).").

³⁸ See, e.g., *Ohio v. American Express Co.*, 138 S.Ct. 2274, 2285–87 (2018) (making a version of this point); Steven C. Salop, Daniel Francis, Lauren Sillman & Michaela Spero, *Rebuilding Platform Antitrust: Moving On from Ohio v. American Express*, 84 Antitrust Law Journal 883, 908–13 (2022) (proposing an approach to antitrust analysis in platform cases that reflects this point).

³⁹ See, e.g., *Ohio v. American Express Co.*, 138 S.Ct. 2274, 2287 (2018) ("Only other two-sided platforms can compete with a two-sided platform for transactions."); *United States v. Sabre Corp.*, 452 F.Supp.3d 97, 138 (D. Del. 2020) (same), *vacated as moot*, No. 20-1767, 2020 WL 4915824 (3d Cir. July 20, 2020).

⁴⁰ *Ohio v. American Express Co.*, 138 S.Ct. 2274 (2018). In brief, the Court's *AmEx* decision holds among other things that a single antitrust market definition should be constructed to include both (or all?) sides of such platforms, even though the services on those sides may not be substitutable for one another. See *supra* § III.C.4.

⁴¹ See Steven C. Salop, Daniel Francis, Lauren Sillman & Michaela Spero, *Rebuilding Platform Antitrust: Moving On from Ohio v. American Express*, 84 Antitrust Law Journal 883, 930 (2022).

⁴² See *Continental T.V., Inc. v. GTE Sylvania Inc.*, 433 U.S. 36, 52 n.19 (1977).

tolerated because manufacturers have every incentive to use such restraints to compete more effectively against other brands, and that such competition will lead to greater welfare overall. Moreover, the idea goes, if interbrand competition is robust, retailers will be able to switch (or threaten to switch) to other manufacturers, which will in turn help to ensure that manufacturers impose only efficient restraints on their retailers.

The interbrand/intrabrand distinction has some interesting implications for competition among networks, ecosystems, and platforms. On what might be the most natural reading, it might imply that antitrust is primarily concerned with competition *among* those units, not competition within or on them. For example, optimal competition among networks (etc.) might involve significant intra-network restraints, including those that might help to guarantee the secure and efficient operation of the network as a whole. Likewise, if inter-network competition is robust, market participants may be able to switch (or threaten to switch) in order to deter the network owner from imposing inefficient restrictions.

But in some important ways networks, ecosystems, and platforms seem very different from the manufacturers of consumer goods that were at issue in *GTE Sylvania*, and those differences might have implications for the role of the interbrand/intrabrand distinction in antitrust policy. For one thing, inter-network competition may not be particularly robust if the network owner is an entrenched monopolist, or engaged in tacit collusion. Such competition may not help at all if the relevant restraints are adopted in parallel by the other tacit colluders. For another thing, switching costs, lock-in, and similar effects may reduce the extent to which the presence of alternative networks genuinely disciplines internal restraints. Chicken-and-egg problems might exacerbate this effect: for example, app developers might resist switching away to other operating systems so long as users stay on the dominant operating system, and vice versa. Ultimately, a commitment to the primacy of interbrand competition might involve some steeper costs—at least in the short term—in the digital context than it does in the brick-and-mortar one. (But then, one might reply: are any of these factors really unique to digital markets? Is it clear that they are more salient in that context?)

There is, of course, another side to this coin. The importance of certain kinds of relationships and interactions among the participants in a network, ecosystem, or platform may *increase* the importance and value of internal restraints and limitations, including those that limit competitive freedom in some way. In the context of a digital ecosystem, there may be a particular need for coordination—for both technological and commercial reasons—going far beyond what is necessary or desirable in the distribution of traditional consumer goods. For example, internal restrictions may be necessary to ensure product compatibility, system security, consumer privacy, ease of use, consistency of user experience, or the integrity of commercial practices grounded in network or platform economics (*e.g.*, asymmetric price structures).

All this tees up some tough, deep questions for antitrust policy. Should the primacy of interbrand competition in brick-and-mortar antitrust imply the equal primacy of inter-network (or inter-ecosystem, or inter-platform) competition in digital antitrust? If so, what are the implications and limits of that primacy: should antitrust focus exclusively on protecting inter-unit competition? Or is it time to reconsider interbrand competition's primacy, either in some tech markets or across the board?

One analytical tool that may play a role in approaching this problem is the “aftermarket” concept, exemplified by the Supreme Court’s decision in *Eastman Kodak*.⁴³ In brief, the aftermarket concept permits an antitrust market to be defined around the set of products and services available to consumers, or other trading partners, that have already bought a particular primary product or service. In *Eastman Kodak* itself, the Court held that even if the defendant, Kodak, lacked market or monopoly power in a market for photocopying equipment, it might nevertheless hold market or monopoly power in an aftermarket for service and parts for its own equipment. In particular, such “aftermarket power” might exist if information costs and other market imperfections meant that competition in the supply of equipment did not in fact discipline competitive conditions in the supply of service and parts, leaving some customers vulnerable to adverse and discriminatory exploitative conduct in those complementary markets. (Look back at Chapter III for a fuller refresher.⁴⁴)

⁴³ *Eastman Kodak Co. v. Image Technical Services, Inc.*, 504 U.S. 451 (1992).

⁴⁴ See *supra* § III.E.

There may well be some room to apply the aftermarket concept to certain digital markets in ways that have not yet been much explored. In particular: even when competition between networks, ecosystems, or platforms is robust, it is possible that costs and market imperfections—similar to the ones in *Eastman Kodak*—could result in imperfect competitive discipline *within* (or “on”) those units, exposing a set of trading partners to the risk of harm. In such cases, a court might rely on *Eastman Kodak* to define an antitrust “aftermarket,” specific to a particular network, ecosystem, or platform, to include only the complementary products and services offered within that environment. For example, even if a smartphone market was competitive, a court might conclude that information costs and other factors meant that such competition did not discipline restraints that affected, say, the supply of apps to users of the smartphone, exposing some or all users of a device, or app developers for a device, to competitive harm. Do you think this would be an appropriate way to qualify antitrust’s general preference for “interbrand” competition? Or would this approach lead to undesirable results and excessive antitrust intervention?

3. Digital Advertising

Many digital products and services are supported by advertising. That is: the products and services are provided free of charge to users, and they are made profitable by charging advertisers for the right to display advertising to those users. Online advertising has been around since the early days of the mainstream Internet, and today it represents a vast amount of economic activity.⁴⁵

Digital advertising comes in many forms. In broad terms: “display advertising” typically takes the form of an advertising image displayed on a web page: for example, on a banner at the top, or in a bar down one side.⁴⁶ “Search advertising” is displayed in response to a search—on an internet search result screen, an e-commerce product search result window, a map or otherwise—that promote the advertised products or services in some way, and which may or may not be integrated into non-advertising (“organic”) search results.⁴⁷ “Video advertising” typically takes the form of videos or video clips that promote a product or service.⁴⁸ “Influencing” generally involves paid promotional social media content, such as videos, photos, or posts that endorse or praise a product or service.⁴⁹ Advertising that blends with its nonadvertising context is generally known as “native advertising,” a category which may overlap with any of the above.⁵⁰ And so on. Assessing competition among or between different forms of digital advertising can be very tricky: of course, this is often critical for the assessment of market definition, market or monopoly power, and other pieces of an antitrust case.⁵¹

⁴⁵ See, e.g., Statista, *Digital Advertising—United States*, <https://www.statista.com/outlook/dmo/digital-advertising/united-states> (“Ad spending in the Digital Advertising market is projected to reach US\$298.4bn in 2024.”); see also, e.g., Jeejun Lee & Chang-Hoan Cho, *Digital Advertising: Present and Future Prospects*, 39 Rev. Mktg. Comms. 332 (2020); Andrew McStay, DIGITAL ADVERTISING (2016).

⁴⁶ See, e.g., *United States v. Google LLC*, --- F.Supp.3d ---, 2024 WL 3647498, at *82 (D.D.C. Aug. 5, 2024).

⁴⁷ See, e.g., Pavel Kireyeva, Koen Pauwels & Sunil Gupta, *Do Display Ads Influence Search? Attribution and Dynamics in Online Advertising*, 33 Intl. J. Res. Mktg. 475 (2016); Yakov Bart, Andrew T. Stephen & Miklos Sarvary, *Which Products Are Best Suited to Mobile Advertising? A Field Study of Mobile Display Advertising Effects on Consumer Attitudes and Intentions*, 51 J. Mktg. Res. 270 (2014); Avi Goldfarb & Catherine Tucker, *Online Display Advertising: Targeting and Obtrusiveness*, 30 Mktg. Sci. 389 (2011).

⁴⁸ See, e.g., Catherine E. Tucker, *The Reach and Persuasiveness of Viral Video Ads*, 34 Mktg. Sci. 281 (2015); Hao Li & Hui-Yi Lo, *Do You Recognize Its Brand? The Effectiveness of Online In-Stream Video Advertisements*, 44 J. Advertising 208 (2014).

⁴⁹ See, e.g., Andrea Galeotti & Sanjeev Goyal, *Influencing the Influencers: A Theory of Strategic Diffusion*, 40 RAND J. Econ. 509 (2009); Paul Harrigan, Timothy M. Daly, Kristof Coussement, Julie A. Lee, Geoffrey N. Soutar & Uwana Evers, *Identifying Influencers on Social Media*, 56 Intl. J. Info. Mgmt. 102246 (2021).

⁵⁰ Colin Campbell & Pamela E. Grimm, *The Challenges Native Advertising Poses: Exploring Potential Federal Trade Commission Responses and Identifying Research Needs*, 38 J. Pub. Pol’y & Mktg. 110 (2018).

⁵¹ See, e.g., *United States v. Google LLC*, --- F.Supp.3d ---, 2024 WL 3647498, at *81–95 (D.D.C. Aug. 5, 2024) (considering a variety of issues in digital advertising market definition); *In re Google Digital Advert. Antitrust Litig.*, No. 20-CV-03556, 2021 WL 2021990, at *3 (N.D. Cal. May 13, 2021) (“[T]he Court agrees with Defendants that the alleged market for online display advertising services on the open web improperly excludes other ways for advertisers to reach publishers without using Google’s services. The Court is particularly concerned that Plaintiffs’ market excludes social-media display advertising and direct negotiations.”) (internal quotation marks and citations omitted); *FTC v. IQVIA Holdings Inc.*, --- F.Supp.3d ---, 2024 WL 81232, at *11–25 (S.D.N.Y. Jan. 8, 2024) (sustaining relevant market for programmatic advertising to health care professionals). For an overview of the landscape, see generally OECD, *COMPETITION IN DIGITAL ADVERTISING MARKETS* (2020); U.K. Competition and Markets Authority, *ONLINE PLATFORMS AND DIGITAL ADVERTISING: MARKET STUDY FINAL REPORT* (July 2020) § 5; Simeon Thornton, Chris Jenkins & Marie-Madeleine Husunu, *Competition in Digital Advertising Markets*, 20 Comp. L.J. 89 (2021); Catherine

The welfare effects of advertising, like many other things about it, are controversial.⁵² On the one hand, like other forms of marketing and promotion, digital advertising appears to promote the satisfaction of demand: a traditionally procompetitive effect.⁵³ The fact that many businesses spend vast sums on digital advertising does, at least, strongly suggest that they think it works to connect users with products and services that they want to buy. On the other hand, in some circumstances, advertising may be associated with welfare harms. For example, if a personal social network increases the ratio of advertising to “organic” social content in a user’s feed—sometimes called the “advertising load” or “ad load”—the most desirable content may be effectively diluted, arguably reducing the welfare of users.⁵⁴ This is not to say that an ad-supported model is necessarily more harmful for users than the alternative, which may be a subscription-based model with a money price.

The effects of data-driven targeting (“behavioral advertising”) are particularly contested.⁵⁵ There is clearly something to be said in favor of the practice: all else equal, it seems plausible that users are more likely to value advertising that reflects their interests and preferences, compared to advertising that does not. Some scholarly contributions have explored ways in which targeted advertising may contribute to social welfare.⁵⁶ But scholars and advocates have also raised concerns that behavioral advertising—along with the widespread collection and use of personal data that it includes—may be injurious to privacy, dignity, and a variety of other interests.⁵⁷ They suggest that harms may be particularly significant if users either do not consent, or do not consent in a sufficiently robust fashion, to the collection, sharing, or commercialization of their data.⁵⁸ This worry is sometimes identified with broader concerns about a “surveillance economy” in which human dignity or autonomy may be impaired.⁵⁹

Privacy (and similar) concerns related to advertising can show up in antitrust or competition policy in a variety of ways. Some have suggested, for example, that injuries to privacy might play a role in demonstrating that market or monopoly power exists in a particular case, or that a practice or transaction has had harmful effects (*e.g.*, by reducing competitive pressure that would otherwise force a digital business to offer better privacy protections). Others argue that the consistency and magnitude of consumer preferences for privacy are overstated, and that on net consumers prefer to share their information in order to get free products and services, such that more data-sharing does not necessarily correspond to consumer injury. We will return to this point below.

A distinct but related set of concerns has been articulated in connection with features of product or service design that are designed to influence or affect user behavior (sometimes called “dark patterns”): for example, to encourage behavior, like use or purchasing, that are arguably inconsistent with a user’s “true” preferences.⁶⁰ Of course, many

Tucker, *Competition in the Digital Advertising Market* in GAI, THE GLOBAL ANTITRUST INSTITUTE REPORT ON THE DIGITAL ECONOMY (2020); Damien Geradin & Dimitrios Katsifis, *An EU Competition Law Analysis of Online Display Advertising in the Programmatic Age*, 15 Eur. Comp. J. 55 (2019).

⁵² An old strand of criticism and analysis targets advertising itself—digital or otherwise—on the ground that by introducing “artificial” demand inelasticity it results in market power and consumer harm. *See, e.g.*, Lakshman Krishnamurthi & S. P. Raj, *The Effect of Advertising on Consumer Price Sensitivity*, 22 J. Mktg. Res. 119 (1985); Paul W. Farris & Mark S. Albion, *The Impact of Advertising on the Price of Consumer Products*, 447 J. Mktg. 17 (1980); H. Paul Root, *Should Product Differentiation Be Restricted?*, 36 J. Mktg. 3 (1972); Dorothea Braithwaite, *The Economic Effects of Advertisement*, 38 Econ. J. 16 (1928).

⁵³ *See generally, e.g.*, Geoffrey A. Manne & Eric Fruits, *The Antitrust Assault on Ad Tech: A Law & Economics Critique*, ICLE White Paper (2022).

⁵⁴ *See, e.g.*, FTC v. Meta Platforms, Inc., Case No. 20-3590, 2024 WL 4772423, at *14, 31 (D.D.C. Nov. 13, 2024) (indicating that “ad load” might be a suitable proxy for quality or effective price).

⁵⁵ *See generally, e.g.*, Eduardo Abraham, Schnadower Mustri, Idris Adjerid & Alessandro Acquisti, *Behavioral Advertising and Consumer Welfare: An Empirical Investigation*, working paper (Mar. 22, 2023) 2–3 (reviewing literature); Yan Lau, *A Brief Primer on the Economics of Targeted Advertising*, FTC Bureau of Economics Working Paper (Jan. 2020).

⁵⁶ *See, e.g.*, Jianqing Chen & Jan Stallaert, *An Economic Analysis of Online Advertising Using Behavioral Targeting*, 38 M.I.S.Q. 429 (2014); David S. Evans, *The Online Advertising Industry: Economics, Evolution, and Privacy*, 23 J. Econ. Persp. 37, 42–43 (2009); Lola Eseteban & Jose M. Hernandez, *Strategic Targeted Advertising and Market Fragmentation*, 12 Econ. Bull. 1 (2007).

⁵⁷ *See, e.g.*, Jane S. Hoffman, YOUR DATA, THEIR BILLIONS: UNRAVELING AND SIMPLIFYING BIG TECH (2022); Dissenting Statement of Commissioner Rohit Chopra, In re Facebook, Inc. FTC File No. 1823109 (July 24, 2019); Natasha Lomas, *The Case Against Behavioral Advertising Is Stacking Up*, TECHCRUNCH (Jan. 20, 2019).

⁵⁸ *See, e.g.*, Federico Galli, Francesca Lagioia & Giovanni Sartor, *Consent to Targeted Advertising*, Eur. Bus. L. Rev. 485 (2022).

⁵⁹ *See generally, e.g.*, Shoshana Zuboff, THE AGE OF SURVEILLANCE CAPITALISM: THE FIGHT FOR A HUMAN FUTURE AT THE NEW FRONTIER OF POWER (2019).

⁶⁰ *See, e.g.*, House of Representatives Subcommittee on Antitrust, Commercial and Administrative Law of the Committee on the Judiciary, INVESTIGATION OF COMPETITION IN DIGITAL MARKETS: MAJORITY STAFF REPORT AND RECOMMENDATIONS

suppliers design their products to be attractive and to encourage their use. And a very great deal of advertising aims to influence consumer preferences or behavior. So: is the effort to influence consumers different in any salient respect—more effective, more harmful, more pernicious—when it is deployed in connection with an online product or service? How would we prohibit it, if we wanted to do so?

4. Data

No survey of digital antitrust issues would be complete without some mention of data: or indeed “Big Data.”⁶¹ Data, of course, is just information: and digital products and services often involve plenty of it.

Data plays many different roles in digital competition matters.⁶² Sometimes the product or service of competitive concern itself involves the supply of data.⁶³ On other occasions, data of some kind may be an important input into a relevant product or service.⁶⁴ For example, personal data about users may be a valuable input into the provision of targeted advertising services; likewise, data about internet search queries (“query data”) may be a valuable input into the provision of internet search services. This may give rise to concerns about foreclosing rivals’ access to data, or using data—obtained by agreement or through a merger—to free-ride on competitors’ investments in ways that reduce their incentives to make such investments and thus harm welfare.⁶⁵ And on still other occasions, data may affect the analysis of barriers to entry: for example, parties may argue or a court may conclude that a need for data of a particular kind limits the ability of businesses to enter or expand, given the absence of reasonable substitutes.⁶⁶

These settings, among others, raise the question of whether and when access to data may give rise to market or even monopoly power. Can one be a monopolist of some kind of information? The answer is almost certainly yes in principle: data is a valuable thing that may be scarce, even if it is what economists call “non-rivalrous in

(2020) 53 (“[B]ehavioral nudges—referred to as dark patterns—are commonly used in online tracking and advertising markets to enhance a firm’s market power and maximize a company’s ability to extract revenue from its users.”); Eric Ravenscraft, *How to Spot—and Avoid—Dark Patterns on the Web*, WIRED (July 29, 2020); see also Gregory Day & Abbey Stemler, *Are Dark Patterns Anticompetitive?* 72 Ala. L. Rev. 1 (2020).

⁶¹ “Big Data” is a term that usually refers loosely to very large datasets. It is sometimes used to connote datasets that are particularly extensive with respect to their “volume, velocity, and variety,” with different commentators adding or emphasizing different things. See generally, e.g., Xavier Boutin & Georg Clemens, *Defining “Big Data” in Antitrust*, CPI Antitrust Chronicle (Aug. 2017); OECD, *Big Data: Bringing Competition Policy to the Digital Era*, DAF/COMP/M(2016)2/ANN4/FINAL (Apr. 26, 2017).

⁶² See generally, e.g., Kristof Zetenyi & Dheeraj Chaudhary, *Data in the Digital Economy: The “Anti-Hero” of Antitrust or Just “Bad Reputation?”* CPI Antitrust Chronicle (Feb. 2024); D. Daniel Sokol & Roisin Comerford, *Antitrust and Regulating Big Data*, 23 Geo. Mason L. Rev. 1129 (2016); Maureen K. Ohlhausen & Alexander P. Okuliar, *Competition, Consumer Protection, and The Right [Approach] to Privacy*, 80 Antitrust L.J. 121, 123 (2015).

⁶³ See, e.g., Statement of the FTC, In the Matter of Nielsen Holdings N.V. and Arbitron Inc., FTC File No. 131-0058 (Sept. 20, 2013), 1 (“We believe Nielsen’s acquisition of Arbitron is likely to deprive media companies and advertisers of the benefits of competition between two firms that are currently developing, and are most likely to be effective suppliers of, syndicated crossplatform audience measurement services.”); FTC, Analysis of Agreement Containing Consent Order to Aid Public Comment, In the Matter of CoreLogic, Inc., FTC File No. 131-0199 (Mar. 24, 2014), 2 (“The acquisition would significantly increase concentration in an already highly concentrated market for national assessor and recorder bulk data.”); Complaint, In the Matter of Verisk Analytics, Inc., FTC Dkt. No. 9363 (F.T.C., filed Dec. 16, 2014), ¶ 1 (“Verisk’s proposed acquisition of EagleView threatens to harm competition by eliminating its largest and most significant competitor for rooftop aerial measurement services and reports.”).

⁶⁴ See, e.g., Competitive Impact Statement, United States v. Google Inc., No., 11:11-cv-688 (D.D.C. filed Apr. 8, 2011) (resolving concerns that Google’s acquisition of ITA Software would enable it to foreclose rivals’ access to important data and information); see also FTC v. IQVIA Holdings Inc., __ F.Supp.3d __, 2024 WL 81232, at *11 (S.D.N.Y. Jan. 8, 2024) (noting, but not adjudicating, claim that “IQVIA’s acquisition of DeepIntent will allow it to foreclose other industry participants from accessing IQVIA’s data, which is a key input for HCP programmatic advertising”).

⁶⁵ See, e.g., United States v. UnitedHealth Gp. Inc., 630 F. Supp. 3d 118, 142 (D.D.C. 2022) (describing such a claim); U.S. Dept. of Justice & FTC, MERGER GUIDELINES (2023) 17 (“[A] merged firm might use visibility into a rival’s competitively sensitive information to undermine competition from the rival. For example, the merged firm’s ability to preempt, appropriate, or otherwise undermine the rival’s procompetitive actions can discourage the rival from fully pursuing competitive opportunities.”); *id.* at 25 (“Mergers that involve firms that provide other important inputs to platform services can enable the platform operator to deny rivals the benefits of those inputs. For example, acquiring data that helps facilitate matching, sorting, or prediction services may enable the platform to weaken rival platforms by denying them that data.”).

⁶⁶ See, e.g., Jingyuan Ma, REGULATING DATA MONOPOLIES: A LAW AND ECONOMICS PERSPECTIVE (2022) Ch. 6; Daniel L. Rubinfeld & Michal S. Gal, *Access Barriers to Big Data*, 59 Ariz. L. Rev. 339 (2017); D. Daniel Sokol & Roisin Comerford, *Antitrust and Regulating Big Data*, 23 Geo. Mason L. Rev. 1129 (2016).

consumption” (*i.e.*, use of data by one person does not leave less of it for others).⁶⁷ But, as with any other product or service, market or monopoly power in data is only plausible in the absence of reasonable substitutes for whatever kind of information may be at issue, from the perspective of demand. Such power can exist when there are few or no reasonably available alternative kinds or sources of data to meet the relevant demand; means of gathering or generating it; or non-data-driven means of meeting the demand in question.⁶⁸ Just as with any other product or service, merely having a lot of information or data is not itself constitutive of market or monopoly power in the antitrust sense, even if it contributes in some way to a competitive advantage.⁶⁹

Data may also play a role in the assessment of market power by making a particular subset of inelastic customers, consumers, or other trading partners more easily identifiable. For example, in determining whether to define a “price discrimination” (or “targeted customer”) market, agencies and courts must commonly determine whether a particular segment of demand is inelastic and vulnerable to a price increase or other harm from the relevant practice or transaction. This assessment may turn in part on whether the relevant market participants have access to data about customer identity, preference, and behavior in ways that would make it easier to target customers and thus support the use of the price-discrimination market device.⁷⁰

In other settings, we might think of data not as a source of market power but as a possible dimension of benefit or harm. For example, improved access to accurate data might be a relevant procompetitive benefit of a practice or transaction: it might contribute to welfare by permitting the accurate identification and satisfaction of demand, more valuable product design and innovation, or the reduction of waste and information costs.⁷¹ As we saw in Chapter V, even data exchange among direct competitors can be, and often is, procompetitive.⁷² Conversely, data may figure in a story of harm. For example—as noted above—if consumers do indeed prefer to share less data rather than more, their welfare may be reduced if the “data price” for a product or service is increased and all else is otherwise equal.⁷³

This touches a notorious empirical puzzle that sometimes raises its head in digital competition policy discussions: how much do consumers really value their digital privacy? When they receive a digital product or service for no cash price, in exchange for providing data that is used to target advertising, is their surplus value high or low? The evidence on this question is mixed and puzzling. Consumers frequently indicate (*e.g.*, on surveys and in interviews) that they value their privacy online.⁷⁴ And many scholars and policy advocates emphasize the harms of tech

⁶⁷ See, *e.g.*, *Standfacts Credit Servs. v. Experian Info. Sols., Inc.*, 294 F. App’x 271, 272 (9th Cir. 2008) (accepting, for the purposes of a motion to dismiss, a “wholesale market for . . . credit data for use in tri-merged Mortgage Credit Reports”); Complaint, In the Matter of Fidelity National Financial/Stewart Information Services, FTC File No. 181-0127 (F.T.C. filed Sept. 24, 2019) ¶¶ 39–42 (alleging a market for “title information services”).

⁶⁸ See generally, *e.g.*, Nadeem U. Shahid & Nasir J. Sheikh, *Impact of Big Data on Innovation, Competitive Advantage, Productivity, and Decision Making: Literature Review*, 9 Open J. Bus. & Mgmt. 586 (2021); Anja Lambrecht & Catherine E. Tucker, *Can Big Data Protect a Firm from Competition?*, CPI Antitrust Chronicle (January 2017); Inge Graef, *Market Definition and Market Power in Data: The Case of Online Platforms*, 38 World Competition 473 (2015).

⁶⁹ See generally *supra* §§ II.F., III.E. (economics and law of market power).

⁷⁰ See generally, *e.g.*, U.S. Executive Office of the President, *BIG DATA AND DIFFERENTIAL PRICING* (February 2015); Ariel Ezrachi & Maurice E. Stucke, *The Rise of Behavioural Discrimination*, 37 Eur. Comp. L. Rev. 484 (2016).

⁷¹ See, *e.g.*, Catherine Tucker, *Online Advertising and Antitrust: Network Effects, Switching Costs, and Data As An Essential Facility*, CPI Antitrust Chronicle (Apr. 2019) (noting that “[d]ata has revolutionized online advertising by allowing platforms to ‘target’ consumers who are likely to respond well to an ad with the right ad at the right time, and then measure the effectiveness of the ad,” and that “the right data can greatly improve the performance of advertising,” albeit “only because of the baseline assumption that online advertising is rather ineffective”); D. Daniel Sokol & Roisin Comerford, *Antitrust and Regulating Big Data*, 23 Geo. Mason L. Rev. 1129, 1133 (2016) (“Unprecedented consumer benefits have already been realized through the use of Big Data, chief among them free user services (as a number of the cases have noted), improved quality, and a rapid increase in innovation.”). Some have suggested that under certain circumstances data may be so beneficial as to be competitively essential. Zachary Abrahamson, *Essential Data*, 124 Yale L.J. 867(2014).

⁷² See, *e.g.*, *Todd v. Exxon Corp.*, 275 F.3d 191, 213 (2d Cir. 2001) (“Public dissemination is a primary way for data exchange to realize its procompetitive potential. For example, in the traditional oligopoly . . . context, access to information may better equip buyers to compare products, rendering the market more efficient while diminishing the anticompetitive effects of the exchange.”); see generally *supra* § V.C.2.

⁷³ See, *e.g.*, Magali Eben, *Personal Data as a Price in Market Definition: A Brief Assessment*, CPI Antitrust Chronicle (Sept. 2021).

⁷⁴ This is a favorite empirical topic for scholars and marketers alike. See, *e.g.*, Data & Marketing Ass’n, *UK Data Privacy: What the Consumer Really Thinks* (2022) 4 (“The proportion of UK consumers who claim to have high levels of concerns about their online privacy has fallen notably over the past decade. In 2022, 69% of UK consumers stated high levels of online privacy concerns,

“surveillance” as an urgent problem for legislators and regulators.⁷⁵ And yet many consumers seem to act in ways that suggest they value digital privacy little, if at all.⁷⁶ Researchers, including industry participants, have made various efforts to quantify the economic value to consumers of unpriced services like search, email, and social networking, in order to assess the net surplus that accrues from receiving such services in exchange for data.⁷⁷

5. Innovation and the “Dynamism Discount”

Arrovian and Schumpeterian Perspectives on Innovation

Even more than other areas of antitrust, digital competition policy is haunted by concerns about innovation. Everyone recognizes that innovation—the invention and dissemination of new and better ways of doing things—is a source of tremendous social benefit. And what we loosely call the digital or platform economy certainly seems to be marked by rapid and often desirable technological change, including a series of socially valuable inventions. (Of course, this does not mean that everything about digital markets is necessarily or always good!). Most people who write about competition policy broadly agree that innovation should be promoted, supported, and encouraged through antitrust.⁷⁸ In other words, almost everyone is in favor of innovation!

But that’s about as far as the consensus goes. There is deep disagreement about where innovation comes from; how to measure or predict it; what practices, circumstances, or rules are most likely to generate valuable innovation; and what a focus on innovation does or should imply for enforcement.⁷⁹ Some writers (including, most famously, Joseph Schumpeter) have argued that the best way to promote innovation is to allow businesses to gain and exploit monopoly power. They argue that the “dynamic” benefits of new inventions and ideas will outweigh the “static” harms of high monopoly prices, and they predict that successive generations of monopolists will be continually swept away in a “gale of creative destruction” by businesses with radically new approaches.⁸⁰ A Schumpeterian approach to antitrust and competition policy might therefore take a relatively hands-off approach, for fear of deterring or preventing incumbents from pursuing valuable innovations, and for fear of making monopoly itself a less attractive goal for would-be investors.⁸¹ Such an approach would still be attuned to threats to innovation competition.

Other writers (including, most famously, Kenneth Arrow) have argued that monopolists tend to be stakeholders in the status quo, so the best hope for real innovation comes from rivals and entrants.⁸² An Arrovian approach to

compared to 84% in 2012.”); Jeffrey T. Prince & Scott Wallsten, *How Much Is Privacy Worth Around the World and Across Platforms?*, 31 J. Econ. & Mgmt. Strat. 841 (2022) (presenting empirical data across multiple jurisdictions); KPMG, Corporate Data Responsibility: Bridging the Consumer Trust Gap (Aug. 2021) 1 (“86% [of U.S. general population] say data privacy is a growing concern” and “68% are concerned about the level of data being collected by businesses”); see generally Alessandro Acquisti, Curtis Taylor & Liad Wagman, *The Economics of Privacy*, 54 J. Econ. Lit. 442 (2016) (comprehensive survey).

⁷⁵ See *supra* notes 57–59 and accompanying text.

⁷⁶ See, e.g., Susan Athey, Christian Catalini & Catherine Tucker, *The Digital Privacy Paradox: Small Money, Small Costs, Small Talk*, NBER Working Paper 23488 (June 2017) 2 (“Whereas people say they care about privacy, they are willing to relinquish private data quite easily when incentivized to do so.”). See also Christopher Jon Sprigman & Stephan Tontrup, *Privacy Decision-making and the Effects of Privacy Choice Architecture: Experiments Toward the Design of Behaviorally-Aware Privacy Regulation*, J. Empirical L. Stud. (forthcoming 2024) (offering an explanation for this phenomenon grounded in trustworthiness heuristics).

⁷⁷ See, e.g., Erik Brynjolfsson, Avinash Collis, Asad Liaquat, Daley Kutzman, Haritz Garro, Daniel Deisenroth, Nils Wernerfelt & Jae Joon Lee, *The Digital Welfare of Nations: New Measures of Welfare Gains and Inequality*, NBER Working Paper 31670 (Sept. 2023); Erik Brynjolfsson, Avinash Collis & Felix Eggers, *Using Massive Online Choice Experiments to Measure Changes in Well-Being*, 116 Proc. Nat’l Acad. Sci. U.S.A. 7250 (2019).

⁷⁸ See, e.g., Diana Moss, American Antitrust Institute, *The Impact of Consolidation and Monopoly Power on American Innovation*, Testimony Before the U.S. Senate, Committee on the Judiciary Subcommittee on Antitrust, Competition, and Consumer Rights (Dec. 15, 2021) (“antitrust enforcement and competition policy [are] vital tools for promoting innovation”); Christine S. Wilson, *Antitrust and Innovation: Still Not a Dynamic Duo?* (remarks of Sept. 10, 2019) (emphasizing importance of innovation as a goal for antitrust).

⁷⁹ See, e.g., Michael L. Katz & Howard A. Shelanski, *Merger Policy and Innovation: Must Enforcement Change to Account for Technological Change?*, Adam B. Jaffe, Josh Lerner & Scott Stern (eds.), 5 INNOVATION POLICY AND THE ECONOMY (2005) 110 (“Merger policy has thus increasingly focused on innovation, although exactly what the new focus in merger policy means or how it translates into enforcement has proven difficult to ascertain.”).

⁸⁰ See, e.g., Joseph Schumpeter, CAPITALISM, SOCIALISM, AND DEMOCRACY (1942).

⁸¹ *Id.* at 87–91 (indicating tolerance for “restrictive practices” by monopolists for this reason).

⁸² See, e.g., Kenneth Arrow, *Economic Welfare and the Allocation of Resources to Invention*, in NBER (ed.), THE RATE AND DIRECTION OF INVENTIVE ACTIVITY: ECONOMIC AND SOCIAL FACTORS (1962) (noting the disincentive to invest created by pre-innovation monopoly profits).

antitrust and competition policy might therefore take a relatively interventionist stance, to make sure that incumbents do not snuff out small entrants (or deter their entry in the first place) and thus deprive society of the most promising sources of innovation.

Innovation and Substantive Antitrust: The Dynamism Discount

The innovation debate continues, and there is probably not much chance of consensus breaking out any time soon.⁸³ And the elusiveness of innovation creates a real puzzle for those who want courts (or other institutions, like agencies) to try to take it seriously. For example, suppose that an antitrust plaintiff alleges that a particular transaction—such as the acquisition of a nascent or potential competitor—had harmed innovation, on the ground that more and more valuable innovation would or could have emerged if the transaction had not taken place. How could that be proved? What metrics or outcomes should a court examine? Likewise, suppose that an antitrust defendant argues that a practice or transaction is justified overall, despite the existence of some short-term harms, by its tendency to promote valuable innovation. How could a court or agency evaluate that claim?

In principle, antitrust doctrine is crystal clear that harm to innovation counts as an anticompetitive effect, and that the promotion of innovation counts as a procompetitive benefit.⁸⁴ But it's one thing to affirm, as courts and writers do, that antitrust cares about innovation in principle, and quite another thing to say that antitrust has a reliable or coherent way for assessing innovation effects. It does not; nor, it seems, does anyone else!⁸⁵

In practice, some courts exhibit a kind of soft Schumpeterianism in tech cases: that is, they show particular caution about intervening (*i.e.*, imposing antitrust liability and remedies) in markets that are new, expanding, changing rapidly, or high-tech in some sense. This seems to amount to a kind of informal, inconsistent “dynamism discount” on antitrust cases: all else equal, the more dynamic and fast-moving the market, the stronger a plaintiff's case must be to win.⁸⁶

Reasonable minds can disagree about whether this is a good idea. Some writers support this approach, arguing that the risks of unintended harm are particularly acute in complex or fast-moving markets, or that the presence of rapid technological change means that the market is more likely to self-correct, so we should be more cautious about intervening through antitrust or other competition-law tools.⁸⁷ Others take the opposite view, suggesting

⁸³ The literature is enormous. For a selection, *see, e.g.*, Richard J. Gilbert & A. Douglas Melamed, *Antitrust For Innovation: A Progress Report*, GW Competition & Innovation Lab Working Paper 2024/9 (2024); Gönenç Gürkaynak, *INNOVATION PARADOX IN MERGER CONTROL* (2023); Richard J. Gilbert, *INNOVATION MATTERS: COMPETITION POLICY FOR THE HIGH-TECHNOLOGY ECONOMY* (2020); Carl Shapiro, *Competition and Innovation: Did Arrow Hit the Bull's Eye?*, in Josh Lerner & Scott Stern (eds.) *THE RATE & DIRECTION OF ECONOMIC ACTIVITY REVISITED* (2012); Geoffrey A. Manne & Joshua D. Wright, *Innovation and the Limits of Antitrust*, 6 J. Comp. L. & Econ. 153 (2010); Ilya Segal and Michael D. Whinston, *Antitrust in Innovative Industries*, 97 Am. Econ. Rev. 1703 (2007).

⁸⁴ *See, e.g.*, *NCAA v. Alston*, 594 U.S. 69, 102 (2021) (noting that antitrust remedies should not “suppress procompetitive innovation”); *Epic Games, Inc. v. Apple, Inc.*, 67 F.4th 946, 998 (9th Cir. 2023) (noting in a tying analysis that courts should avoid interpretations that would “dampen[] innovation”); *FTC v. Surescripts, LLC*, 424 F. Supp. 3d 92, 103 (D.D.C. 2020) (emphasizing adequacy of allegations that the defendant's conduct “hurt innovation, decreased output, and lowered quality”); *see also* U.S. Dept. of Justice & FTC, *MERGER GUIDELINES* (2023) 11 (listing “greater innovation” as a “procompetitive effect” of entry).

⁸⁵ *See generally* Daniel F. Spulber, *Antitrust and Innovation Competition*, 11 J. Antitrust Enforcement 5 (2023) (criticizing some traditional analytical approaches to the assessment of innovation effects).

⁸⁶ *See, e.g.*, *New York v. Meta Platforms, Inc.*, 66 F.4th 288, 305 (D.C. Cir. 2023) (“[C]ourts should proceed cautiously when asked to deem novel products or practices anti-competitive. Many innovations may seem anti-competitive at first but turn out to be the opposite, and the market often corrects even those that are anti-competitive.”); *id.* at 295 (“The States’ lawsuit is not only odd, but odd. ‘Odd’ because the States’ suit concerns an industry that, even on the States’ allegations, has had rapid growth and innovation with no end in sight.”); *FTC v. Qualcomm Inc.*, 969 F.3d 974, 990–91 (9th Cir. 2020) (emphasizing special caution in cases involving “novel business practices—especially in technology markets”); *United States v. Microsoft Corp.*, 253 F.3d 34, 93 (D.C. Cir. 2001) (en banc) (relying in part on the “pervasively innovative” nature of platform software markets as a reason to disapply the purported *per se* rule against tying in that context).

⁸⁷ *See, e.g.*, Geoffrey Manne & Dirk Auer, *Antitrust Dystopia and Antitrust Nostalgia: Alarmist Theories of Harm in Digital Markets and Their Origins*, 28 Geo. Mason L. Rev. 1279, 1309 (2021) (“Because of . . . relatively static, backward-looking market definitions, innovation or other procompetitive conduct may be systematically misidentified as anticompetitive. . . . These problems are likely to be particularly acute in rapidly changing digital markets.”); Douglas H. Ginsburg, Koren W. Wong-Ervin, & Joshua D. Wright, *Product Hopping and the Limits of Antitrust: The Danger of Micromanaging Innovation*, CPI Antitrust Chronicle (Dec. 2015) (“Antitrust law is not a suitable instrument for micromanaging product design and innovation. Imposing antitrust liability upon new product introductions requires competition agencies and courts to weigh the benefits to consumers from the innovation against any costs to consumers arising from the diminution of competition. Not only are agencies and courts ill-equipped to make such determinations, but it is also unclear whether the balancing contemplated by a rule prohibiting anticompetitive product hopping can be done at all.”).

that it may be especially important to maintain antitrust vigilance in markets for tech-heavy products and services, to protect against harms to innovation.⁸⁸ As you would expect, one’s views about the right path for antitrust here has plenty to do with one’s own background beliefs about how markets generally work. These arguments and views may remind you of the debates we explored in Chapter I about the benefits and risks of intervention in markets more generally.

Innovation and Antitrust Procedures

Aside from the debate over whether we should have a “dynamism discount” in antitrust, there are fair questions about the fit between antitrust’s institutions and procedures, on the one hand, and the realities of digital competition, on the other. The wheels of our antitrust system turn slowly. A government monopolization investigation can take two or three years; and after a complaint issues it can take just as long again—or more!—to get through motions to dismiss, fact and expert discovery, and summary judgment, to reach a full trial; and appeals can add years on top of that. By the time a final remedy is imposed at the far end of that process, the subject matter of the litigation may long have been overtaken by technological and commercial developments. Many people see this as a problem.⁸⁹

So what can be done? The answer—as with everything else in tech antitrust—is open to multiple competing interpretations. Some suggest that this long lag time means that antitrust is virtually useless for fast-moving markets. On one reading, we should therefore get out of the game altogether, because the prospect of real benefit is slender and the costs are great. On another reading, we just need faster tools for responding to competition problems in tech markets.

One important difficulty is that it is not clear where the time-savings both could and should come from. A faster process would probably mean giving up on efforts to measure the things that make antitrust cases so complicated and burdensome, like market definition, market power, competitive effects, and procompetitive benefits. Which of those things should we stop worrying about? Would new presumptions lead to faster processes—or would all the same arguments and evidence be relevant in any event?

Certainly, faster (and cheaper) antitrust litigation would be welcomed by most market participants—and most judges and enforcers too. But, in the meantime, even with its delays and imperfections, the base case for tech antitrust seems solid, for most of the same reasons that we might value antitrust in the rest of the economy. For one thing, the slowness of antitrust process is a feature of *all* antitrust litigation, not a unique problem in tech markets. For another, the social value of antitrust litigation often extends beyond merely fixing the litigated problem: much of its value flows from the guidance that it provides to others about the interpretation and application of antitrust rules.

It is also worth remembering that tech monopolies are not always washed away overnight in a turning of the Schumpeterian tide. For example, the most famous tech antitrust decision of all time—the D.C. Circuit’s *Microsoft* opinion—concerned Microsoft’s position in PC operating systems. That complaint was filed in 1998; Microsoft still enjoyed a substantial market position in operating systems when the D.C. Circuit rendered its opinion three

⁸⁸ See, e.g., Jonathan B. Baker, *Beyond Schumpeter vs. Arrow: Antitrust Fosters Innovation*, 74 Antitrust L.J. 575 (2007); Diana L. Moss, *The Record of Weak U.S. Merger Enforcement in Big Tech*, American Antitrust Institute White Paper (July 8, 2019); Franklin M. Fisher, *Antitrust and Innovative Industries*, 68 Antitrust L.J. 559, 559 (2000) (“[I]t is wrong to concentrate only on the innovations introduced by the defendant.”). See also Anu Bradford, *The False Choice Between Digital Regulation and Innovation*, 118 Nw. U. L. Rev. (forthcoming 2024) (arguing that “stringent” regulation is consistent with innovation); Tim Wu, *Taking Innovation Seriously: Antitrust Enforcement If Innovation Mattered Most*, 78 Antitrust L.J. 313 (2012) (proposing a substantive agenda for an innovation-focused antitrust policy).

⁸⁹ See, e.g., Ashley Gold, *While Big Tech Zips, Regulators Slog*, AXIOS (Jan. 12, 2022) (“Tech firms and Beltway regulators not only see issues differently but also operate on wildly different scales of time — with DC’s glacial pace often leaving it at a deep disadvantage in its quest to limit tech giants’ power.”); Testimony of Charlotte Slaiman before the U.S. House of Representatives Committee on the Judiciary Subcommittee on Antitrust, Commercial, and Administrative Law, Hearing On Reviving Competition, Part 1: Proposals to Address Gatekeeper Power and Lower Barriers to Entry Online (Feb. 25, 2021) (“In markets as fast-moving and prone to tipping as [digital platform markets are], case-by-case antitrust litigation is too slow and limited to fully address the breadth of the problem.”). These concerns are not new! See, e.g., Jonathan B. Baker, *Can Antitrust Keep Up?: Competition Policy in High-Tech Markets*, BROOKINGS COMMENTARY (Dec. 1, 2001) (“The critics’ central claim is that the pace of change in high tech is so rapid that antitrust, and the legal machinery within which it must operate, is too slow and potentially counterproductive.”).

years later; and indeed it still does so today, two decades later.⁹⁰ There are plenty of other examples of businesses that have maintained an impressive position for more than a decade: Google, for example, has been a leading internet search provider for more than two decades; Facebook has been a leading personal social network for more than 15 years; and so on. This does not necessarily imply a policy problem. But it does suggest that success, incumbency, and market power can endure in digital markets just as it can in non-digital parts of the economy: for good reasons, bad ones, or combinations of the two. This suggests that antitrust intervention may be necessary to bring harmful practices to an end, remedy their effects, and enjoin recidivism.

For these and other reasons, there seems to be plenty of social value in antitrust enforcement in tech markets. The harder question is how to do it best: that is, in a way that best serves society, while accurately reflecting the workings of the relevant technologies, businesses, and markets. And that, as we shall see, can be tricky.

Are There Digital Markets?

Finally: what is a “digital” or “tech” market anyway? Today, many businesses across the economy use digital platforms, rich datasets, algorithms and AI tools, cloud computing, and automation of all kinds. They operate multisided businesses, enjoy network effects, sell advertising, and use data-driven tools to optimize their businesses. If we should treat two similar practices and transactions dissimilarly just because more electrons are involved in one than the other, it is not obvious why this should be the case. And, certainly, if we decide to apply an antitrust discount in “tech” cases, we will surely find that, over time, that discount applies to a steadily greater proportion of our economic activity.

NOTES

- 1) Do we need a special approach to “tech antitrust”? In other words: is there a “tech sector” in any meaningful sense, and, if so, are there good reasons to take a special approach to antitrust or other regulatory decisions in that sector? (Can you think of practices that should be permitted outside the tech sector but prohibited within it, or vice versa?) When brick and mortar businesses use or offer digital products and services (*e.g.*, retailers selling through websites, or using rich consumer data to target advertising and special offers), does that fall in or out of the “tech sector”?
- 2) Herbert Hovenkamp has suggested that, of all the sectors of the economy upon which one might focus antitrust attention, digital markets seem to be among the least promising: innovation seems high, competition seems vigorous, and consumers seem to be getting good deals.⁹¹ Do you agree?
- 3) Do you agree with the following statement: “Antitrust should only promote competition, not other goals that we might have for the digital economy”? If you do agree with it, what do you mean by “competition” and to what extent does it overlap with, or contain, other values and goals? If you don’t agree with it, what goals do you think antitrust should promote in this area and why?
- 4) Suppose that Congress wants to do something about the fact that antitrust litigation is too slow and expensive, on the ground that this limits its relevance in tech markets. Congress asks for your best ideas. What reforms—substantive, procedural, or institutional—would you propose?
- 5) Would we be better off if we banned behavioral advertising? What effects do you predict this would have?
- 6) Should privacy play a role in antitrust analysis? If so, what would that role be?
 - a. Can you think of how it might play a role in market definition?
 - b. How might providing less privacy protection figure as a form of competitive harm? Should it always be treated that way?

⁹⁰ See, *e.g.*, Ahmed Sherif, *Operating systems market share of desktop PCs 2013-2024, by month*, STATISTA (Mar. 5, 2024) (“Microsoft’s Windows was the dominant desktop operating system (OS) worldwide as of February 2024, with a market share of around 72 percent.”).

⁹¹ Robert Armstrong & Ethan Wu, *What Big Tech Antitrust Gets Wrong: An Interview with Herbert Hovenkamp*, Financial Times (Jan. 19, 2024) (“Which industries should the antitrust authorities pursue? You look for industries that are characterised by slow growth, oligopoly, rigid market shares, not very big increases in productivity—industries of poor performance. You try to make those industries perform better. With Big Tech, we’re looking at probably the most productive part of the economy. The rate of innovation is high. They spend a lot of money on R&D. They are among the largest patent holders. There’s very little evidence of collusion. They seem to be competing with each other quite strongly. They pay their workers relatively well and have fairly educated workforces. None of this is a sign that these are industries we should be pursuing. That doesn’t mean they don’t do some anti-competitive things. But the whole idea that we should be targeting Big Tech strikes me as fundamentally wrong-headed.”).

- 7) Antitrust doctrine generally takes demand as it finds it: that is, it assumes that the satisfaction of consumer demand are generally good, and things that reduce the satisfaction of demand are generally bad. Can and should antitrust analysis respond to concerns that some digital products and services might *reshape* our preferences in ways that might be regrettable? Such concerns have been raised about a wide array of products and services, from social media to video games to behavioral advertising. Are those concerns irrelevant to antitrust enforcement and adjudication, or should enforcers and courts take them into account in some way? And what about similar concerns that some have raised in connection with *non-digital* products and services, from alcohol and tobacco to politically disfavored books?

C. Antitrust’s Tech Frontier

This Section offers a short tour of some of the most interesting and prominent issues on antitrust’s technological leading edge. In each case, we will take a specific type of digital business and use it to examine one or two problems that it presents or exemplifies for antitrust doctrine and for competition policy more generally.

This is just a tasting menu. Any one of these problems—or any of a dozen others—could fill a whole chapter. And most of the issues we will describe are *certainly* not unique to any one industry or part of the economy. But our purpose is to get a sense of the range and variety of the puzzles that tech markets can present. And we will use some of the most familiar corners of the tech sector to illustrate those puzzles.

1. Internet Search: Defaults and Self-Preferencing

Few tech services have attracted quite as much attention as internet search. In particular, Google’s role as a portal to information and content elsewhere on the Internet—and the implications of that role for competition policy and antitrust—has been exhaustively studied by scholars and policy advocates of all kinds.⁹² So too has the complex relationship between the “general search” role of Google Search and the more specialized “vertical” search functions provided by e-commerce websites like Amazon, review sites like Yelp, travel sites like Expedia, mapping websites like Google Maps, and so on.⁹³ (Are these complements? Substitutes? A little of each?)

We will focus on just two antitrust puzzles raised by life in the search business: first, the role of “default” status as the search engine on a device, operating system, or app; and, second, some complexities of search rankings, including the practice or alleged practice of “self-preferencing,” in which a search engine owner gives a boost to search results that link to its own businesses, at the expense of independent ones.

Neither of these issues is unique to search. Defaults are everywhere in digital land: our devices have default internet browsers, email apps, document editors, and internet home pages. And businesses a long way from general internet search do or may engage in self-preferencing, including e-commerce sites, app store owners, device manufacturers, and traditional supermarkets. But search is a great forum in which to examine these puzzles.

a) Defaults

In the broadest sense, a “default” setting is any automatic or presumptive setting on a hardware or software product or service that can be changed by a user. For example, devices have default volume and brightness levels, a default color scheme, and so on. But, in the sense at issue here, a default is an automatic or presumptive designation of one product or service, rather than any of its alternatives, to perform a complementary function.

⁹² See, e.g., Lawrence J. White, *The Dead Hand of Cellophane and the Federal Google and Facebook Antitrust Cases: Market Delineation Will Be Crucial*, 67 Antitrust Bull. (2022); Herbert Hovenkamp, *Antitrust and Platform Monopoly*, 130 Yale L.J. 1952 (2021); Fiona M. Scott Morton & David C. Dinielli, *Roadmap for a Monopolization Case Against Google Regarding the Search Market*, Omidyar Network White Paper (June 2020); Aaron S. Edlin & Robert G. Haris, *The Role of Switching Costs in Antitrust Analysis: A Comparison of Microsoft and Google*, 15 Yale J.L. & Tech. 169 (2013); Robert H. Bork & J. Gregory Sidak, *What Does The Chicago School Teach About Internet Search and the Antitrust Treatment of Google?*, 8 J. Comp. L. & Econ. 663 (2012).

⁹³ See generally, e.g., Marina Lao, *Search, Essential Facilities, and the Antitrust Duty to Deal*, 11 Nw. J. Tech. & Intell. Prop. 275 (2013); Lina M. Khan, *The Separation of Platforms and Commerce*, 119 Colum. L. Rev. 973, 997–1000 (2019); Andrew Bockscosky, *The Rise of Vertical Search Engines*, SEARCH ENGINE WATCH (Nov. 13, 2020); Danny Sullivan, *Why Google ‘Vertical’ Search Shouldn’t Face Antitrust Action*, CNET (Nov. 19, 2012). See also European Commission, Case AT.39740 (Google Shopping) (European Commission challenge to conduct directed against verticals).

For example, a device operating system may have a default setting for the choice of app that is used to read a document or browse the internet; an internet browser app may have a default setting for the choice of search engine that is activated whenever a user types a search query, rather than a URL web address, into the address bar; and a tablet device may have a default setting for the choice of communication app that is used to connect with a contact whenever that person's name is selected from a contacts list. Such default settings can typically be changed by the user, with the new default replacing the original factory setting.

Defaults, including factory defaults, can confer significant value on users in a variety of ways. For one thing, they can ensure that a high-quality product or service is made available to the user, even if the user lacks the expertise required to judge quality for themselves. (Suppose, for example, that you were a new computer user, and when you tried to open a word-processing document for the first time you were presented with a list of dozens or hundreds of apps, with unfamiliar names, and asked to choose the one that you wanted to use. As a new user, you might very well be unable to make an informed choice; and you could very well pick a low-quality or low-security app that failed to meet your expectations, or exposed you to some harm, in some important respect.)

For another thing, default settings allow system and ecosystem suppliers to ensure a certain level and consistency of user experience. A supplier of a device or operating system may wish to ensure that users—including those without the experience or expertise to select optimal products for themselves—have a smooth, high-quality experience, including robust interoperability and compatibility among a set of apps. After all, part of the value of a device or operating system *is* the experience of using apps and functionalities on that device or operating system. By designating a set of compatible products or services as factory defaults, the supplier can ensure a seamless experience.

Finally, there is probably some non-zero transaction cost saving from allowing users to avoid a string of lengthy choice menus each time—or even the first time—they use a device. Figuring out which options should be included on such a list, and in what order, and after what kind of testing and evaluation, and how often the user should be prompted to pick a new default, may involve real costs for the supplier and for the user.

So, in general, the existence of default options is not very surprising, nor necessarily very sinister. But defaults can also be associated with competitive concerns and with welfare harms. Defaults are ultimately a form of preferred distribution, and like other forms of distribution they can be locked up or foreclosed by exclusivity commitments or similar practices, in ways that can raise rivals' costs.⁹⁴ Such practices are particularly likely to have a significant impact when default status is very important: for example, when users seldom change the original default. Of course, antitrust has always been concerned with the risk that a business with market or monopoly power might use exclusive distribution rights to exclude rivals and harm consumers.

When defaults are “sticky”—that is, when users seem reluctant to change them even if they appear to prefer another product or service—the stickiness can be understood to imply some kind of switching cost. And, like other costs, they may lead to a welfare reduction compared to a costless and frictionless alternative. But it can be difficult to figure out when and how default status, rather than product quality, is driving behavior: for example, suppose that you learned that users of a particular kind of device infrequently changed the default search engine away from an initial setting of Google Search, should we draw an inference about the power of the default status, or about the strength of their preference for Google?⁹⁵

Some defaults are stickier than others. The costs and burdens of changing a default often seem lower—perhaps much lower—than many other kinds of switching cost elsewhere in the economy and in antitrust, including costs that antitrust effectively ignores or treats as trivial. For example, switching from one trading partner to another in a non-digital market often involves at least making a phone call to, or otherwise communicating with, another

⁹⁴ See, e.g., *United States v. Google LLC*, --- F.Supp.3d ---, 2024 WL 3647498, at *106 (D.D.C. Aug. 5, 2024) (“[P]reloaded default placements are the most efficient channel for reaching search consumers, and Google has secured all the major ones (except the default on the Edge browser preloaded on Windows devices). Sure, users can access Google's rivals by switching the default search access point or by downloading a rival search app or browser. But the market reality is that users rarely do so.”) (citation omitted).

⁹⁵ Compare, e.g., Paul Heidhues, Alessandro Bonatti, L. Elisa Celis, Gregory S Crawford, David Dinielli, Michael Luca, Tobias Salz, Monika Schnitzer, Fiona M. Scott Morton, Michael Sinkinson & Jidong Zhou, *More Competitive Search through Regulation*, 40 Yale J. on Reg. 915 (2023) with Kent Walker, Google, *A deeply flawed lawsuit that would do nothing to help consumers*, Google Public Policy Blog (Oct. 20, 2020).

trading partner, or driving to a store or other physical place of business. This poses some puzzling questions. Does antitrust’s general disregard of such costs as *de minimis* mean that the stickiness of a default is also of negligible concern? Or do other features—such as the technical difficulty of changing some default settings, at least for some inexperienced users, or the fact that using a search engine is a brief and free activity for which a user may be reluctant to invest a minute in changing a setting—mean that defaults may really be a stronger deterrent on switching than, say, the need to drive to another store? And, to touch on a broader issue, do competition concerns of this kind recede if “competition is just a click away”?⁹⁶ (*Is competition just a click away?*)

As with many other practices, it is impossible to evaluate the effects of defaults without asking: what would be a better alternative? This question is relevant not just when trying to measure effects—that is, when figuring out whether having a default is better or worse than not having one—but also when trying to design a remedy. For example, suppose that we concluded that a monopolist supplier of internet search had entered into a long-term agreement with one or more important trading partners for exclusive default status on their apps or devices, and that this had harmfully foreclosed rivals in ways that had led to welfare harms. What remedy should follow?⁹⁷ Going forward, should the trading partners—device OEMs, browser developers, and so on—be allowed to have a factory default search provider, subject to a rule that the default cannot be the monopolist? (What if users prefer the monopolist’s product?) Should the trading partners be allowed to choose a factory default, including the monopolist, so long as the monopolist does not pay for that status? (Does that amount to requiring the trading partner to provide a distribution benefit to the monopolist for free: and, if so, is that a good idea? And if we knew that the consequences of cutting off the payments would be to increase consumer prices—because the price of a device or app was no longer being subsidized—would that matter?) Or should we create a “choice menu” from which a user can, on first use, select a default: and if so, how should that work? Real-world experiences with choice menus seem to have been mixed.⁹⁸

These are tough puzzles. Very likely the competitive effects of particular default relationships, and the value of any particular remedy for a harmful practice, will be a fact-specific affair. And *all* remedies are imperfect. That does not mean that no remedy would be better!

The ongoing case against Google brought by the U.S. Department of Justice and a coalition of states led by Colorado challenges, among other things, Google’s use of agreements to obtain exclusive default status at key points of search distribution, including browsers and devices. In August 2024, the district court held that Google was liable for monopolization.

United States v. Google LLC

__ F. Supp. 3d. __, Case No. 20-cv-3010, 2024 WL 3647498 (D.D.C. filed Aug. 5, 2024)

Judge Mehta.

[1] Google’s dominance has gone unchallenged for well over a decade. In 2009, 80% of all search queries in the United States already went through Google. . . . By 2020, it was nearly 90%, and even higher on mobile devices at almost 95%. The second-place search engine, Microsoft’s Bing, sees roughly 6% of all search queries—84% fewer than Google.

⁹⁶ See, e.g., David Wismer, *Google’s Larry Page: “Competition Is One Click Away” (And Other Quotes Of The Week)*, Forbes (Oct. 14, 2012) (describing “competition is one click away” as “[a]n oft-used and now iconic response from Google”). What, if anything, do you find persuasive about the point? What, if anything, do you think might be said by way of response or qualification?

⁹⁷ See, e.g., Herbert Hovenkamp, *Fixing Platform Monopoly in the Google Search Case*, PROMARKET (Oct. 6, 2023); Tessie LiJu Su, *Not All Google Trial Remedies Would Restore Search Competition*, BLOOMBERG (Sept. 19, 2023).

⁹⁸ See, e.g., Omar Vazquez Duque, *Active Choice vs. Inertia? An Exploratory Assessment of the European Microsoft Case’s Choice Screen*, 19 J. Comp. L. & Econ. 60 (2023); Francesco Decarolis, Muxin Li & Filippo Paternollo, *The role of default settings in online searches*, VOXEU (Mar. 13, 2023); Megan Gray, “Choice Screen” Fever Dream: Enforcers’ New Favorite Remedy Won’t Blunt Google’s Search Monopoly, TECH POLICY PRESS (Feb. 15, 2024); George Nguyen, *Google’s search choice screen had virtually no effect on search market share, perhaps by design*, SEARCH ENGINE LAND (Feb. 17, 2021); Daisuke Wakabayashi & David McCabe, *Google’s European Search Menu Draws Interest of U.S. Antitrust Investigators*, N.Y. TIMES (June 4, 2020).

[2] Google has not achieved market dominance by happenstance. It has hired thousands of highly skilled engineers, innovated consistently, and made shrewd business decisions. The result is the industry’s highest quality search engine, which has earned Google the trust of hundreds of millions of daily users.

[3] But Google also has a major, largely unseen advantage over its rivals: default distribution. Most users access a general search engine through a browser (like Apple’s Safari) or a search widget that comes preloaded on a mobile device. Those search access points are preset with a “default” search engine. The default is extremely valuable real estate. Because many users simply stick to searching with the default, Google receives billions of queries every day through those access points. [. . .]

[4] For years, Google has secured default placements through distribution contracts. It has entered into such agreements with browser developers, mobile device manufacturers, and wireless carriers. These partners agree to install Google as the search engine that is delivered to the user right out of the box at key search access points.

[5] Google pays huge sums to secure these preloaded defaults. Usually, the amount is calculated as a percentage of the advertising revenue that Google generates from queries run through the default search access points. This is known as “revenue share.” In 2021, those payments totaled more than \$26 billion. That is nearly four times more than all of Google’s other search-specific costs combined. In exchange for revenue share, Google not only receives default placement at the key search access points, but its partners also agree not to preload any other general search engine on the device. Thus, most devices in the United States come preloaded exclusively with Google. These distribution deals have forced Google’s rivals to find other ways to reach users.

[6] . . . According to [complaints filed by the U.S. Department of Justice and many state Attorneys General], Google has unlawfully used the distribution agreements to thwart competition and maintain its monopoly in the market for general search services and in various online advertising markets.

Findings of Fact

Browser Agreements

[7] Google has entered into search distribution contracts with two major browser developers (Apple and Mozilla); all major [original equipment manufacturers (“OEMs”)] of Android devices (Samsung, Motorola, and Sony); and the major wireless carriers (AT&T, Verizon, and T-Mobile) in the United States. In 2021, Google paid out a total of \$26.3 billion in revenue share under these contracts, an expense listed in its financial statements as “traffic acquisition costs,” or TAC. . . .

[8] The Internet Services Agreement (“ISA”) is an agreement between Google and Apple, wherein Google pays Apple a share of its search ads revenue in exchange for Apple preloading Google as the exclusive, out-of-the-box default [general search engine] on its mobile and desktop browser, Safari. [. . .]

[9] The ISA requires Apple to set Google as the default search engine on Safari for all its devices. Under the ISA, a “Default” search engine is one that “will automatically be used for responding to Search Queries initiated from the Web Browser software, unless the End User selects a different third-party search service.” [. . .]

[10] Across all Apple devices, 65% of searches are entered into Safari’s default access point, which is the integrated search bar. This means that across all Apple devices, only 35% of all queries flows through non-default search access points. The numbers are similar for mobile searches: 61.8% of query volume flows through search access points governed by the ISA, and 38.2% of queries are run through non-default search access points. [. . .]

[11] In return for these default placements, Google pays Apple [Redacted]% of its ad revenue on Safari and Chrome

[12] In 2022, Google’s revenue share payment to Apple was an estimated \$20 billion

[13] Google has long recognized that, if Apple were to develop and deploy its own search engine as the default [general search engine] in Safari, it would come at great cost to Google. [. . .]

[14] Notwithstanding [some investments to grow its own capacity in search], Apple has decided not to enter general search at this time. Apple would forego significant revenues under the ISA if it were to do so. [. . .]

[15] Apple and Microsoft occasionally have had discussions regarding installing Bing as the default [general search engine] on Safari. [. . .]

[16] Microsoft thought they had great search quality and they said that[,] with Apple’s search volume, they could be even better, but Apple disagreed. Moreover, Apple was concerned that despite the high revenue share percentage [that Microsoft was willing to pay to Apple in return for default status], Bing would not be able to bring in sufficient revenues because it was “horrible at monetizing advertising.” [. . .]

[17] Apple proposed to Microsoft that it guarantee [minimum annual] revenues . . . but Microsoft balked Regardless, Apple would not have accepted the deal, even if Microsoft had agreed to a guarantee. According to [Apple executive Eddy] Cue, there was no price that Microsoft could ever offer Apple to make the switch, because of Bing’s inferior quality and the associated business risk of making a change. [Cue testified:] “I don’t believe there’s a price in the world that Microsoft could offer us. They offered to give us Bing for free. They could give us the whole company.” [. . .]

[18] Although Apple has never seriously considered Bing as an option, Microsoft perceives that Apple has used Bing to bid up the price in its negotiations with Google and extract a higher revenue share from Google. [. . .]

[19] Google also has a revenue sharing agreement with the browser developer Mozilla, whereby it pays Mozilla [Redacted]% revenue share in exchange for the default search placement on the Firefox browser. The search access points on Firefox include “the search box” in the browser, “the navigation or location bar,” [and] any “search box displayed on a Firefox Startpage,” among others. . . .

[20] Google’s 2021 revenue share payment to Mozilla was over \$400 million, or about 80% of Mozilla’s operating budget. Mozilla has repeatedly made clear that without these payments, it would not be able to function as it does today. [. . .]

[21] Mozilla has run experiments to assess a potential switch of the default [general search engine] from Google to a rival. It tends to run these experiments when its agreements come up for renewal.

[22] In a 2016 experiment, Mozilla switched the default [general search engine] on both new and existing users from Google to Bing. By the twelfth day, Bing had kept only 42% of the search volume. After some additional time, those numbers dropped to 20–35%, depending on certain variables. Mozilla’s takeaway was that switching the Firefox default to Bing would result in missing revenue targets.

[23] The same year, Mozilla conducted an experiment switching the default [general search engine] to Yahoo. Yahoo only retained 16.5% of the total search volume. [. . .]

[24] Google has comparable agreements with smaller browsers, like Samsung’s S Browser [. . .]

Android Agreements

[25] Google has entered into Mobile Application Distribution Agreements, or MADAs, with all Android OEMs, including Motorola and Samsung, among others. The MADA is a device-by-device license that allows OEMs to use Google’s proprietary mobile applications developed for the Android ecosystem. This suite of applications is referred to as Google Mobile Services (GMS). OEMs pay no fee for the GMS license, but Google requires OEMs to preload certain applications in prominent placements. [. . .]

[26] Under the MADA, partner OEMs must preload all 11 GMS applications onto a new device, including the Google Search Widget, Chrome, YouTube, Gmail, Google Maps, and Google Drive, among others. [. . .]

[27] Nothing in the MADA expressly requires an OEM to preload only the GMS applications. OEMs are, for instance, free to preload a second (or third) browser or search widget.

[28] In practice, however, OEMs recognize that preloading more than one of the same search access points, especially in similar prominent positions, is a suboptimal design that would degrade the user experience. This

overloading of apps is known as “bloatware.” Even Microsoft avoided adding a Bing search widget on its Duo devices to avoid degrading the user experience. [. . .]

[29] A revenue share agreement, or RSA, is a separate agreement from the MADA. Each RSA generally follows a tiered structure, in which a carrier’s or OEM’s payment is tied to the degree of device exclusivity. The RSAs are device-by-device, meaning that partners can opt into different tiers based on the device model sold. [. . .]

[30] Google has signed RSAs with each major wireless carrier: Verizon, AT&T, and T-Mobile. . . .

[31] Google has long viewed RSAs with carriers as essential to securing query traffic on Android devices to the exclusion of rivals. In fact, Google viewed exclusivity on Android devices as “very strategic to Google.” In a 2011 email, Google executive Chris Barton wrote about then-existing exclusive distribution deals with T-Mobile, Verizon, and Sprint, “I think this approach is really important otherwise Bing or Yahoo can come and steal away our Android search distribution at any time, thus removing the value of entering into contracts with them. Our philosophy is that we are paying revenue share *in return for* exclusivity.” . . .

[32] Verizon’s RSA has three tiers: Core, Qualifying, and Preferred. Google pays Verizon [Redacted]% revenue share on devices where the “core” search access points have been preinstalled and defaulted to Google. . . . In exchange for more placements, Google pays more revenue share. The RSA requires Google to pay Verizon [Redacted]% revenue share on Preferred Tier devices (a three-fold increase from Verizon’s Core Tier), provided that those devices have several other default Google placements. Those include, but are not limited to, the Google Search Widget, Chrome, and the default homepage on the browser. [. . .]

[33] [Previously,] Verizon . . . conducted a full revenue impact assessment if it were to either not renew the RSA or renew but accept the Core Tier to allow it to commingle search with Yahoo. That analysis demonstrated that Verizon’s acceptance of the Core Tier revenue share payment [rather than a higher tier] would result in a \$1.4 billion loss in revenue to the company. [. . .]

[34] AT&T’s RSA is very similar to Verizon’s, although it does not have a tier for Core Devices. AT&T may instead choose to enroll its devices in the Preferred Tier, maintain them as Qualifying Devices, or forego any revenue share.

[35] The [AT&T] RSA requires Google to pay AT&T [Redacted]% revenue share on Preferred Tier devices provided that all search access points default to Google and those devices preload the Google Search Widget on the default home screen.

[36] T-Mobile’s RSA is structured differently than the others. T-Mobile is compensated for the default placements on Qualifying Devices and Preferred Devices through a \$[Redacted] bounty per device. If T-Mobile does not configure a device on an exclusive basis, it is entitled to no bounty at all. [. . .]

[37] Google also has RSAs with the two primary Android OEMs, Samsung and Motorola. . . .

[38] Under its current RSA, Samsung receives [Redacted]% revenue share for devices complying with prior terms. Additional incremental revenue share requires Samsung to configure certain search access points to Google. “Core Devices” per the Samsung RSA must have Google set as the default [general search engine] on the S Browser and must not allow users to change the S Browser default from the browser search bar itself (as opposed to the device settings). In exchange, Google pays Samsung [Redacted]% revenue share on certain search access points for Core Devices.

[39] The Samsung RSA also provides for “Enhanced Devices,” which requires additional placements beyond the MADA, such as placing Chrome as the default browser (over S Browser) in the hotseat, or dock. The revenue share paid to Samsung is the same for Enhanced Devices and Core Devices, but that percentage applies to a broader set of search access points.

[40] Nearly all Samsung devices sold in the United States are Enhanced Devices.

[41] Motorola’s RSA with Google is structured differently. All devices sold must meet the minimum requirements of the Foundation Tier (preinstallation of Chrome with Google as the default [general search engine] in the

device's dock or hotseat). Motorola then earns at least \$[Redacted] monthly in return. The Premier Tier requires exclusive preinstallation of Google as the default on all search access points on the device, in return for additional monthly payments. Google estimates that the number of Motorola devices sold by the OEM that are subject to this RSA is north of 95 percent. [. . .]

Conclusions of Law

[42] Section 2 of the Sherman Act makes it unlawful for a firm to monopolize. The offense of monopolization requires proof of two elements: (1) the possession of monopoly power in the relevant market and (2) the willful acquisition or maintenance of that power as distinguished from growth or development as a consequence of a superior product, business acumen, or historic accident.

{Eds.: the court determined that relevant antitrust markets existed for “general search services” and “general search text advertising.”}

[Monopoly Power]

[43] Monopoly power is the power to control prices or exclude competition. More precisely, a firm is a monopolist if it can profitably raise prices substantially above the competitive level. Importantly, a firm need not actually have earned monopoly profits or excluded competition to possess monopoly power. The material consideration in determining whether a monopoly exists is not that prices are raised and that competition is actually excluded but that power exists to raise prices or exclude competition when it is desired to do so. [. . .]

[44] Plaintiffs' direct evidence [of monopoly power] is limited. They note that Google's immense revenues and large profit margins allow it to capture significant surplus from the challenged contracts.

[45] In addition, Plaintiffs point to Google's admission that it does not consider whether users will go to other specific search providers (general or otherwise) if it introduces a change to its Search product. Google's indifference is unsurprising. In 2020, Google conducted a quality degradation study, which showed that it would not lose search revenue if were to significantly reduce the quality of its search product. Just as the power to raise price when it is desired to do so is proof of monopoly power, so too is the ability to degrade product quality without concern of losing consumers. The fact that Google makes product changes without concern that its users might go elsewhere is something only a firm with monopoly power could do. [. . .]

[46] Assessing monopoly power through indirect evidence begins with determining market share. Although there is no minimum percentage, the Supreme Court has recognized that two-thirds of a domestic market can constitute a predominant share. Duration also matters. Monopoly power must be shown to be persistent in order to warrant judicial intervention.

[47] Plaintiffs easily have demonstrated that Google possesses a dominant market share. Measured by query volume, Google enjoys an 89.2% share of the market for general search services, which increases to 94.9% on mobile devices. This overwhelms Bing's share of 5.5% on all queries and 1.3% on mobile, as well as Yahoo's and DDG's shares, which are under 3% regardless of device type. Google does not contest these figures. [. . .]

[48] Barriers to entry are essential to establishing monopoly power because the current market share may not reflect the possibility of competition from new entrants. If barriers to entry are high, then market power can be sustainable over a long period of time. Plaintiffs identify several such barriers to the general search services market: (1) high capital costs, (2) Google's control of key distribution channels, (3) brand recognition, and (4) scale. The court finds that these barriers exist and that, both individually and collectively, they are significant barriers that protect Google's market dominance in general search.

[49] Building and maintaining a competitive GSE require an extraordinary upfront capital investment, to the tune of billions of dollars. Apple's Chief of Machine Learning and AI Strategy, John Giannandrea, testified that “a startup could not raise enough money to build a very good, large-scale search engine” because “to build a competitive project is very expensive,” amounting to a “multi-billion dollar investment.” . . . Google's internal estimates also are consistent with this testimony. And those capital expenditures are required before the additional, multi-billion-dollar investment needed to build and maintain an ad platform or other means of monetization.

[50] High capital costs thus constitute a substantial barrier to entry. [. . .]

[51] . . . Google controls the most efficient and effective channels of distribution for GSEs. It is the exclusive preloaded GSE on all Apple and Android mobile devices, all Apple desktop devices, and most third-party browsers (Edge and DDG are the exceptions). Rivals cannot presently access these channels of distribution without convincing Google’s partners to break existing agreements, all of which are binding for a term of years. [. . .]

[52] Record evidence firmly establishes that Google’s brand is widely recognized and valued. After all, “Google” is used as a verb. Even on Bing, “google.com” is the number one search. The “entrenched buyer preferences” enjoyed by Google are a major deterrent to market entry.

[53] Finally, Plaintiffs identify scale as a barrier to entry. . . . It is enough to say for now that scale is an important factor in search quality. As Google admits, the volume and availability of user interaction data is one factor that can affect search quality.” Google has a lot of scale, and new entrants struggle to obtain it. [. . .]

[Anticompetitive Conduct]

[54] According to Plaintiffs, the challenged contracts are unlawful exclusive agreements. They effectively block Google’s rivals from the most effective channels of search distribution, namely, the out-of-the-box default search settings. Google is the exclusive default search engine on the Safari and Firefox browsers. Likewise, on all Android devices, the Google Search Widget appears on the home screen and, on all except Samsung devices, Chrome is preloaded as the exclusive browser. Plaintiffs say that these distribution contracts effectively “lock up” half of the market for search and, by extension, nearly half of the market for general search text ads. These exclusive deals protect Google’s dominant position and shield it from meaningful competition. Plaintiffs also specify certain contractual provisions that they claim thwart competition. The ISA, for example, contains provisions arguably restricting Apple’s ability to divert queries away from Google and serve search ads, and the RSAs prohibit partners from preloading “alternative search services” on Android devices. [. . .]

[55] Google disputes that the distribution agreements are exclusionary. Recall, the Supreme Court has drawn a line between exclusionary conduct versus growth or development as a consequence of a superior product, business acumen, or historical accident. The former violates the Sherman Act; the latter does not. Google says that it has secured default distribution, not through exclusionary conduct, but by developing a superior product through constant innovation. Google claims that it has repeatedly outcompeted its rivals on the basis of its superior quality and monetization, and that any scale benefits achieved from winning customers’ business based on competition on the merits do not turn an otherwise lawful agreement into an unlawful one. Google points out that its partners chose to design their products to have a default [general search engine], and Google simply has bested its rivals to secure those default positions. . . . Thus, Google says, it has won (and continues to win) the defaults through competition as opposed to exclusionary conduct. . . .

[56] In a sense, Google is not wrong. It has long been the best search engine, particularly on mobile devices. Nor has Google sat still; it has continued to innovate in search. . . .

[57] But these largely undisputed facts are not inconsistent with possessing and exercising monopoly power. Nor do they tell the full story. There is no genuine “competition for the contract.” Google has no true competitor. [. . .]

[58] The market reality is that Google is the only real choice as the default [general search engine]. Apple’s Senior Vice President of Services, Eddy Cue, put it succinctly when, in a moment of (perhaps inadvertent) candor, he said: “There’s no price that Microsoft could ever offer [Apple] to” preload Bing. . . .

[59] Google understands there is no genuine competition for the defaults because it knows that its partners cannot afford to go elsewhere. Time and again, Google’s partners have concluded that it is financially infeasible to switch [the default away from Google] or seek greater flexibility in search offerings because it would mean sacrificing the hundreds of millions, if not billions, of dollars that Google pays them as revenue share. [. . .]

[60] [The antitrust framework for exclusive dealing arrangements] requires the court to consider, at the threshold, the degree to which the agreements foreclose the relevant markets. But because foreclosure is only a useful

screening function, the court also must identify real-world anticompetitive effects that arise from such agreements. [. . .]

[61] Google’s browser agreements are exclusive insofar as they establish Google as the out-of-the-box default search engine. The Apple ISA requires that Google be preloaded as the exclusive default search engine on all Safari search access points in exchange for [Redacted]% revenue share. The resulting query volume is substantial. About 65% of queries on all Apple devices (mobile and desktop), and 61.8% on iOS devices (mobile), flow through the Safari default, demonstrating that default placement is a primary channel for distribution of search.

[62] The Mozilla RSA has a similar effect. Google is the default [general search engine] on all Firefox search access points, including the navigation bar and the homepage, among others. Google’s default placements on Firefox generate 80% of Mozilla’s overall operating revenue, demonstrating that the vast majority of query volume on Firefox goes through defaults. Google also has comparable agreements with smaller browsers, like Samsung’s S Browser. . . .

[63] Google points out that the ISA does not prevent Apple from preloading a third-party’s search application or a third-party browser on its devices. But market realities matter more than what is theoretically possible. Apple has made clear it will not design its products to include third-party applications. Google knows this well. So, even though the ISA contains no express exclusivity provision, its terms in combination with Apple’s established business practices means that Google will be the only [general search engine] preloaded on an Apple device. That makes it exclusive. [. . .]

[64] Google argues that users’ search behavior is not consistent with Plaintiffs’ assertion that the agreements were exclusive or de facto exclusive, and that ultimately, user choice is determined by quality, not defaults. It points out that nearly 40% of queries on Apple’s mobile devices flow through non-default search access points, such as default bookmarks or organic search. . . .

[65] But the fact that some consumers access search on non-default access points is not dispositive on exclusivity. On Apple devices, 65% of queries still go through the default. . . .

[66] To be deemed exclusive, a contract need not foreclose all other avenues of distribution to which consumers might have access. It is enough that the contract closes to rivals a substantial percentage of the available opportunities for distribution. [. . .]

[67] . . . With the benefit of a full trial, the court can now conclude that the MADA is exclusive in practice.

[68] Its exclusivity arises from two contractual requirements and two market realities. The two contractual requirements are that all MADA signatories must: (1) feature the Google Search Widget in the center of the home screen and (2) place Chrome on the home screen with Google as the default [general search engine]. The two market realities are that: (1) the Google Play Store is a must-have on all Android devices, and (2) the industry-wide practice is to avoid excessive preloading of applications, or “bloatware.” This combination of factors has resulted in all Android OEMs and carriers entering into MADAs, with all Android devices featuring the Google Search Widget and Chrome on the home screen to the exclusion of rivals as a practical matter. No Android device carries a second search widget and, other than Samsung, no device comes with a second preinstalled browser These prized placements are extremely effective at driving searches to Google. [. . .]

[69] The RSAs between Google and Android device distributors formalize the practical exclusivity of the MADAs. That has been their purpose from the outset. All of the RSAs contain an “alternative search services” clause. That clause prohibits Google’s Android partners from preloading rival search engines. It also greatly restricts a partner’s ability to promote other [general search engines]. In return, the Android partner receives revenue share. The structure of revenue share payments varies among the RSAs, but the basic barter is revenue share in exchange for default exclusivity.

[70] It is, of course, true that no distributor of Android devices is required to enter into an RSA with Google. They can opt to distribute MADA-compliant devices without earning revenue share. Also, Google’s agreements with Verizon and Samsung permit those partners to retain the option to preinstall another [general search engine], albeit at a lower revenue share percentage. As Google argues, RSA partners are not prevented from preloading

rivals on any devices (and any amount of devices) of their choosing—the only result of doing so is that the partner will not receive the highest revenue share on those devices.

[71] This optionality does not make the RSAs any less exclusive. Antitrust policy should not differentiate between the manufacturer of widgets that explicitly imposes exclusive dealing on its dealers and the manufacturer that gives such dealers a discount or rebate for dealing exclusively in the manufacturer’s widgets, because both have the practical effect of inducing exclusive dealing. While financial incentives to deal exclusively may not thwart competition in the short-term, such a scheme is problematic when the defendant is a dominant firm in a position to force manufacturers to make an all-or-nothing choice.

[72] That is effectively how the RSAs operate. No rational market actor would sell a MADA-compliant device without ensuring that it earned search revenue through the RSA. The forgone revenue is simply too great. For instance, Verizon considered switching away from the Google default but would have had to risk a \$1.4 billion loss to do so. The decision to stick with Google was the only rational choice. Not surprisingly then, Google has identified no Android device presently sold in the United States that is subject to a MADA but not an RSA. [. . .]

Effects in the Market for General Search Services

[73] To be condemned as exclusionary, a monopolist’s act must have an anticompetitive effect. That is, the monopolist must harm the competitive process and thereby harm consumers. In contrast, harm to one or more competitors will not suffice.

[74] Anticompetitive effects analysis involves establishing a causal link. The exclusionary conduct must cause the anticompetitive harm. As here, when a regulator is seeking only injunctive relief, the standard is somewhat relaxed. Courts may infer causation from the fact that a defendant has engaged in anticompetitive conduct that reasonably appears capable of making a significant contribution to maintaining monopoly power. [. . .]

[75] The key question then is this: Do Google’s exclusive distribution contracts reasonably appear capable of significantly contributing to maintaining Google’s monopoly power in the general search services market? The answer is “yes.” . . .

[76] The agreements have three primary anticompetitive effects: (1) market foreclosure, (2) preventing rivals from achieving scale, and (3) diminishing the incentives of rivals to invest and innovate in general search. [. . .]

[77] U.S. Plaintiffs’ expert, Dr. Whinston[,] found that 50% of all queries in the United States are run through the default search access points covered by the challenged distribution agreements [28% through the ISA, 19.4% through the MADAs and RSAs, and the remaining 2.3% through third-party browser agreements]. This figure does not include the 20% of all queries in the United States that flow through Google on user-downloaded Chrome.

[78] . . . [P]reloaded default placements are the most efficient channel for reaching search consumers, and Google has secured all the major ones (except the default on [Microsoft’s own] Edge browser preloaded on Windows devices). Sure, users can access Google’s rivals by switching the default search access point or by downloading a rival search app or browser. But the market reality is that users rarely do so. . . .

[79] . . . Google’s distribution agreements foreclose a substantial portion of the general search services market and impair rivals’ opportunities to compete. This is not a market where a competitor can simply wait for contracts to expire or make alluring offers to initiate termination.

[80] Google’s exclusive agreements have a second important anticompetitive effect: They deny rivals access to user queries, or scale, needed to effectively compete. Scale is the essential raw material for building, improving, and sustaining a [general search engine]. For more than a decade, the challenged distribution agreements have given Google access to scale that its rivals cannot match. Google has used that scale to improve its search product and ad monetization. Meanwhile, without access to scale, other [general search engines] have remained at a persistent competitive disadvantage, and new entrants cannot hope to achieve a scale that would allow them to compete with Google. Naturally then, [search] distributors prefer Google because of its search quality and because it would be economically irrational to sacrifice the high revenue share. They thus routinely renew the distribution

deals with their exclusive terms. In this feedback loop, the revenue share payments effectively make the ecosystem exceptionally resistant to change and basically freeze the ecosystem in place. That is the antithesis of a competitive market. [. . .]

[81] The distribution agreements have caused a third key anticompetitive effect: They have reduced the incentive to invest and innovate in search.

[82] For more than a decade, the market for general search services has presented the opportunity to earn outsized profits. Google certainly has reaped the rewards. Yet the general search services market has remained static for at least the last 15 years, with investments largely coming from established players. Only Google and Microsoft have made the sizeable capital investments needed to build a self-sustaining [general search engine]. Smaller competitors do even not compete as fully integrated search engines.

[83] Nor has venture capital money rushed in. As Apple’s [executive] John Giannandrea wrote in 2018: “[T]he reason a better search engine has not appeared is that it’s not a VC fundable proposition even though it’s a lucrative business.” [. . .]

[84] Today, Microsoft could invest more money in search but chooses not to without assurances of additional distribution on mobile. That withholding of additional investment is in part attributable to Google’s exclusive search distribution agreements. As Microsoft’s former CEO of Advertising and Web Services, Mikhail Parakhin, testified, “fundamentally it boils down to what kind of a long-term revenue we can achieve . . . If you don’t have [the] ability to effectively distribute [through defaults], it’s almost meaningless to invest in the area.”

[85] Google responds that Microsoft’s current investment strategy is not evidence of an anticompetitive effect because market actors must take financial risks to compete and Microsoft’s unwillingness to take such risks is not an antitrust problem.

[86] What Google says has intuitive appeal, but it does not reflect market realities. Microsoft stood no realistic chance of beating Google for the Apple default, and there is no evidence of any serious negotiations for Android placements. No profit-driven firm in Microsoft’s position would invest the substantial sums required to enhance its search product when there is little to no genuine opportunity for a default distribution deal. Google’s distribution agreements thus appear reasonably capable of having significantly contributed to disincentivizing Microsoft from enlarging its investment in search. [. . .]

Procompetitive Benefits

[87] If a plaintiff successfully establishes a prima facie case under § 2 by demonstrating anticompetitive effect, then the monopolist may proffer a procompetitive justification for its conduct. . . .

[88] Google advances three categories of procompetitive benefits. It submits that the challenged agreements (1) enhance the user experience, quality, and output in the market for general search services, (2) incentivize competition in related markets that redounds to the benefit of the search market, and (3) produce consumer benefits within the related markets. The court concludes that the record does not sufficiently support any of these procompetitive justifications.

[89] First, Google argues that its browser agreements allow the browser’s search functionality to work effectively out of the box, which ensures convenience for Safari and Firefox users. As support for this proposition, Google notes the longstanding industry practice of preloading a browser with a default [general search engine]. Indeed, all browsers in the United States are so designed. This practice, Google contends, is evidence that the browser agreements benefit consumers.

[90] But the procompetitive benefit must justify the specific means here in question, namely exclusive dealing contracts. Assuming Google has established the value of a default placement to competition and consumers, it has not shown that *exclusive* defaults across nearly all key search access points have such utility.

[91] What’s more, a non-exclusive default would still provide all the convenience and efficiency benefits that Google touts. . . .

[92] Second, Google contends that the contest to be the default presents search engines the opportunity to win incremental promotion, thereby incentivizing firms to make quality improvements to compete for the default position. That may be true in a competitive market. But as the court already has concluded, there is no genuine competition . . . for defaults, and there is no record evidence that competition for the default has motivated [other general search engines] to make quality improvements. [. . .]

[93] Third, Google contends that the challenged contracts have led to increased search output due to the efficiency of the default placements and its superior search quality. Google is right that search output has increased significantly, but it has presented no evidence that default exclusivity—as opposed to a host of other market forces—is a substantial cause of that result.

NOTES

- 1) How would you measure the foreclosure arising from an agreement to make a particular search engine the default option? In other words: what quantity or proportion would be the best measure, and what would you do in order to measure that quantity?
- 2) What do you make of the court’s decision in *Google Search*? On the court’s reasoning, is a default always equivalent to an exclusivity arrangement? What facts are required to make a default “exclusive”?
- 3) Does anything about the analysis in *Google Search* seem specific to the fact that the service is a digital one?
- 4) Do you agree with any of the following statements?
 - a. “What matters is not whether one search engine is the default for searches typed into the address bar of a browser, but whether users are free to visit other search engines. As long as they are free to go visit alternative search sites, there is no real threat to competition.”
 - b. “Monopolists should not be able to purchase preferred distribution. The risks are too great.”
 - c. “In practice, default status is so important to actual consumers that an agreement for ‘default status’ is equivalent to an agreement for exclusivity.”
 - d. “The only people injured by a search default agreement are those people sophisticated enough to have a preference about their search engine but not sophisticated enough to be able to change the default. That’s a pretty small group.”
 - e. “It would be fine for a monopolist search provider to be the default option on an app or device: it just shouldn’t be permitted to pay to hold that status.”
- 5) Is there any relevant difference between a downstream business (like a device or app developer) choosing to make a monopolist’s product a default, and a downstream business choosing to do so in exchange for payment from the monopolist? Does it matter if the payments reduce the downstream business’s costs and prices?
- 6) Is there any difference between an operating system or browser having a default search engine and a brick-and-mortar business having a “preferred partner” that customers are encouraged, but not required, to use?
- 7) Suppose that you were a court that had decided to impose antitrust liability for a practice involving default status. The parties have agreed that a choice menu—giving users the ability to elect a default provider or none—is the right solution. What would you write into a remedial order to ensure that a choice menu worked desirably? How would you approach or decide:
 - a. which businesses or products should be included on the menu;
 - b. the order in which the businesses or products should be displayed;
 - c. whether businesses could pay for more prominent treatment on the choice menu;
 - d. whether it ought to be possible for businesses to give users a “one-click” power to reassign the default after they had made the choice;
 - e. how much time should elapse before users are invited to pick a new default from the choice menu;
 - f. concerns that some of the businesses wanting to include on the choice menu might be unsafe, low-quality, or funded by hostile governments or criminal actors; and
 - g. who should bear the costs and burdens of administering the choice menu, and dealing with any objections or complaints?
- 8) Should Google face any limits on its ability to make Google Search the default search engine on its own devices and browsers (e.g., Pixel phones and the Chrome browser)? How, if at all, does this situation differ from agreements with third-party OEMs and browser developers?

b) Search Rankings, Search Neutrality, and Self-Preferencing

Search engines generally receive queries from users and supply results: that is, a series of links, along with other content such as images, information, maps, or AI-generated narrative responses. Sometimes users get all the information they need from the results page, particularly if the search engine displays some information in addition to links⁹⁹; but in many cases users will then click on a link, generating traffic to the linked website. The higher a link is ranked, the more traffic it is likely to receive.¹⁰⁰

Search engine traffic can be very important to the success of a website or an online business: it can play a similar function to customer footfall in brick-and-mortar businesses. Before you can make a sale, the customer must come to your door! Online businesses may live or die based on the flow of traffic from search engines, and an entire field of economic activity—“search engine optimization”—is devoted to helping businesses figure out how to “game” the search engine ranking system and be featured more prominently.¹⁰¹ In effect, search engine ranking is a kind of distribution or promotion for the linked businesses, usually provided by the search engine—at least to some extent—at no charge.

Search engines can make money in a variety of ways, but one very common way is to sell advertising of various kinds. Advertising that is displayed with search results can offer a distinctive kind of value, because it can be targeted in response to a user’s search query: thus, for example, a user searching for “online contact lens stores” may be particularly likely (compared to the set of all users) to be seriously considering making a contact lens purchase. As a result, the opportunity to advertise to that user at the point of search may be highly valuable.¹⁰²

Some search advertising can take the form of sponsored links or results, which may or may not be presented in a format that is somewhat similar to the unpaid (or “organic”) results, and displayed together with them.¹⁰³ For example, in response to the contact lens query in the previous paragraph, the search engine might display a results screen of, say, ten links, of which two or three are “paid” in that the website publisher (or other owner of the business to which the link leads) has paid the search engine to display the links more prominently.

The sale of such advertising has attracted critical attention. Some writers have suggested that, when sponsored results look similar to non-sponsored results, users may be deceived into thinking that the advertised business has achieved a high search ranking “on the merits” rather than through paid sponsorship. If true, this suggests that users may be directed to lower-quality, higher-priced, or otherwise worse businesses as a result. In principle, these concerns—or many of them—may also apply to search engine optimization as well: those activities too may reflect

⁹⁹ Some commenters have raised concerns—sometimes in a competition-policy register—about the practice of providing information, rather than just links, in response to a search. The development of AI technology, with the associated possibilities of synthesizing a narrative response from publicly available sources, has brought additional attention to this practice. (Is this just a complaint about a service that is too valuable: in effect, a complaint about too much competition? Or is it a complaint about free-riding that might eliminate the incentive to make information freely available online in the first place? Both? Neither?)

¹⁰⁰ See, e.g., Claire Cain Miller, *Seeking to Weed Out Drivel, Google Adjusts Search Engine*, N.Y. TIMES (Feb. 25, 2011) (“High rankings in search results are crucial because they allow Web sites to get more traffic and bring in more business[.]”); Kelly Shelton, *The Value Of Search Results Rankings*, FORBES (Oct. 30, 2017) (“According to Moz, the first page of Google captures 71% of search traffic clicks and has been reported to be as high as 92% in recent years. Second-page results are far from a close second coming in at below 6% of all website clicks.”).

¹⁰¹ See, e.g., Eric Enge, Stephan Spencer & Jessie Stricchiola, *THE ART OF SEO: MASTERING SEARCH ENGINE OPTIMIZATION* (2023).

¹⁰² See, e.g., *United States v. Google LLC*, __ F. Supp. 3d __, 2024 WL 3647498, at *82 (D.D.C. Aug. 5, 2024) (“Search ads are . . . unique in their capacity to connect the consumer and vendor at the very moment the consumer is looking to make a purchase.”). This kind of competition was at issue in the *1-800-Contacts* case—*1-800 Contacts, Inc. v. FTC*, 1 F.4th 102 (2d Cir. 2021)—which you may remember from Chapter V. In brief, *1-800-Contacts* brought trademark-infringement litigation against rivals that bid on advertising space for results from queries including “1-800-Contacts” as a keyword. It then entered into settlement agreements with those rivals, pursuant to which the rivals agreed to stop bidding on such advertising. The FTC, over a dissent from Commissioner Phillips, took enforcement action on the theory that such agreements were subject to quick-look scrutiny under Section 1 of the Sherman Act (as applied through Section 5 of the FTC Act). On appeal, the Second Circuit disagreed, and held that the practice was related closely enough to the procompetitive protection of trademark rights to warrant the application of the full rule of reason. See *supra* § V.D.

¹⁰³ See, e.g., Google Ads, *What Is Paid Search?* (Mar. 20, 2023) (“When you type something into Google, you’re presented with a list of results on the Search Engine Results Page (SERP). Here, you see both organic results and paid results.”).

the “distortion” of search results in the interests of profit. The FTC has warned that failing to distinguish paid advertising from organic search may constitute a violation of federal consumer protection law.¹⁰⁴

Others have argued that the concerns about payment for search placement are overblown. Some writers, for example, have underscored the fact that the search engine itself has an incentive to make sure that users receive high quality search results: if users become dissatisfied with the results they get—organic or paid—then they will reduce their usage of the search engine.¹⁰⁵ So the search engine itself may have strong incentives to take result quality, not just ad dollars, into account. And other writers have argued that paid search promotion might be a more effective form of advertising or distribution than organic search.¹⁰⁶

Some of these concerns have led some writers and commentators to favor “neutral” or “undistorted” search rankings. But that concept is more complicated than it might appear, and it raises some interesting questions.¹⁰⁷ What would it concretely mean to require that search rankings were neutral and non-discriminatory? How would we explain or enforce that obligation? What would be the measure of neutrality? Do users in fact expect and believe that search results are ordered according to some particular function? (Do you?) Should search engines have an obligation to seek or attain neutrality, rather than whatever is profitable for their business? What about other advertisers? Is there a tacit premise here that search engines must carry links to some or all businesses, or could the system work if search engines were free to refuse to do so? And if we are squeamish about imposing a general obligation of carriage and non-discrimination on search engines (either through an interpretation of the antitrust laws or through specific legislation), are there nevertheless specific acts in this vein that we might want to deter and punish? Moreover: are internet search engines special with respect to any of these issues—for example, because of their peculiar importance to the economy? What about other digital settings where users conduct searches: app stores, e-commerce sites, microblogging sites, social networks, and so on? And how about non-digital settings where business owners must arrange products and services for consumers to view: product shelves in supermarkets and other stores; newspaper ad pages; store placement in malls; and so on.

The difficulties of defining and measuring neutrality are, or can be, exacerbated by the presence of automated decision-making. Search rankings may be determined wholly or in part by algorithms that may be designed to maximize overall revenue. What are we to make of it if an algorithm, instructed to maximize profits, displays a link to one brand of contact lenses more highly than another? On other occasions, of course, we might be dealing with rankings that are the result of specific intervention to promote or demote particular businesses. Should we

¹⁰⁴ See, e.g., FTC, *FTC Consumer Protection Staff Updates Agency’s Guidance to Search Engine Industry on the Need to Distinguish Between Advertisements and Search Results* (June 25, 2013) (“[F]ailing to clearly and prominently distinguish advertising from natural search results could be a deceptive practice. The [FTC’s 2013] updated guidance emphasizes the need for visual cues, labels, or other techniques to effectively distinguish advertisements, in order to avoid misleading consumers, and it makes recommendations for ensuring that disclosures commonly used to identify advertising are noticeable and understandable to consumers.”).

¹⁰⁵ See, e.g., Geoffrey A. Manne & Joshua D. Wright, *Google and the Limits of Antitrust: The Case Against the Case Against Google*, 34 Harv. J. L. & Pub. Pol’y 171, 205–06 (2011) (“But this dynamic, potentially leading to [a less-preferred link] in the first paid search result position, is suboptimal not only for [the rival that loses out] but also for Google’s users and for Google’s shareholders. Users will find a nonrelevant search result in the top position and will thus devalue the search engine. And Google will receive smaller revenue because of the relative irrelevance of the top results and the correspondingly smaller number of clicks (even at a slightly higher price).”)

¹⁰⁶ See, e.g., Geoffrey A. Manne & Eric Fruits, *The Antitrust Assault on Ad Tech: A Law & Economics Critique*, Int’l Ctr. L. & Econ. White Paper (Nov. 3, 2022) § III.F.2. (“[T]here are clear reasons why it may be in an advertiser’s interest to advertise [through paid search advertising rather than organic search]. Paid search ads may give them greater control over how a link is displayed to a user (for example, with text the advertiser has chosen, rather than text that the search engine has retrieved) or guarantee a prominent listing for searches where the advertiser’s URL listing is not always guaranteed to be on top.”).

¹⁰⁷ Setting aside the issue of “self-preferencing,” to which we will turn in a moment, it seems unlikely that this kind of “manipulation” of search results would lead to antitrust liability in most cases. Antitrust doctrine—including monopolization law under Section 2 of the Sherman Act—does not usually require a monopolist to deal on equal terms with all parties, or even to carry trading partners’ content in the first place. See generally *supra* Chapter VII. (And to the extent that search listing is a form of free distribution, antitrust generally does not require even a monopolist to provide non-discriminatory distribution for free.) More importantly, Section 2 liability generally requires, among other things, that the relevant conduct must contribute to the monopolist’s own monopoly power: if the search engine does not compete with a business that is disfavored in the search rankings, it is hard to see how that could be the result of manipulation. See *supra* § VII.C.2. But there are strands in monopolization law that might be applicable in special cases. For example, if a particular act of search manipulation involves deception and contributes to the search engine’s own monopoly power, the law of monopolization-by-misrepresentation may be applicable. See *supra* § VII.D.5.

treat “intentional” or “specific” interventions of this kind differently from “incidental” or “general” decisions about ranking?

These puzzles about “neutrality” and “distortion” lead us to one of the most prominent and controversial topics in all of tech antitrust: “self-preferencing.” Suppose that a search engine of any kind—general search, product search on an ecommerce website, app search, specialized “vertical” search—gives preferential treatment, in search results, to businesses, products, and services that are owned by the owner of the search engine itself, at the expense of rivals. Is this a bad or harmful thing? Is it an antitrust violation? Should it be prohibited (absolutely or presumptively) by legislation? If so, why, and subject to what rebuttals or defenses?

This is a surprisingly tricky question. On the one hand, like paid promotion in search results, self-preferencing implicates some of the concerns about “artificial” or “distortionary” search results that may advance search engine profit and reduce user welfare. If a search engine is a particularly important point of distribution for some product or service, one could imagine that the effect of self-preferencing might be to push users away from the highest-quality results! As a result, some writers have raised concerns about self-preferencing: for example, as a form of “monopolization” under Section 2 of the Sherman Act, if it contributes to monopoly power; as an unfair method of competition under Section 5 of the FTC Act, if it satisfies whatever criteria we might think that provision imposes; or as an appropriate target for legislation or some other kind of policy intervention.¹⁰⁸ (Why is self-preferencing unlikely to raise issues under Section 1?) Other jurisdictions, including the European Union, appear to regard self-preferencing as a violation of competition law in at least some cases.¹⁰⁹

But there is another side to the story. For one thing, the practice of self-preferencing is pretty common in the economy. Virtually every business is vertically integrated at least to some extent: that is, it does more than one thing in-house. And such businesses commonly “favor” or “prefer” in some way their own internal divisions over third parties. For example, many businesses favor their full-time employees over spot-market labor, or deal more favorably with in-house accounting, sales, production, or marketing functions than with external alternatives. Many retailers manufacture their own products, and may choose to carry, display, or price some of those products more favorably than some similarly situated third parties. (Supermarket “own brand” products are a good example.) And many businesses share competitive information, strategic plans, and other valuable materials more freely with internal partners than with those outside the business. For example, a business that makes devices and apps might coordinate the development of new hardware and software features that work uniquely well together: for example, a smartphone camera along with specialized image-processing software, or new games-console hardware along with new games that take advantage of the extra features.

In fact, many businesses don’t stop at preferential treatment, but choose to deal *only* with in-house trading partners for certain needs. By doing so, they are not just preferencing internal trading partners over external ones but actually cutting the latter out altogether.¹¹⁰ For example, a retail superstore chain might advertise its own products

¹⁰⁸ See, e.g., Herbert Hovenkamp, *Antitrust and Self-Preferencing*, 38 Antitrust 5, 6 (2023) (arguing that “current United States antitrust law has many prohibitions on self-preferencing,” but that “they apply only when the firm in question has market power in the dominant good and competitive harm results from the refusal to give equal treatment”); Daniel A. Hanley, *How Self-Preferencing Can Violate Section 2 of the Sherman Act*, Comp. Pol’y Int’l (June 2021) (arguing that “self-preferencing can constitute a form of monopolization”); House of Representatives Subcommittee on Antitrust, Commercial and Administrative Law of the Committee on the Judiciary, INVESTIGATION OF COMPETITION IN DIGITAL MARKETS: MAJORITY STAFF REPORT AND RECOMMENDATIONS (2020) 382 (“[T]he Subcommittee recommends that Congress consider establishing nondiscrimination rules to ensure fair competition and to promote innovation online.”); David J. Balan, *Too Many Economists Are Using a Flawed Theory To Defend Dominant Platforms’ Self-Preferencing Practices*, ProMarket (Nov. 18, 2022); Fiona Scott Morton, Monika Schnitzer, Paul Heidhues, Amelia Fletcher, David Dinielli & Jacques Crémer, *The Digital Markets Act: An Economic Perspective on the Final Negotiations*, VOXEU (Feb. 11, 2022) (stating that “any sort of self-preferencing can be highly anti-competitive”).

¹⁰⁹ See, e.g., E.U. General Court, Case T-612/17, *Google LLC v. European Commission* (decision of Nov. 10, 2021) ¶¶ 167–75 (“The Commission considered that, through leveraging, Google was relying on its dominant position on the market for general search services in order to favour its own comparison shopping service on the market for specialised comparison shopping search services by promoting the positioning and display of that comparison shopping service and of its results on its general results pages, as compared to competing comparison shopping services, whose results, given their inherent characteristics, were prone to being demoted on those pages by adjustment algorithms.”); “[T]he Commission will have been fully entitled to take the view that that favouring was a departure from competition on the merits.”).

¹¹⁰ In the terms we offered earlier in the Chapter, businesses engaged in such practices may be fully open, fully closed, or partly closed systems. Recall that in a fully closed system, third parties cannot feasibly supply at all (e.g., internal components for a

on the front of its stores: thus refusing to allow any rivals to buy its advertising space. Or a device manufacturer might install only its own products and components in its devices—its own flashlights or cameras in a smartphone, or its own operating system on a tablet, or its own calculator or media player software with an operating system—thus completely refusing to deal with third-party component manufacturers at all. Or a cinema or other venue might be the exclusive supplier of popcorn, soda, and snacks as well as of the movie showings. A restaurant might insist on not only supplying food but also being the exclusive seller of wine and other drinks. A car manufacturer might insist on supplying cars only with its own steering wheels, seats, or engines fitted, cutting out third-party component manufacturers altogether. As these examples demonstrate, it is not always clear what the scope of the “main” product or service is.

Crucially, there are many explanations for self-preferencing that are benign or beneficial.¹¹¹ It may be cheaper and easier, in a variety of ways, for a division of an integrated business to interact with an internal partner; the division may have higher confidence that it will not fall victim to opportunistic behavior or that its competitively sensitive information or plans will not be shared with competitors; the division may have higher confidence in the security, quality, accuracy, or transparency of the internal partner’s activities; the division may have greater faith that the internal partner will be committed for the long term; and so on. And the possibilities for “special compatibility” with internal trading partners, including better features, superior interoperability, and so on, may be considerable. Conversely, depending on the context, the prospect of dealing with third parties, let alone *all* third parties, on similar terms might be sky-high, particularly if dealings must be individualized or negotiated in some way.

In addition—apart from the benefits of dealing with an internal partner—sometimes the internal product or service itself may have a fair claim “on the merits” to be treated more favorably. For example, if the in-house supply is known to be more reliable (or, at least, can more easily monitored for reliability); higher quality; more likely to process or provide refunds, returns, complaints, service requests, or other services in a desirable way; or otherwise better or cheaper from the point of view of the preferring business, then what seems to be self-preferencing may simply reflect those advantages.

So at least some self-preferencing is benign or beneficial. But there are some other reasons why a business might want to keep things in-house that may not be quite so appealing to policymakers—or to the rest of us! The integrated business might simply want to make sure that rivals—even rivals with a superior product—don’t get access to valuable inputs, distribution, customers, or complements, so that they stay at a lower scale or efficiency level. It might want to discourage competition, by forcing rivals that would be able to profitably enter at any *one* level of the market to enter simultaneously at *multiple* levels: a harder and riskier undertaking. Or it might just prefer not to do anything that would contribute to a direct competitor’s profits. It may reason—perhaps correctly—that if it cuts off a rival or restricts its dealings with that rival, then it will save itself the headaches and losses from a more effective competitor down the line. And it might even conclude, in light of decisions like *Trinko*, that antitrust gives it the right to limit its support of rivals in just this way.¹¹²

smartphone made by a vertically integrated manufacturer, or own-brand devices in an operating system that only allows such devices). In a partly closed system, there are limits on how they may do so (*e.g.*, through control of intellectual property or non-public knowhow that is necessary to interoperate with the system). And even in an open system, in which third parties can feasibly and independently supply, the system owner may nevertheless decline to affirmatively support rivals (*e.g.*, a cinema may allow customers to bring in third-party food but decline to allow third party food vendors to sell on-site).

¹¹¹ See generally, *e.g.*, D. Bruce Hoffman & Garrett D. Shinn, *Self-Preferencing and Antitrust: Harmful Solutions for an Improbable Problem*, CPI Antitrust Chronicle (June 2021); Michael A. Salinger, *Self-Preferencing*, in Global Antitrust Institute, GAI REPORT ON THE DIGITAL ECONOMY (2020) 363 (“Google’s universal search results were simply its search results for queries that it perceived with some probability to fit a particular theme, and allegations that Google search results were biased toward Google “properties” were, in effect, allegations that Google search results were biased toward Google search results.”); Pablo Ibáñez Colomo, *Self-Preferencing: Yet Another Epithet in Need of Limiting Principles*, 43 WORLD COMPETITION 417 (2020) (arguing that “self-preferencing is a manifestation of competition on the merits and often inseparable from the pro-competitive benefits that come with product integration”); Jonathan Jacobson & Ada Wang, *Competition or Competitors? The Case of Self-Preferencing*, 38 ANTITRUST 13 (2023); Testimony of Daniel Francis, U.S. Senate, Committee on the Judiciary, Subcommittee on Competition Policy, Antitrust, and Consumer Rights, Hearing on Reining in Dominant Digital Platforms: Restoring Competition to Digital Markets (March 2023); see also Daniel Francis, *Making Sense of Monopolization*, 84 Antitrust L.J. 779, 829 (2022) (“Virtually every vertically integrated enterprise in the economy treats its own divisions better than third parties, for an array of obvious theory-of-the-firm reasons as well as the fact that an integrated business is aiming to optimize overall profit, not the separate profit of each division.”).

¹¹² *Verizon Communications Inc. v. Law Offices of Curtis V. Trinko, LLP*, 540 U.S. 398, 407–08 (2004).

Self-preferencing seems just as common in digital markets as it is in the rest of the economy. For example, a device manufacturer might choose to preinstall a package of its own apps, when it could not or would not install all the available third-party apps. Likewise, an operating system manufacturer might decide to include a set of applications, in addition to the basic operating system, or a games console manufacturer might decide to include some of its own games along with the console, rather than those made by third parties. And the operator of a mobile device ecosystem might choose to make that system compatible only with smartphones and devices that it manufactured itself, rather than open the ecosystem to third party devices. Or—to return to internet search—the supplier of an internet search engine might decide to feature its own products, apps, services, or widgets more prominently than it features the offerings of others.

Concerns about this kind of behavior have featured prominently in arguments that self-preferencing does or should violate existing rules of antitrust law. The following two extracts showcase different perspectives on the relationship between self-preferencing and monopolization. On one view, self-preferencing raises all the classic concerns that animate monopolization law: the use of power to foreclose rivals and harm consumers. On another view, self-preferencing is a ubiquitous and typically desirable aspect of life in a vertical integrated world. Which perspective do you prefer? Do you see a third way?

Daniel A. Hanley, How Self-Preferencing Can Violate Section 2 of the Sherman Act

CPI Antitrust Chronicle (June 2021)

By unfairly modifying its operations to privilege its, another firm's, or a set of firms' products or services, self-preferencing enables a firm to unilaterally distort the relationships between dependent firms and customers to monopolize a market, fortify its dominance, destroy a competitor, or leverage into a new market. Self-preferencing can thus violate the Sherman Act and violate the principles of fair competition embedded in it. [. . .]

Self-preferencing causes two primary harms to market participants and consumers. First, since self-preferencing artificially weakens a rival firm's competitive position (who is often dependent on the provided service), it allows the perpetrator to unfairly maintain and extend its market power. When this happens, barriers to entry in an industry can increase, leading to less consumer choice, increased bargaining leverage of incumbent firms to extract or impose more favorable terms of service and conduct on dependent firms, and increased costs to dependent firms.

Second, self-preferencing causes significant exclusion and foreclosure effects, which can lessen consumer choice for alternative services. The exclusion of a firm can also cause consumers to lose out on the benefits of increased firm rivalry and potential innovation derived from it.

The foreclosure effects caused by self-preferencing can also deprive a firm of the necessary scale to be a viable market participant. Moreover, even the threat of foreclosure can cause harm to consumers by deterring the entry of potential competitors since they will likely not risk entering a market that they can be unilaterally excluded from if they start challenging the dominant incumbent firm. [. . .]

[Examples of alleged demotion, by Google, of rival shopping sites and image results in search results] provide an adequate basis for a violation of Section 2 of the Sherman Act. In both examples, Google used self-preferencing derived from its "dominant economic power" to "foreclose competition, to gain a competitive advantage, or to destroy a competitor" and harm the competitive process, — as opposed to succeeding on account of "superior service, lower costs, and improved efficiency." Since Google is indispensable to third parties, an artificially lower search ranking from self-preferencing can be devastating for a firm's competitive position. As such, self-preferencing not only leads to substantial foreclosure of a rival site, but it also can raise the costs to dependent firms because a firm may have to either enter into a special deal with Google or pay for advertising on Google's search platform to ensure they are at a higher search position. All of this has the effect of raising a rival's costs or forcing a dependent firm to operate in a significantly weaker bargaining position as a direct result of the firm's market power and self-preferencing.

**D. Bruce Hoffman & Garrett D. Shinn, Self-Preferencing and Antitrust:
Harmful Solutions for an Improbable Problem
CPI Antitrust Chronicle (June 2021)**

[M]odern political and popular discourse treats self-preferencing as nearly a per se evil. But, is there any reason to think that is right? Consider the example of that most quotidian of platforms: the shopping mall.

A shopping mall is a platform. Its value is as a gathering place for stores on the one hand and shoppers on the other. It is compensated for this role by rent collected from its tenants. Let's suppose that a particular mall decides to open its own pretzel store in its food court. [. . .]

. . . [Could a desire to hurt other pretzel stores] explain self-preferencing [by the mall to favor its own store]? It should be obvious that the answer is probably not, for a simple reason: the mall owner has much better tools for that purpose. It could, for example, just kick the competing snack stores out of the mall, or raise their rents to unsustainable levels. Making its own pretzel offering particularly compelling for customers is a costly and roundabout way to drive out rivals, if that's what the mall owner really wants to do.

More importantly, consider what will happen if the mall owner's actions hurt other snack stores and the net result . . . is bad for customers. . . . [T]he other snack stores close, or raise prices or cut the quality of their offerings because they're being squeezed on rent, and whatever the mall owner's own pretzel store offers isn't good enough to outweigh the negative effects of the degradation of the other snack stores. So now there are long lines at the pretzel store, and shoppers are upset because they don't have the options they appreciated before. If that happens, the mall will become less attractive to shoppers. . . . As shopper spending declines, the mall becomes less attractive to merchants; some close, or cut quality, or reduce hours, and total sales fall, which in turn makes the mall even less attractive to shoppers, and so on. And as all of this happens, the mall owner gets less rent and is worse off, which plainly wasn't its goal.

. . . [T]he most likely reason for a mall to [self-preference] is because it thinks the net result of its actions will benefit shoppers and make the mall more attractive (both to shoppers and merchants). In other words, our little thought experiment demonstrates that the most likely explanation for platform self-preferencing is procompetitive, benefiting both buyers and sellers on the platform and increasing overall output. [. . .]

[T]he basic intuition we describe above should generally hold even where the platform has market or monopoly power. This is the case for two reasons.

First, if the platform's vertical integration and self-preferencing is actually bad for consumers, the result is simply that the monopoly platform makes more profit in the short run, but undermines its monopoly in the long run. The effects are no different than a monopolist charging a monopoly price (using our mall example, raising rents sky-high because no other malls are around)

Second, in the U.S. at least, it's not illegal for a monopolist to reap the rewards of its monopoly, because those rewards help drive innovation and competition. Section 2 of the Sherman Act doesn't prohibit monopolies; it assumes that a competitive economy can result in monopolies, because some competitor might just do things better than all of its rivals. Rather, Section 2 prohibits anticompetitive conduct — conduct that harms the competitive process — that results in a monopoly. As the Supreme Court has explained, even so-called monopoly leveraging (using a monopoly in one market to gain an advantage in another) does not violate the antitrust laws so long as this leveraging does not create or maintain monopoly power in a second market. Antitrust law isn't price regulation.

What all this means is that (1) because the platform has other, easier ways to make more money than by vertically integrating, and (2) because the platform's motivation is to make both sellers and buyers happier, the most likely reason a platform would vertically integrate is to make buyers happier. That will make them more likely to come to the mall, spend more time there, and spend more money in all the stores at the mall. In turn, this will make sellers more likely to want to be in the mall, and able and willing to pay higher rent because of the higher sales

they'll make. In more technical antitrust terms, the most likely reason for platform vertical integration is to increase output and consumer (and overall) welfare.

Are Search Rankings Constitutionally Protected?

A handful of district court cases have explored the argument that search engines (and perhaps by extension others providing search results?) may enjoy at least some First Amendment protection from civil liability when they present and order search results. This is one of the ways in which First Amendment doctrine may have some broadly “deregulatory” implications.¹¹³ And like other examples in that category, it is highly controversial!

Some district courts have held that the First Amendment bars at least some—and maybe all—claims related to the ordering and presentation of search results. In *Search King Inc. v. Google Technology, Inc.*, for example, a plaintiff alleged that Google had committed tortious interference by downgrading the plaintiff's websites on Google Search.¹¹⁴ The district court held that Google's page ranking scores were “opinions of the significance of particular web sites as they correspond to a search query,”¹¹⁵ and as such enjoyed “full constitutional protection,” including from state law tortious-interference claims.¹¹⁶ Similarly, in *Langdon v. Google*, a plaintiff alleged that Google and Microsoft had refused to carry advertising for, and removed or degraded search results for, the plaintiff's two websites, which detailed injustices allegedly perpetrated by government officials in North Carolina and China respectively.¹¹⁷ The district court held that the First Amendment compelled dismissal, citing a string of cases holding that newspapers have a constitutional right to decline to print advertisements and replies to articles.¹¹⁸ And in *Zhang v. Baidu.com*, a group of plaintiffs sued the Chinese search engine Baidu, alleging that Baidu had removed pro-democracy materials from search results, including materials created and published online by the plaintiffs.¹¹⁹ The district court in that case emphasized that “the Government may not . . . tell a private speaker what to include or not to include in speech about matters of public concern,” even if the speaker was not a part of the journalistic press and even if it did not generate the underlying content.¹²⁰ As a result, Baidu's de-listing of the plaintiffs' content was protected.¹²¹

But other district courts have been less inclined to apply First Amendment protection. In *e-Ventures Worldwide, LLC v. Google, Inc.*, the district court declined to accord Google constitutional immunity from a claim about removal from search results, on the ground that the plaintiff was not complaining about page rankings or about Google's editorial judgment, but was rather complaining about alleged false statements concerning Google's listing policies, and about conduct driven by “anti-competitive motives.”¹²² And in *Dreamstime.com, LLC v. Google, LLC*, the district court likewise refused to dismiss on constitutional grounds a claim that Google had intentionally downgraded the plaintiff's website for competitive reasons after entering into a licensing agreement with the plaintiff's main competitor.¹²³ “Just like a fast-talking con-artist cannot hide behind the First Amendment,” the court stated, “neither can Google.”¹²⁴

The first federal government effort to challenge self-preferencing on antitrust grounds—albeit as part of a broader scheme of monopolization—had nothing to do with internet search. It was the 2024 suit against Apple brought

¹¹³ See, e.g., Amanda Shanor, *The New Lochner*, 2016 Wis. L. Rev. 133 (2016); Charlotte Garden, *The Deregulatory First Amendment at Work*, 51 Harv. C.R.-C.L. L. Rev. 323 (2016); Jeremy K. Kessler, *The Early Years of First Amendment Lochnerism*, 116 Colum. L. Rev. 1915 (2016).

¹¹⁴ *Search King Inc. v. Google Tech., Inc.*, No. CIV-02-1457-M, 2003 WL 21464568 (W.D. Okla. May 27, 2003).

¹¹⁵ *Id.* at *4.

¹¹⁶ *Id.* at *3-4.

¹¹⁷ *Langdon v. Google, Inc.*, 474 F.Supp.2d 622 (D. Del. 2007).

¹¹⁸ *Id.* at 629-30.

¹¹⁹ *Zhang v. Baidu.com Inc.*, 10 F.Supp.3d 433, 435 (S.D.N.Y. 2014).

¹²⁰ *Id.* at 437-38.

¹²¹ *Id.* at 439. The court left open the question of whether the First Amendment required complete immunity, or merely intermediate-scrutiny protection, in this context. *Id.* at 438-40.

¹²² *e-ventures Worldwide, LLC v. Google, Inc.*, 188 F.Supp.3d 1265, 1274-75 (M.D. Fla. 2016).

¹²³ *Dreamstime.com, LLC v. Google, LLC*, No. C-18-01910, 2019 WL 2372280 (N.D. Cal. June 5, 2019).

¹²⁴ *Id.*, at *2.

by the Justice Department and a coalition of states. (The FTC’s 2023 case against Amazon had previously alleged that self-preferencing was *evidence of harm* from the practices that were the focus of the complaint. Specifically, the FTC alleged because Amazon had increased its monopoly power through the conduct challenged in the complaint, it had acquired the ability to reduce quality: including by engaging in self-preferencing.¹²⁵)

The 2024 DOJ case against Apple alleged a monopolization scheme with multiple components, aimed at contributing to monopoly in markets for smartphones and performance smartphones. The following extract isolates the allegations regarding Apple’s conduct relating to mobile messaging apps and smart watches. In what way can these allegations be understood as self-preferencing? Can they be understood any other way? If DOJ wins, what remedy would be appropriate?

First Amended Complaint, United States v. Apple Inc.

Case No. 2:24-cv-4055 (D.N.J., filed June 11, 2024)

10. This complaint highlights five examples of Apple using [practices] to suppress technologies that would have increased competition among smartphones. {Eds.: this extract focuses on just two examples: messaging and smartphones. It omits allegations relating to “super apps,” cloud streaming game apps, and digital wallets.} Suppressing these technologies does not reflect competition on the merits. Rather, to protect its smartphone monopoly—and the extraordinary profits that monopoly generates—Apple repeatedly chooses to make its products worse for consumers to prevent competition from emerging. These examples below individually and collectively have contributed to Apple’s ability to secure, grow, and maintain its smartphone monopoly by increasing switching costs for users, which leads to higher prices and less innovation for users and developers. [. . .]

i. Messaging: Apple protects its smartphone monopoly by degrading and undermining cross-platform messaging apps and rival smartphones

80. Apple undermines cross-platform messaging to reinforce obstacles to iPhone families giving their kids Android phones. Apple could have made a better cross-platform messaging experience itself by creating iMessage for Android but concluded that doing so “will hurt us more than help us.” Apple therefore continues to impede innovation in smartphone messaging, even though doing so sacrifices the profits Apple would earn from increasing the value of the iPhone to users, because it helps build and maintain its monopoly power.

81. Messaging apps allow smartphone users to communicate with friends, family, and other contacts and are often the primary way users interact with their smartphones. In Apple’s own words, messaging apps are “a central artery through which the full range of customer experience flows.”

82. Smartphone messaging apps operate using “protocols,” which are the systems that enable communication and determine the features available when users interact with each other via messaging apps.

83. One important protocol used by messaging apps is SMS. SMS offers a broad user network, but limited functionality. For example, all mobile phones can receive SMS messages, but SMS does not support modern messaging features, such as large files, edited messages, or reactions like a “thumbs up” or a heart.

84. Many messaging apps—such as WhatsApp, Facebook Messenger, and Signal—use proprietary, internet-based protocols, which are sometimes referred to as OTT (“over the top”) protocols. OTT messaging typically involves more secure and advanced features, such as encryption, typing indicators, read receipts, the ability to share rich media, and disappearing or ephemeral messages. While all mobile phones can send and receive SMS messages, OTT only works between users who sign up for and communicate through the same messaging app. As a result, a user cannot send an OTT message to a friend unless the friend also uses the same messaging app.

85. Apple makes third-party messaging apps on the iPhone worse generally and relative to Apple Messages, Apple’s own messaging app. By doing so, Apple is knowingly and deliberately degrading quality, privacy, and security for its users. For example, Apple designates the APIs needed to implement SMS as “private,” meaning third-party developers have no technical means of accessing them and are prohibited from doing so under Apple’s

¹²⁵ Complaint, FTC v. Amazon.com, Inc., Case No. 2:23-cv-01495 (W.D. Wash., filed Sept. 26, 2023) ¶¶ 241–48

contractual agreements with developers. As a result, third-party messaging apps cannot combine the “text to anyone” functionality of SMS with the advanced features of OTT messaging. Instead, if a user wants to send somebody a message in a third-party messaging app, they must first confirm whether the person they want to talk to has the same messaging app and, if not, convince that person to download and use a new messaging app. By contrast, if an Apple Messages user wants to send somebody a message, they just type their phone number into the “To:” field and send the message because Apple Messages incorporates SMS and OTT messaging.

86. Apple prohibits third-party developers from incorporating other important features into their messaging apps as well. For example, third-party messaging apps cannot continue operating in the background when the app is closed, which impairs functionality like message delivery confirmation. And when users receive video calls, third-party messaging apps cannot access the iPhone camera to allow users to preview their appearance on video before answering a call. Apple Messages incorporates these features.

87. If third-party messaging apps could incorporate these features, they would be more valuable and attractive to users, and the iPhone would be more valuable to Apple in the short term. For example, by incorporating SMS, users would avoid the hassle of convincing someone to download a separate app before sending them a message. Third-party messaging apps could also offer the ability to schedule SMS messages to be sent in the future, suggest replies, and support robust multi-device use on smartphones, tablets, and computers—as they have already done on Android.

88. Moreover, messaging apps benefit from significant network effects—as more people use the app, there are more people to communicate with through the app, which makes the app more valuable and in turn attracts even more users. Incorporating SMS would help third-party messaging apps grow their network and attract more users. Instead, Apple limits the reach of third-party messaging apps and reinforces network effects that benefit Apple.

89. Recently, Apple has stated that it plans to incorporate more advanced features for cross-platform messaging in Apple Messages by adopting a 2019 version of the RCS protocol (which combines aspects of SMS and OTT). Apple has not done so yet, and regardless it would not cure Apple’s efforts to undermine third-party messaging apps because third-party messaging apps will still be prohibited from incorporating RCS just as they are prohibited from incorporating SMS. Moreover, the RCS standard will continue to improve over time, and if Apple does not support later versions of RCS, cross-platform messaging using RCS could soon be broken on iPhones anyway.

90. In addition to degrading the quality of third-party messaging apps, Apple affirmatively undermines the quality of rival smartphones. For example, if an iPhone user messages a non-iPhone user in Apple Messages—the default messaging app on an iPhone—then the text appears to the iPhone user as a green bubble and incorporates limited functionality: the conversation is not encrypted, videos are pixelated and grainy, and users cannot edit messages or see typing indicators. This signals to users that rival smartphones are lower quality because the experience of messaging friends and family who do not own iPhones is worse—even though Apple, not the rival smartphone, is the cause of that degraded user experience. Many non-iPhone users also experience social stigma, exclusion, and blame for “breaking” chats where other participants own iPhones. This effect is particularly powerful for certain demographics, like teenagers—where the iPhone’s share is 85 percent, according to one survey. This social pressure reinforces switching costs and drives users to continue buying iPhones—solidifying Apple’s smartphone dominance not because Apple has made its smartphone better, but because it has made communicating with other smartphones worse.

91. Apple recognizes that its conduct harms users and makes it more difficult to switch smartphones. For example, in 2013, Apple’s Senior Vice President of Software Engineering explained that supporting cross-platform OTT messaging in Apple Messages “would simply serve to remove [an] obstacle to iPhone families giving their kids Android phones.” In March 2016, Apple’s Senior Vice President of Worldwide Marketing forwarded an email to CEO Tim Cook making the same point: “moving iMessage to Android will hurt us more than help us.

92. In 2022, Apple’s CEO Tim Cook was asked whether Apple would fix iPhone-to-Android messaging. “It’s tough,” the questioner implored Mr. Cook, “not to make it personal but I can’t send my mom certain videos.” Mr. Cook’s response? “Buy your mom an iPhone.”

93. Recently, Apple blocked a third-party developer from fixing the broken cross-platform messaging experience in Apple Messages and providing end-to-end encryption for messages between Apple Messages and Android users. By rejecting solutions that would allow for cross-platform encryption, Apple continues to make iPhone users' less secure than they could otherwise be.

ii. Smartwatches: Apple protects its smartphone monopoly by impeding the development of cross-platform smartwatches

94. Apple uses smartwatches, a costly accessory, to prevent iPhone customers from choosing other phones. Having copied the idea of a smartwatch from third-party developers, Apple now prevents those developers from innovating and limits the Apple Watch to the iPhone to prevent a negative "impact to iPhone sales."

95. Smartwatches are wrist-worn devices with an interactive display and accompanying apps that let users perform a variety of functions, including monitoring health data, responding to messages and notifications, performing mobile payments, and, of course, telling time. Smartwatches must generally be paired with a smartphone to operate and unlock their full functionality, such as receiving and responding to emails and text messages or answering phone calls. Because of the significant cost of buying a smartwatch, users are less willing to choose a smartphone if it is not compatible with their smartwatch.

96. Apple's smartwatch—Apple Watch—is only compatible with the iPhone. So, if Apple can steer a user towards buying an Apple Watch, it becomes more costly for that user to purchase a different kind of smartphone because doing so requires the user to abandon their costly Apple Watch and purchase a new, Android-compatible smartwatch.

97. By contrast, cross-platform smartwatches can reduce iPhone users' dependence on Apple's proprietary hardware and software. If a user purchases a third-party smartwatch that is compatible with the iPhone and other smartphones, they can switch from the iPhone to another smartphone (or vice versa) by simply downloading the companion app on their new phone and connecting to their smartwatch via Bluetooth. Moreover, as users interact with a smartwatch, e.g., by accessing apps from their smartwatch instead of their smartphone, users rely less on a smartphone's proprietary software and more on the smartwatch itself. This also makes it easier for users to switch from an iPhone to a different smartphone.

98. Apple recognizes that driving users to purchase an Apple Watch, rather than a third-party cross-platform smartwatch, helps drive iPhone sales and reinforce the moat around its smartphone monopoly. For example, in a 2019 email the Vice President of Product Marketing for Apple Watch acknowledged that Apple Watch "may help prevent iPhone customers from switching." Surveys have reached similar conclusions: many users say the other devices linked to their iPhone are the reason they do not switch to Android.

99. Apple also recognizes that making Apple Watch compatible with Android would "remove [an] iPhone differentiator."

100. Apple uses its control of the iPhone, including its technical and contractual control of critical APIs, to degrade the functionality of third-party cross-platform smartwatches in at least three significant ways: First, Apple deprives iPhone users with third-party smartwatches of the ability to respond to notifications. Second, Apple inhibits third-party smartwatches from maintaining a reliable connection with the iPhone. And third, Apple undermines the performance of third-party smartwatches that connect directly with a cellular network. In doing so, Apple constrains user choice and crushes innovation that might help fill in the moat around Apple's smartphone monopoly.

101. The ability to respond to notifications, e.g., new messages or app alerts, directly from a smartwatch is one of the top considerations for smartwatch purchasers—and one of the most used product features when it is available. According to Apple's own market research, the ability to "[s]end and receive text messages from social and messaging apps" is a critical feature for a smartwatch. In 2013, when Apple started offering users the ability to connect their iPhones with third-party smartwatches, Apple provided third-party smartwatch developers with access to various APIs related to the Apple Notification Center Service, Calendar, Contacts, and Geolocation. The following year, Apple introduced the Apple Watch and began limiting third-party access to new and improved APIs for smartwatch functionality. For example, Apple prevents third-party smartwatches from accessing APIs

related to more advanced Actionable Notifications, so iPhone users cannot respond to notifications using a third-party smartwatch. Instead, Apple provides third-party smartwatches access to more limited APIs that do not allow users to respond to a message, accept a calendar invite, or take other actions available on Apple Watch.

102. A reliable Bluetooth connection is essential for a smartwatch to connect wirelessly with a smartphone, and thereby function as a companion to the user's smartphone and unlock its full functionality. But Apple prohibits third-party smartwatch developers from maintaining a connection even if a user accidentally turns off Bluetooth in the iPhone's control center. Apple gives its own Apple Watch that functionality, however, because Apple recognizes that users frequently disable Bluetooth on their iPhone without realizing that doing so disconnects their watch. As a result, iPhone users have a worse experience when they try to use a third-party smartwatch with their iPhone. Apple also requires users to turn on "Background App Refresh" and disable the battery-saving "Low Power Mode" in their iPhone settings for third-party smartwatches to remain consistently connected to their companion app, which is necessary to allow a user's iPhone and their smartwatch to update and share data about the weather or exercise tracking, even though Apple does not impose similar requirements for Apple Watch.

NOTES

- 1) Drawing on your knowledge of monopolization law (see Chapter VII), what outcome do you predict for the *Apple* litigation?
- 2) Under what circumstances does—or should—antitrust impose an obligation on a smartphone manufacturer to interoperate with third-party complements like messaging apps and smartwatches?
- 3) What is a "neutral" search-result ranking and how could we know it when we see it? If a search engine designed a search ranking algorithm to simply maximize profits by experimenting with different approaches until profits were maximized, would that be sufficiently neutral? Would it matter if this involves systematically disfavoring rival results?
- 4) Should a search engine be allowed to look for websites where search engine optimization—that is, a deliberate effort to increase ranking—is at work, and apply some kind of "corrective" tool to neutralize the effect of the optimization?

c) Should Congress Ban (Some?) Self-Preferencing or Discrimination?

We have seen that self-preferencing has an uncertain relationship with monopolization law, and that the federal enforcers have not so far succeeded in proving that a digital platform has violated the antitrust laws by engaging in self-preferencing. But competition policy is about more than just antitrust law! So some writers and advocates have argued that, even if antitrust doesn't prohibit (some? all? any?) self-preferencing, Congress should intervene to impose some limits. From 2024 onward, the European Union's Digital Markets Act limits the ability of platforms to engage in self-preferencing; some American commenters favor similar legislation in the United States.¹²⁶

At the time of writing, the leading proposal of this kind is the bill known as the American Innovation and Choice Online Act ("AICOA"). The following extract gives a sense of the bill's intended scope and content. It reflects the version published in May 2022 by the bill's sponsor, Senator Klobuchar of Minnesota.¹²⁷ It is followed by two excerpts from written Congressional testimony regarding the bill: one critical, one supportive.

As you will see, AICOA does more than just limit self-preferencing and discrimination. How would you characterize its substantive provisions? What problems do you think it aims to solve or address?

¹²⁶ See generally Alexandre de Streel, Marc Bourreau, Amelia Fletcher, Jan Kraemer & Giorgio Monti, IMPLEMENTING THE DMA: SUBSTANTIVE AND PROCEDURAL PRINCIPLES, CERRE Issue Paper (January 2024); European Commission, *Digital Markets Act (DMA) Legislation*, https://digital-markets-act.ec.europa.eu/legislation_en (web page with resources); Martin Peitz, THE PROHIBITION OF SELF-PREFERENCING IN THE DMA, CERRE Issue Paper (Nov. 2022).

¹²⁷ Text available here: https://www.klobuchar.senate.gov/public/_cache/files/b/9/b90b9806-cccf-4796-89fb-561e5322531c/B1F51354E81BEFF3EB96956A7A5E1D6A.sil22713.pdf.

[Proposed] American Innovation and Choice Online Act
S.2992, 11th Cong., 2d Sess. (draft of May 2022)

SEC. 2 DEFINITIONS [. .]

(5) COVERED PLATFORM.—The term “covered platform” means an online platform that—

(A) has been designated as a covered platform under [this Act];

(B) is owned or controlled by a person that—

(i) at any point during the 12 months preceding a designation under [this Act] or the 12 months preceding the filing of a complaint for an alleged violation of this Act has at least—

(I) 50,000,000 United States-based monthly active users on the online platform; or

(II) 100,000 United States-based monthly active business users on the online platform;

(ii) during—

(I) the 2 years preceding a designation under [this Act], or the 2 years preceding the filing of a complaint for an alleged violation of this Act—

(aa) at any point, is owned or controlled by a person with United States net annual sales of greater than \$550,000,000,000, adjusted for inflation on the basis of the Consumer Price Index; or

(bb) during any 180-day period during the 2-year period, has an average market capitalization greater than \$550,000,000,000, adjusted for inflation on the basis of the Consumer Price Index; or

(II) the 12 months preceding a designation under [this Act], or at any point during the 12 months preceding the filing of a complaint for an alleged violation of this Act, has at least 1,000,000,000 worldwide monthly active users on the online platform; and

(iii) is a critical trading partner for the sale or provision of any product or service offered on or directly related to the online platform.

(6) CRITICAL TRADING PARTNER.—The term “critical trading partner” means a person that has the ability to restrict or materially impede the access of—

(A) a business user to the users or customers of the business user; or

(B) a business user to a tool or service that the business user needs to effectively serve the users or customers of the business user.

[. .]

SEC. 3. UNLAWFUL CONDUCT.

(a) IN GENERAL.—It shall be unlawful for a person operating a covered platform in or affecting commerce to—

(1) preference the products, services, or lines of business of the covered platform operator over those of another business user on the covered platform in a manner that would materially harm competition;

(2) limit the ability of the products, services, or lines of business of another business user to compete on the covered platform relative to the products, services, or lines of business of the covered platform operator in a manner that would materially harm competition;

- (3) discriminate in the application or enforcement of the terms of service of the covered platform among similarly situated business users in a manner that would materially harm competition;
- (4) materially restrict, impede, or unreasonably delay the capacity of a business user to access or interoperate with the same platform, operating system, or hardware or software features that are available to the products, services, or lines of business of the covered platform operator that compete or would compete with products or services offered by business users on the covered platform, except where such access would lead to a significant cybersecurity risk;
- (5) condition access to the covered platform or preferred status or placement on the covered platform on the purchase or use of other products or services offered by the covered platform operator that are not part of or intrinsic to the covered platform;
- (6) use nonpublic data that are obtained from or generated on the covered platform by the activities of a business user or by the interaction of a covered platform user with the products or services of a business user to offer, or support the offering of, the products or services of the covered platform operator that compete or would compete with products or services offered by business users on the covered platform;
- (7) materially restrict or impede a business user from accessing data generated on the covered platform by the activities of the business user, or through an interaction of a covered platform user with the products or services of the business user, such as by establishing contractual or technical restrictions that prevent the portability by the business user to other systems or applications of the data of the business user;
- (8) materially restrict or impede covered platform users from uninstalling software applications that have been preinstalled on the covered platform or changing default settings that direct or steer covered platform users to products or services offered by the covered platform operator, unless necessary—
 - (A) for the security or functioning of the covered platform; or
 - (B) to prevent data from the covered platform operator or another business user from being transferred to the Government of the People’s Republic of China or the government of a foreign adversary;
- (9) in connection with any covered platform user interface, including search or ranking functionality offered by the covered platform, treat the products, services, or lines of business of the covered platform operator more favorably relative to those of another business user and in a manner that is inconsistent with the neutral, fair, and non-discriminatory treatment of all business users; or
- (10) retaliate against any business user or covered platform user that raises good-faith concerns with any law enforcement authority about actual or potential violations of State or Federal law on the covered platform or by the covered platform operator.

(b) **AFFIRMATIVE DEFENSES.**—

- (1) **IN GENERAL.**—It shall be an affirmative defense to an action under subsection (a) if the defendant establishes that the conduct was reasonably tailored and reasonably necessary, such that the conduct could not be achieved through materially less discriminatory means, to—
 - (A) prevent a violation of, or comply with, Federal or State law;
 - (B) protect safety, user privacy, the security of nonpublic data, or the security of the covered platform; or
 - (C) maintain or substantially enhance the core functionality of the covered platform.
- (2) **ADDITIONAL AFFIRMATIVE DEFENSES.**—It shall be an affirmative defense to an action under paragraph (4), (5), (6), (7), (8), (9), or (10) of subsection (a) if the defendant establishes that the conduct has not resulted in and would not result in material harm to competition.

[. . .]

(8) RULES OF CONSTRUCTION.—

(A) IN GENERAL.—Nothing in subsection (a) may be construed—

(i) to require a covered platform operator to divulge or license any intellectual property, including any trade secrets, business secrets, or other confidential proprietary business processes, owned by or licensed to the covered platform operator;

(ii) to prevent a covered platform operator from asserting its preexisting rights under intellectual property law to prevent the unauthorized use of any intellectual property owned by or duly licensed to the covered platform operator;

(iii) to require a covered platform operator to interoperate or share data with persons or business users that are on any list maintained by the Federal Government by which entities—

(I) are identified as limited or prohibited from engaging in economic transactions as part of United States sanctions or export-control regimes; or

(II) have been identified as national security, intelligence, or law enforcement risks;

(iv) to prohibit a covered platform operator from promptly requesting and obtaining the consent of a covered platform user prior to providing access to the nonpublic, personally identifiable information of the user to a covered platform user under that subsection;

(v) in a manner that would likely result in data on the covered platform or data from another business user being transferred to the Government of the People's Republic of China or the government of a foreign adversary; or

(vi) to impose liability on a covered platform operator solely for offering—

(I) full end-to-end encrypted messaging or full end-to-end encrypted communication products or services;

(II) a fee-for-service subscription that provides benefits to covered platform users on the covered platform. [. . .]

SEC. 4. ENFORCEMENT GUIDELINES.

(a) IN GENERAL.—Not later than 270 days after the date of enactment of this Act, the Commission and the Department of Justice, in consultation with other relevant Federal agencies and State attorneys general, shall jointly issue agency enforcement guidelines outlining policies and practices relating to conduct that may materially harm competition under section 3(a), [and] agency interpretations of the affirmative defenses under section 3(b) . . . with the goal of promoting transparency, deterring violations, fostering innovation and procompetitive conduct, and imposing sanctions proportionate to the gravity of individual violations.

**Daniel Francis, Testimony before the U.S. Senate Committee on the Judiciary,
Subcommittee on Competition Policy, Antitrust, and Consumer Rights**

March 7, 2023

The strongest case for AICOA, as I understand it, depends on two related claims. The first claim is that *platform self-preferencing is generally bad for consumers*. The second claim is that *a ban on self-preferencing would be better for consumers than the status quo*. I do not recommend enacting AICOA because I believe each of those claims is wrong. And I expect that enacting AICOA would harm consumers overall, not help them.

I believe that the first claim is wrong because “self-preferencing” includes a vast array of product improvements, feature innovations, and other practices (including those supporting new entry) that American consumers value enormously. Platform self-preferencing includes many familiar and beneficial practices, including for example: the integration of Google Maps information into Google Search results; the preinstallation of Apple apps on iOS devices; the preinstallation of Microsoft software on Windows computers; the special promotion on the Amazon and Apple+ platforms of their own in-house content; and the closer integration of in-house virtual assistants with platforms or in-house apps with virtual assistants.

These and similar practices are good for consumers, even if the platform in question has market or monopoly power. Sometimes these practices will help to improve the interoperation of two existing products, services, or businesses; sometimes they will involve giving consumers additional benefits; sometimes they will play an important role in incentivizing and supporting entry by platform businesses into new markets. (For example, Apple’s incentive to invest in creating and supporting Apple+ content, or Amazon’s incentive to invest in creating and supporting Amazon Studios content, was clearly augmented by the opportunities for promotion on their respective platforms.) Indeed, any practice by an integrated business that makes products and services work better together is “self-preferencing” unless the business also makes the same improvement available to every other third-party business. It is routine throughout our economy, and I do not think Congress should legislate from the premise that it is a presumptive problem, either in general or in digital markets.

And I believe that the second claim is wrong because a ban on self-preferencing would actively harm consumers, in addition to whatever good it might do. I predict at least five separate kinds of harm. First, I expect that the ban would deter improvements and other practices that consumers value, including the practices described above. By telling platforms that they may not implement a product improvement unless they are able and willing to extend it to a limitless class of third parties seeking equal treatment, AICOA would lead to fewer new improvements, withdrawal of existing ones, and resulting consumer harm.

Second, I expect that the ban would deter platforms from protecting consumers, businesses, platforms, and even national security, in close or borderline cases. Under AICOA, denying third-party demands for equal treatment (preinstallation, high search ranking, access to consumer data, etc.) threatens complaints, investigations, litigations, penalties, injunctions, and the personal forfeiture of compensation. At the very least this means significant costs, delays, and uncertainty. Platforms will therefore face an incentive to give in to third-party demands, and grant third parties access on equal terms, even in cases where there are genuine grounds for concern, if the platform fears that it may not ultimately be able to prove those grounds, or where the burdens and costs of trying to do so may be significant. . . . As a result, more bad actors will get access to platforms, consumers, and data. At a time when there is no shortage of hostile and malicious actors in the world seeking to harm the United States and its citizens, it is an odd time to encourage our most important platforms to lower their guard.

Third, I expect that the ban would threaten the provision of ad-supported business models, many of which involve providing free or low-cost services to millions of Americans through a business model that promotes a platform’s own advertising channel. Prohibiting platforms from apps and functions that support those ad services . . . strikes at the heart of the underlying business model that makes such free service possible. And if the result is to drive digital businesses to migrate from free-to-use, ad-supported business models to fee-based models, I fear that millions of Americans will pay more, and get less, than they do today. Free access to digital services is a critical tool for giving American families access to knowledge and opportunity. I think it would be unwise to make that model a losing proposition for our most critical digital businesses.

Fourth, on the most natural reading, I expect that the bill would be read to prohibit or deter “closed systems” in which a business opts to run its system, in whole or part, without third-party participation. Closed systems, or parts of systems, are common in the digital economy. For example, Apple does not allow third-party device manufacturers to participate in its iOS system, and Amazon does not allow third-party music streaming platforms to participate in its Amazon Prime ecosystem. (Outside the world of the covered platforms, it is also common: for example Disney does not generally allow third party content creators to participate in its Disney+ platform, and so on.) Closed systems are overwhelmingly associated with a more secure and more seamless experience for users. Banning that business model seems unwise and harmful.

Fifth, I expect that AICOA would perversely suppress interplatform competition—that is, competition against covered platforms in the market in which the “main” platform itself competes—in an effort to support competition on covered platforms. Trading partners that are given special benefits on a covered platform have less incentive to create, invest in, or sponsor, competitors of the platform. Instead, they become comfortable stakeholders in the status quo. I appreciate that some might conclude that the current generation of covered platforms will never be displaced, and are therefore happy to make that trade. I do not share that confidence. I think entrenching and perpetuating existing incumbency, and hoping to manage the results, is a mistake.

To be sure, there will be some benefits. AICOA would have some effect in favoring third parties over incumbent platforms in “secondary” markets where platforms also compete, and some third parties will do better as a result. Consumers may or may not benefit from that effect. But I fear that this uncertain benefit would come at much too high a cost. Moreover, to the extent that Congress’s concern is really with intentional, targeted, and unjustified discrimination by dominant platforms against actual or potential rivals (e.g., an effort to deny rivals access to complementary markets as a means of protecting the platform monopoly), a narrow rule could address that concern with much less collateral harm.

The “harm to competition” test in the current draft of AICOA does not much reduce my concerns. For one thing, it is not clear whether it contemplates a “consumer welfare” test drawn from traditional antitrust, or an “injury to rivals” test reflecting AICOA’s separate nature and purpose. It cannot be both. This point is too important to leave intentionally unresolved. [. . .]

Nor do the affirmative defenses allay my concerns. Some important policy justifications are omitted entirely. For example: AICOA does not allow platforms to deny equal treatment to third parties, or their products and services, because they: are buggy or badly interoperable with the platform; are of low quality; contain objectionable content (e.g., sexually explicit content, promotion of terrorism or violence); contain false or inaccurate information; promote spam; constitute or facilitate fraud; are subject to control or influence by, or are vulnerable to, a hostile or malicious entity; or because integration would present unusual technological or other commercial difficulties, or costs.

Remarkably, even product improvements are allowed only if they relate to “core” functions (an undefined term!) and, further, only if the platform can show that it “could not” achieve the improvement in a less discriminatory way. A platform does not seem to have the option of saying: “OK, it would be technically possible, but no rational platform would go to the trouble and expense of sharing this improvement with all third parties. We would rather not implement it at all than take on that burden, which would wipe out the profit case for doing it in the first place. The whole point of our investment was to make our product more valuable, not to subsidize competitors.”

Finally: the difficulties and burdens of proving up a fact-heavy defense, with an array of burdens and penalties hanging overhead, will seriously erode the utility of the defense in practice.

To be sure: anticompetitive practices and transactions present a serious threat in digital markets, just as they do in other markets that matter to American consumers and workers. But to deter digital platforms, from engaging—not in improper collusion, anticompetitive acquisitions, and so on, but product improvements, feature innovations, and entry—has it entirely backwards. This kind of thing is exactly what we are spending millions of antitrust enforcement dollars with our left hand in an effort to get platforms to do: compete on the merits by providing valuable combinations of high-quality products and services to consumers for low prices. We should not bash them for it with our right hand when they do so.

Three final general comments. First, the scope of AICOA is exceedingly puzzling. There are serious and profound differences between the business models of the covered platforms, and each covered platform is active in a wide variety of markets. Competitive conditions, and competitive concerns, differ widely across those countless markets. I cannot discern any neutral rationale for including these businesses with respect to all their business lines and excluding other businesses, including other large monopolists, in a single regulatory measure like this one. This approach may give rise to the appearance that these businesses are being singled out not because of any distinctive competition-policy problem (there is plenty of monopoly power, network effects, data, and vertical integration throughout the rest of the economy) but because of political unpopularity. . . .

Second, antitrust enforcement experience teaches us to be exceptionally wary of vague behavioral tools like non-discrimination obligations. They are often, and notoriously, a nightmare to design, to interpret, and to enforce. I do not think anyone should feel enthusiastic about the prospect of agency staff, or a court, trying to figure out whether someone's app isn't prominent enough in the app store, whether an algorithm is producing a search ranking that is "too low," or whether a delay in integration is lasting "too long." [. . .]

Third, it may be worth remembering that the rest of the world is closely watching the United States very closely in matters of digital competition policy. Obligations like non-discrimination, forced access to platforms and consumer data, and so on may well inspire other jurisdictions to enact similar, or more intrusive, versions of the same programs. There is no guarantee that such measures will contain robust protections for consumer privacy, intellectual property, or the integrity of commercial data. Congress may have some pause about giving political cover for such legislation elsewhere.

**Fiona Scott Morton, Testimony before the U.S. Senate Committee on the
Judiciary, Subcommittee on Competition Policy, Antitrust, and Consumer
Rights**

March 7, 2023

The modern interpretation and application of U.S. antitrust laws has failed to preserve competition in today's digital platform markets. While there are numerous problems with judicial interpretations of antitrust laws that deserve legislative attention, there are also unique problems involving digital platforms that would require special attention even if judicial decisions in recent decades had not been so cramped. Digital platform markets suffer from a lack of new entry and expansion for a variety of reasons. Economies of scale and scope and network effects make it difficult for new entrants to reach the scale necessary to compete. Large digital platforms are also in a unique position to combine their unprecedented access to user data with sophisticated algorithms in order to exploit consumers and exclude competitors. Barriers to entry can be especially high when platforms take advantage of the behavioral biases of consumers, or when platforms modify APIs or degrade interoperability in other ways in order to handicap rivals. These techniques often favor the status quo, or can be taken advantage of by the platform to make it difficult for entrants with superior offers to attract new consumers and achieve scale. Incumbent digital platforms are able to exploit structural characteristics of their markets, consumer behavior, and lax antitrust enforcement to acquire, maintain, and expand their market power.

More aggressive antitrust enforcement focused on digital market abuses should have started up a decade ago, but lack of understanding of the new technologies, lack of experience in matching the resulting strategies to established jurisprudence, as well as an increasingly hostile litigation environment, discouraged action. The antitrust enforcement agencies, state attorneys general, and private litigants are now working valiantly to dislodge the monopolies that have taken root in digital platform markets. But the success of their efforts is uncertain. Under modern antitrust jurisprudence, it may be difficult for the government to prevail. Even if the cases are successful, the litigation may take years to resolve, at which point it will be difficult for the courts to fashion remedies that are effective in restoring the lost competition. Consider that the Department of Justice's case against Google alleging anticompetitive behavior in general search, which was filed in October 2020, is not scheduled to go to trial until September of 2023. The government's cases generally will be tried to judges rather than juries, and so there will be additional time after trial briefing and for the judge to write an opinion, after which (we hope) there will be proceedings on remedies. And after all that, there will be appeals and possible remand of issues back to the district court. Even in the most optimistic of scenarios, the harmed consumers are unlikely to experience competition in these platform markets for many years after investigations are opened and complaints filed.

In addition, there is the vexing problem of how to restore competition in the face of entrenched market power and many years of technological change deployed by the platform for its own benefit. In the absence of prompt and effective remedies that create competition in platform markets, a good alternative is a set of rules that stimulates competition on a dominant platform. For example, until there is entry of additional mobile operating systems that offer developers choice, neither of the two vertically integrated app stores available to US consumers has much reason to compete for developers on price or quality. However, when regulation requires that rival app stores have

equal access to the mobile OS platform, then a developer can choose to distribute its app through a rival store with a more favorable curation policy, installed base, or fee level. Competition on the platform will benefit developers, and through lower prices and more innovation, will benefit end consumers as well.

I understand that this hearing will focus on two bills this committee advanced in the prior Congress: the American Innovation and Choice Online Act (AICOA), and the Open App Markets Act (OAMA) *{Eds.: OAMA is discussed later in this chapter}*. Both bills made it out of committee last year and so I will not provide a detailed analysis of their provisions. But, taking them as a whole, I am convinced the two bills give enforcers many of the tools they need to effectively and promptly increase competition to digital markets. These bills control the damaging behavior of dominant digital platforms by opening up markets and allowing for entry and innovation. The American Innovation and Choice Online Act forbids harmful self-preferencing, anti-competitive contractual limitations, abuse of data, impeding interoperability, and unfair discrimination in search and rankings. By limiting that conduct, the law can be expected to create opportunities for entry and expansion, new innovations and lower prices for consumers. Similarly, by allowing competition for app store payment and curation options, the Open App Markets Act will open the door for app store competition and innovation.

I have read a number of opinion pieces expressing concern about the significance of the behavioral changes these bills mandate. Many of the critiques seem to presume that laws that require significant changes are bound to generate a set of equally significant negative consequences, both predicted and unforeseen. I believe this is an over-reaction. The bills are carefully crafted to target a narrow range of activity while at the same time containing significant protections for platforms. Any new enforcement will occur within existing conceptual and legal frameworks which militate against extreme outcomes.

For example, AICOA is at heart a competition policy bill; it aims to restore competition to digital markets that are concentrated or monopolized. The bill is fit to its purpose, and makes actionable only those violations that *injure competition*. For some prohibitions enforcers must prove harm to competition, and for others the platforms can defend by showing their conduct *has not* harmed competition. Companies that will be subject to the prohibitions are large and sophisticated. They understand what sorts of behaviors might injure competition and which sorts would not. They therefore will make the investments necessary to avoid actions that could harm competition (this is what we want platforms to do) but are unlikely to eliminate popular products or features simply due to the risk of misinterpretation of the law.

Another concern commonly voiced is that some prohibitions will expose user data to hacking or force platforms to change their architecture in ways that make them more vulnerable to hostile foreign interests. AICOA has a built-in safeguard against this sort of risk in the form of an affirmative defense: conduct that violates one of the prohibitions nonetheless cannot support liability if it was reasonably necessary to protect user privacy, data or platform security, or, importantly, user safety.

I am not a lawyer. However, I have worked with lawyers to develop cases and then advised them as the cases proceed, most notably when I served as chief economist in the Antitrust Division. I have also served as a testifying witness, including in matters where plaintiffs have shown harm to competition and those where defendants have demonstrated affirmative defenses. These experiences bolster my confidence that the harm to competition requirements will screen out actions that are not likely to benefit competition or consumers. The deference generally given to affirmative defenses in our current system indicates that the law is very unlikely to penalize reasonable actions platforms take to protect themselves and their users. By achieving this balance, AICOA ensures that platforms as well as businesses dependent on platforms have a full opportunity to flourish and meet consumers' needs.

Another concern is that the language of the prohibition is new, or varies slightly from language used to describe similar concepts in other laws. This is a feature, not a bug. The whole idea is to set up new rules for platforms that will generate more competition. If there was nothing new in the law, it would not be doing its job. Novelty will generate some uncertainty, but this is inevitable if the goal is change. Moreover, the bill has provisions that directly address this concern as well. AICOA requires that the Department of Justice and the FTC work together to generate, develop, and issue joint enforcement guidance. Because the process for developing the guidance will include an opportunity for public comment, firms with concerns about the clarity of particular provisions can help

bring about the needed clarity by explaining the ambiguities and suggesting solutions. Moreover, each agency will bring to the process its own experience, perspective, and expertise. Importantly, by requiring that the DOJ and FTC jointly develop enforcement guidance, any legitimate concerns about how the balancing of factors called for in this legislation will reflect the statutory goals will be worked out by officials who already have the duty to protect security, privacy, and consumers alongside their antitrust enforcement roles.

I am one of many academics, advocates, and policy makers who contend that a specialist regulator, instructed by Congress to issue guidelines that implement specific goals, would be a more effective and lower cost solution to regulating digital platforms. Such a regulator could respond more quickly than courts and be more nimble in responding to new technologies. Such a regulator could employ or consult with technological specialists and take into account issues such as national security, safety, and privacy, as well as competition. Senators Bennet and Welch have proposed legislation that would create such an agency. Their proposal is an excellent starting point and should be seriously considered. I expect it will take many years until we have a digital regulator, just as it took much human suffering before Congress chose to create regulators for industries like pharmaceuticals and railroads. Until we have such a regulator, the laws being proposed today are the best route to immediate improvements in the welfare of consumers. [. . .]

The pair of bills we are discussing today come at a time when the rest of the world is already moving ahead on reforming competition law in digital markets. The European Union has already passed the Digital Markets Act regulating the conduct of digital gatekeepers. The British Parliament has also announced its intention to create a Digital Markets Unit, housed within the British competition authority, which will be endowed with broad powers to regulate digital markets.

[Under the DMA,] the largest tech platforms are already obligated to adjust their business practices across Europe—with compliance required by January 2024—to meet many of the requirements proposed in the legislation under discussion today. [. . .]

. . . [T]he DMA prohibits many of the anticompetitive practices addressed in the US bills we are discussing today (perhaps because they are trying to fix the same problems). The DMA is more detailed than the text of AICOA and OAMA, and does not include any efficiency defense. Note particularly, that DMA does not require that the regulator show that each instance of prohibited conduct harms competition. Instead, the rules were chosen to be those that, in the view of the European Parliament, would generally protect and increase competition.

NOTES

- 1) Could self-preferencing be an appropriate target for enforcement of Section 5 of the FTC Act?¹²⁸ Write a short policy statement on behalf of the FTC, explaining which cases of self-preferencing should be investigated and challenged under that provision.
- 2) Is self-preferencing better or worse for competition or society than paid promotion of third-party products in search results? Is it better or worse for competition or society than search engine optimization services?
- 3) How would you analyze the alleged conduct in the *Apple* complaint under Section 2? What if it were accompanied by, say, anticompetitive tying or exclusive agreements: would that change your analysis of those practices?
- 4) Suppose that self-preferencing in internet search has been banned: by enacting AICOA or a similar statute. Who would complain about violations, and how should a court or agency go about investigating and adjudicating those complaints?
- 5) What is the most plausible case for creating a duty to carry search results, or to treat search results in a non-discriminatory fashion? What is the most plausible case on the other side of the debate?
- 6) What do you make of AICOA's scope: that is, the rules about what businesses are covered?
- 7) What practices do you think AICOA would limit or ban that would not be antitrust violations? List as many as you can.
- 8) Read AICOA's affirmative defenses carefully. How, if at all, would you amend them?

¹²⁸ See *supra* § XI.B.2.a).

- 9) To what extent (if at all) would concerns about self-preferencing recede if a search engine posted a notice at the top of the screen saying: “Search results and rankings may reflect a variety of factors, including our business and profit objectives and our agreements with preferred partners.” Would that matter?
- 10) Where, concretely, do the two testifying witnesses disagree about AICOA? Could we figure out who is right?
- 11) How if at all does the prospect of platform regulation in other jurisdictions affect the case for AICOA?

2. E-Commerce: Algorithms and Personalized Pricing

One of the most prominent and visible features of the digital revolution is the growth of online retail businesses of all kinds. This includes massive integrated retailers like Amazon; auction sites like eBay; craft-focused platforms like Etsy; marketplaces for individual sellers like Craigslist and Facebook Marketplace; and of course online storefronts for countless individual retailers and manufacturers. The U.S. Census Bureau reports that in 2023, e-commerce sales accounted for 15.4% of total U.S. retail sales.¹²⁹

The growth of e-commerce has created plenty of puzzles for antitrust and competition policy. For one thing, many of these businesses are multisided platforms: that is, they deal with at least some “third party” merchants as well as consumers. Some also supply their own “first party” goods and services. E-commerce therefore implicates all the usual questions of policy and doctrine that we associate with two-sided platform markets. For example: should antitrust permit the weighing of harms to one group against benefits to others?¹³⁰ When, if at all, is a single “transaction market” definition, *à la AmEx*, appropriate in this setting?¹³¹

For a second thing, some argue that some e-commerce businesses appear to have a level of market or monopoly power.¹³² This raises some sharp market-definition questions. Do online businesses ever compete with brick-and-mortar ones? (When, if ever, do you comparison-shop between a brick-and-mortar store and an e-commerce site?) More generally, in what market should online retailers’ power be assessed? Is there an antitrust market for “general online retail” or are the relevant markets product-specific?¹³³ After all, we don’t generally define an “all retail” market in the brick-and-mortar context: but is there some reason to do so in the e-commerce space? Could this be justified as a “bundle market” like office superstores or supermarkets? Does the ease of moving from one website to another reduce the need to “one-stop-shop”?

For a third thing, e-commerce also often implicates the self-preferencing debate described above. Some e-commerce websites, like Amazon.com and Walmart.com, offer one or more lines of “own brand” products (like Amazon’s “Amazon Basics” line or Walmart’s “George” line) in addition to those of third-party merchants. When such websites feature those products prominently in search results, or promote them in other ways, they may attract allegations of self-preferencing.¹³⁴ Some support restrictions or prohibitions on self-preferencing in e-commerce, such as the AICOA legislation described above.¹³⁵ Others argue that they should be completely

¹²⁹ See U.S. Census Bureau, Press Release, *Quarterly Retail E-Commerce Sales* (Feb. 20, 2024), <https://www.census.gov/retail/ecommerce.html>.

¹³⁰ See *supra* §§ IV.C.2. (discussing complexities in the formulation and application of the rule of reason, including the admissibility of “out of market” benefits), VIII.D.1. (discussing the role of “out of market” efficiencies in merger analysis).

¹³¹ See *supra* § III.C.4. (market definition issues in the context of two-sided platforms).

¹³² See, e.g., Lina M. Khan, *Amazon’s Antitrust Paradox*, 126 Yale L.J. 710 (2017).

¹³³ Compare, e.g., Complaint, *FTC v. Amazon.com, Inc.*, Case No. 2:23-cv-01495 (W.D. Wash., filed Sept. 26, 2023) § V.A. (alleging among other things that “Amazon has durable monopoly power in the online superstore market” and that “[d]ocuments and data, both from Amazon and industry analysts, confirm that Amazon’s share of the overall value of goods sold by online superstores is well above 60%—and rising”) with Robert Armstrong & Ethan Wu, *What Big Tech Antitrust Gets Wrong: An Interview with Herbert Hovenkamp*, FINANCIAL TIMES (Jan. 19, 2024) (“One of the problems you’ve got with Amazon is that it is very, very big. However, it sells [12 million] products and does not have market-dominating shares in very many of those products. . . . [W]ith Amazon, you have to look product by product. And that means . . . you’re going to get very different outcomes depending on which product you’re looking at.”).

¹³⁴ See *supra* § XIV.C.1.b) (excerpt from FTC’s monopolization complaint against Amazon, alleging that self-preferencing serves as evidence of monopoly power); Chiara Farronato, Andrey Fradkin & Alexander MacKay, *Self-Preferencing at Amazon: Evidence from Search Rankings*, NBER Working Paper 30,894 (Jan. 2023).

¹³⁵ See *supra* § XIV.C.1.c). See also, e.g., Bill Baer, *Why Amazon is wrong about the American Innovation and Online Choice Act*, BROOKINGS COMMENTARY (June 14, 2022).

prohibited from selling on their own platforms.¹³⁶ Others take a different view, arguing that society would be harmed, not benefited, if big e-retailers were prohibited from making desirable products available on their website and then specially promoting them, as other retailers do across the economy.¹³⁷

But the main focus of our discussion of e-commerce in this Section will be a different topic: the use of algorithms, driven by data, to set and alter prices. An algorithm for this purpose is just a set of instructions or steps that a computer can follow to determine a price.¹³⁸ It often involves the use of data inputs collected from other sources, although it need not do so. For example, simple algorithms could be created to do any of the following:

- **Incremental experiments.** On day 1, charge a price of \$1.00, and on day 2, charge a price of \$1.10. On each subsequent day, choose a price according to the following rule: if the previous day's change increased profits, then make the same change again today (*e.g.*, if yesterday's price was a 10-cent increase and it increased profits, increase prices by a further 10 cents today); if the previous day's change did not increase profits, then make the reverse change today (*e.g.*, if yesterday's price was a 10-cent increase and it did not increase profits, decrease prices by 10 cents today).
- **Follow the crowd.** Each day, search the internet for any other supplier selling the same product or service, and charge the highest / lowest / average price detected.
- **Constant profit margin.** Using a feed of live data about product costs, charge whatever price maintains an X% profit margin.
- **Mirror high prices, punish discounting.** Each day, search for the price that competitors A, B, and C are charging. If those competitors are all charging a price above \$X, then charge the average of their prices. If any of those competitors charge a price below \$X, then immediately reduce price to cost, and keep price there for three days. After that time, resume the original behavior.

You get the idea. The point is that an “algorithm” can be designed to execute virtually any set of instructions that can be described. More sophisticated algorithms might experiment with different instructions and strategies, prefer those that turn out to maximize profits, and refine them to improve profitability. Advances in machine learning are pushing back the frontiers of automated decision-making all the time, and this seems likely to continue for the foreseeable future.¹³⁹

Algorithmic pricing online has been a blazing hot topic of tech antitrust for some years. It is certainly happening out in the world: many businesses do rely on partly or fully automated mechanisms to set their prices: including not just their online prices but their brick-and-mortar prices too.¹⁴⁰ Those mechanisms may draw on a vast amount of data, including data about customer and competitor behavior, to do so. Like any other form of automation, algorithmic pricing can result in the saving of human time and energy: particularly when businesses sell many products. And it may reflect a faster and more accurate version of what a human sales employee would be trying to do anyway. Among other things, note that any of the algorithmic instructions above could simply be given to a human employee as a direction for setting prices! Nevertheless, the use of algorithms to set prices has prompted sustained criticism and concern from scholars, policy advocates, and market participants. Some of the most prominent worries can be sorted into two groups: concerns about collusion and concerns about personalized pricing.

¹³⁶ See, *e.g.*, Lina M. Khan, *The Separation of Platforms and Commerce*, 119 Colum. L. Rev. 973 (2019) (proposing renewed attention to line of business restrictions); OECD, *Lines of Business Restrictions—Background Note*, DAF/COMP/WP2(2020)1 (summarizing debates). See also Elizabeth Warren, *What's Next for Big Tech* (remarks of Feb. 27, 2024) (“To restore competition in existing digital markets and to foster emerging markets like AI, Amazon’s e-commerce platform should be separated from its product lines.”).

¹³⁷ See, *e.g.*, *supra* note 111 (citing examples).

¹³⁸ See generally, *e.g.*, Kristian Lumarchivie & Rumman Chowdhury, *What is an “algorithm”? It depends whom you ask*, MIT Tech. Rev. Opinion (Feb. 26, 2021); see also *Algorithm* in MERRIAM-WEBSTER DICTIONARY (2024) (“a step-by-step procedure for solving a problem or accomplishing some end”).

¹³⁹ See generally, *e.g.*, Daniel A. Crane, *Antitrust After the Coming Wave*, 99 N.Y.U. L. Rev. (forthcoming 2024).

¹⁴⁰ See, *e.g.*, Stephanie Assad, Robert Clark, Daniel Ershov & Lei Xu, *Algorithmic Pricing and Competition: Empirical Evidence from the German Retail Gasoline Market*, 132 J. Pol. Econ. 723 (2024); Heather Vogell, Haru Coryne & Ryan Little, *Rent Going Up? One Company’s Algorithm Could Be Why*, PROPUBLICA (Oct. 15, 2022); Le Chen, Alan Mislove & Christo Wilson, *An Empirical Analysis of Algorithmic Pricing on Amazon Marketplace*, in WWW ‘16: PROCEEDINGS OF THE 25TH INTERNATIONAL CONFERENCE ON WORLD WIDE WEB, 1339–49 (2016); Olivia Solon, *How a Book About Flies Came to be Priced \$24 Million on Amazon*, WIRED (Apr. 27, 2011).

a) Algorithmic Coordination

Concerns about “algorithmic coordination” or “algorithmic collusion” have been bubbling for a long time and are now the subject of a vast literature.¹⁴¹ We have already seen that antitrust generally does not prohibit “tacit collusion”: that is, interdependent pricing that does not involve an agreement. For example, in a concentrated and transparent market it may be possible for competitors to monitor one another’s prices and sustain an equilibrium of supracompetitive pricing, even without seeking and receiving acquiescence in a manner traditionally associated with antitrust’s “agreement” criterion.¹⁴² This is the kind of thing that we might see, for example, when two service stations in an isolated area successfully maintain prices significantly in excess of cost, because each recognizes that if it discounts its price, the other will follow suit, and each will end up worse off as a result of a price war. This kind of thing is not normally an antitrust violation: in the classic case there is no agreement, so Section 1 does not apply, and theories of concern under other provisions (like Section 5 of the FTC Act) have foundered on a persistent puzzle: what kind of rule could be imposed to force competitors *not* to take notice of what their rivals are doing?¹⁴³

The development of automated, data-driven pricing has sharpened policy concerns about this practice. If businesses are better able to monitor the behavior of their rivals, and better able to respond by swiftly and accurately following price increases or by punishing price reductions, the result may well be that tacit collusion becomes more widespread and more durable. Moreover, algorithms might themselves “learn” by experimentation to behave in ways that we might associate with tacit collusion: namely, monitoring rivals, mirroring price increases, and punishing price decreases.¹⁴⁴

This in turn raises a question for antitrust law and competition policy: does the advent of algorithmic technology change anything? Does the presence of superior decision-making technology affect either the analysis under existing antitrust law—including restraint-of-trade law under Section 1 of the Sherman Act or unfair-methods-of-competition law under Section 5 of the FTC Act—or the policy case for regulatory intervention? Should we care whether participants in tacit collusion are using an algorithm to monitor and react, rather than doing it manually? And, if we think that tacit collusion is likely to become increasingly feasible and robust, might that change our instincts about the right regulatory response to it?

Recall that antitrust’s definition of “agreement” is complex and elusive. The Supreme Court has emphasized the definitional role of tests like whether the parties have a “conscious commitment to a common scheme” and whether acquiescence has been sought and received.¹⁴⁵ And in searching for agreements in practice, courts have emphasized the importance of a varied list of “plus factors,” including the existence of a common motive to conspire, conduct that would be irrational absent a common understanding, extensive communications, and so on.¹⁴⁶

These tests are, at least, not easier to apply in the presence of algorithmic pricing. To illustrate, let’s take some hypotheticals. Assume that Business A is a leading competitor in a highly concentrated market, and Businesses B and C are its only significant rivals. Is there an agreement between Businesses A, B, and C in the following cases?

¹⁴¹ See, e.g., Emilio Calvano, Giacomo Calzolari, Vincenzo Denicolò & Sergio Pastorello, *Artificial Intelligence, Algorithmic Pricing, and Collusion*, 110 Am. Econ. Rev. 3267 (2020); Jeanine Miklós-Thal & Catherine Tucker, *Collusion by Algorithm: Does Better Demand Prediction Facilitate Coordination Between Sellers?* 65 Mgmt. Sci. (2019); Ulrich Schwalbe, *Algorithms, Machine Learning, and Collusion*, 14 J. Comp. L. & Econ. 568 (2018); Ai Deng, *What Do We Know About Algorithmic Tacit Collusion*, 33 Antitrust 88 (2018); Ariel Ezrachi & Maurice E. Stucke, *Artificial Intelligence & Collusion: When Computers Inhibit Competition*, U. Ill. L. Rev. 1775 (2017); Michal S. Gal, *Algorithmic-Facilitated Coordination: Market and Legal Solutions*, CPI Antitrust Chronicle (May 2017); Salil Mehra, *Antitrust and the Robo-Seller: Competition in the Time of Algorithms*, 100 Minn. L. Rev. 1323 (2016).

¹⁴² See *supra* § II.I. (economics of tacit collusion); see also *supra* § IV.B.2 (defining and proving agreement).

¹⁴³ As Scott Hemphill has put it: “If the court tells the sellers to knock it off, what are they supposed to do instead?” See Richard A. Posner, *Review of Kaplow, “Competition Policy and Price Fixing,”* 79 Antitrust L.J. 761, 767 (2014).

¹⁴⁴ Emilio Calvano, Giacomo Calzolari, Vincenzo Denicolò & Sergio Pastorello, *Artificial Intelligence, Algorithmic Pricing, and Collusion*, 110 Am. Econ. Rev. 3267, 3268 (2020) (“[Our] results indicate that . . . relatively simple pricing algorithms systematically learn to play collusive strategies.”).

¹⁴⁵ See *supra* § IV.B.2.

¹⁴⁶ See *supra* § IV.B.2; see also Christopher R. Leslie, *The Probative Synergy of Plus Factors in Price-Fixing Litigation*, 115 Nw. U. L. Rev. 1581 (2021); William E. Kovacic, Robert C. Marshall, Leslie M. Marx & Halbert L. White, *Plus Factors and Agreement in Antitrust Law*, 110 Mich. L. Rev. 393 (2011).

1. Business A instructs an algorithm to track the prices of Businesses B and C, and to set a price that is the average of their prices.
2. Business A instructs an algorithm to increase price by one cent at 9:00am every morning, to check to see whether B or C matches that price increase, and to keep the increase if they both do so before 10:00am, and to reverse the price increase if they do not.
3. Business A instructs an algorithm to increase price by 10% at 9:00am every morning, to check to see whether B or C matches that price increase, and to keep the increase if they both do so before 10:00am, and to reverse the price increase if they do not.
4. An executive at Business A calls her counterparts at Businesses B and C and proposes that they each commit to use the algorithm described in point number 3 above. This, she says to her counterparts, will ensure that each business is setting price unilaterally, while also helping to protect profits.
5. An executive at Business A instructs an algorithm as described in point number 3 above, and announces that fact publicly. She hopes that Businesses B and C will notice and do the same thing, but she does not express that hope publicly.
6. Business D advertises “price consultation services.” It does so by proposing prices to its clients that reflect the application of the algorithm described at point number 3 above. Business A buys these services from Business D, and sets its own prices accordingly. Businesses B and C learn about this, and immediately sign up with Business D to do the same.

There are plenty of reasonable views about the right treatment of algorithms in antitrust. In the following excerpt, FTC Acting Chair Maureen Ohlhausen offers one such perspective to guide analysts and courts. “If it isn’t ok for a guy named Bob to do it,” she argues, “then it probably isn’t ok for an algorithm to do it either.” Do you agree?

**Maureen K. Ohlhausen, Should We Fear the Things That Go Beep in the Night?
Some Initial Thoughts on the Intersection of Antitrust Law and Algorithmic
Pricing**

Remarks of May 23, 2017

[1] There are at least two key advantages to using computer algorithms to make certain kinds of decisions: speed and complexity. Computers can examine hundreds or even thousands of different variables in a fraction of a second, and react almost instantaneously to changes in any one of those variables. Certain algorithms can gain accuracy over time, by identifying patterns in data and adjusting to the patterns they identify.

[2] Perhaps unsurprisingly, once people realized computers could be programmed to make decisions more quickly and accurately than humans in some narrow, clearly defined areas, they tried to gain a trading advantage using these new tools. Algorithmic trading is a ubiquitous phenomenon across the financial markets today.

[3] Eventually, people figured out that the useful applications for this kind of high-speed, rules-based approach to financial decision-making were not limited to trading stocks or bonds. As algorithms spread out from the financial markets and started to be used in the on-line pricing of consumer goods, voices have been raised in alarm. The inner workings of these tools are poorly understood by virtually everyone outside the narrow circle of technical experts that directly work in the field. But they raise a number of questions. Are there opportunities for mischief in the black box nature of all this? Will the use of pricing algorithms allow firms to collude or increase prices in ways that will ultimately go undetected by the enforcement agencies? Does antitrust doctrine need to change in important ways to reflect the greater use of automated decision-making across markets?

[4] I’d like to suggest tonight that although antitrust enforcers should always remain vigilant for new forms of anticompetitive behavior, some of the concerns about algorithms are a bit alarmist. From an antitrust perspective, the expanding use of algorithms raises familiar issues that are well within the existing canon. An algorithm is a tool, and like any other tool, it can be put to either useful purposes or nefarious ends. There is nothing inherently wrong with using mathematics and computers to engage more effectively in commercial activity, regardless of whether that activity is participation in the financial markets or the selling of goods and services.

[5] I will start with the easiest question, the use of a complex algorithm by a single firm to observe and respond to various market conditions and set prices nearly instantaneously in response to changes in the market.

[6] [Consider two gas stations engaged in tacit collusion.] If the market participants cannot see their competitors' posted prices easily with their naked eyes, they might decide to buy a pair of binoculars to read their competitors' signs better from the comfort of their offices. The binoculars make it easier for the market participants to understand market conditions more quickly and respond accordingly. It is certainly true that the binoculars increase transparency in the market and thereby make it easier for informal, tacit coordination to take place. But we don't use the antitrust laws to police firms' abilities to understand the markets they operate in or to optimize prices.

[7] We may recognize that the binoculars make it easier to understand the behavior of competitors and that fact, in turn, becomes part of the calculus in evaluating future mergers in this space. But we don't ban the use of binoculars just because they can be used to assist in conscious parallelism. Unilateral efforts to understand market conditions better and respond to them are a critical part of a well-functioning economy. This is just not a place where antitrust needs to impose new rules in response to new tools. [. . .]

[8] At least facially, things get a bit more interesting when multiple firms competing with each other employ algorithms to determine prices. In theory, these systems can allow competitors to communicate with each other in ways that may be difficult for enforcers to detect.

[9] In this scenario, the algorithms are programmed to produce some sort of signal to the market, a signal that only the other market participants, similarly armed with algorithms of their own, will be able to detect. Through those signals, competitors reach an agreement on prices or output levels. The executives are still communicating with each other, but now they are using algorithms essentially to fly under the radar, so their unlawful agreements can escape detection by the enforcement agencies.

[10] Although this might sound pretty exotic and scary at first, it is actually pretty familiar ground for antitrust law. Way back in 1993, a group of airlines got in a lot of trouble with the U.S. Department of Justice for using the common, on-line reservation system to signal each other on airline fares.⁴ Both the enforcers and the court had little trouble understanding the legal implications of the airlines' conduct. This is because the type of technology used to communicate with competitors is wholly irrelevant to the legal analysis. Whether it is phone calls, text messages, algorithms or Morse code, the underlying legal rule is the same—agreements to set prices among competitors are always unlawful.

[11] But wait a minute, won't it be extremely hard to detect the use of algorithms to fix prices? Won't the technology make it impossible for enforcers to easily detect unlawful price-fixing agreements?

[12] Unfortunately, this is really not a new problem either. It is often difficult to detect a determined group of people who are both aware of the illegality of their conduct and actively trying to conceal it. This is one of the many reasons why cartel behavior is punished criminally in this country. Communicating through algorithms is just one of a myriad of different ways that conspirators could conceal their illegal behavior.

[13] Recognizing the difficulty in detecting cartels, the leniency program at the Department of Justice explicitly doesn't depend on external detection of any kind. Instead, it works to turn the members of a cartel on each other, by incentivizing early cooperation with the agency, coupled with stiff penalties for the conspirators who don't come forward early. Since 1997, the Department of Justice has imposed fines for criminal price fixing of approximately \$11 billion, and the average criminal sentence for an executive accused of price fixing in recent years is 22 months. I'd say that suggests a program that is already working pretty well and likely to continue to function well when faced with any nefarious use of algorithms.

[14] What if algorithms are not used in such a clearly illegal way, but instead effectively become a clearing house for confidential pricing information? Imagine a group of competitors sub-contracting their pricing decisions to a common, outside agent that provides algorithmic pricing services. Each firm communicates its pricing strategy to

⁴ United States v. Airline Tariff Publishing Co., 836 F. Supp. 9 (D.D.C. 1993); see <http://www.usdoj.gov/atr/cases/dir23.htm>.

the vendor, and the vendor then programs its algorithm to reflect the firm’s pricing strategy. But because the same outside vendor now has confidential price strategy information from multiple competitors, it can program its algorithm to maximize industry-wide pricing. In effect, the firms themselves don’t directly share their pricing strategies, but that information still ends up in common hands, and that shared information is then used to maximize market-wide prices.

[15] Again, this is fairly familiar territory for antitrust lawyers, and we even have an old-fashioned term for it, the hub-and-spoke conspiracy. Just as the antitrust laws do not allow competitors to exchange competitively sensitive information directly in an effort to stabilize or control industry pricing, they also prohibit using an intermediary to facilitate the exchange of confidential business information.

[16] Let’s just change the terms of the hypothetical slightly to understand why. Everywhere the word “algorithm” appears, please just insert the words “a guy named Bob”. Is it ok for a guy named Bob to collect confidential price strategy information from all the participants in a market, and then tell everybody how they should price? If it isn’t ok for a guy named Bob to do it, then it probably isn’t ok for an algorithm to do it either.

[17] It is certainly true that as markets move online, they can become much more transparent. . . . [T]ransparency can be either a good thing or a bad thing for consumers, depending on the broader market dynamics. But there is nothing inherently suspect about using computer algorithms to look carefully at the world around you before participating in markets.

[18] So, from my perspective, if conduct was unlawful before, using an algorithm to effectuate it will not magically transform it into lawful behavior. Likewise, using algorithms in ways that do not offend traditional antitrust norms is unlikely to create novel liability scenarios.

[19] The enforcement agencies should remain vigilant here, in the same way they need to remain vigilant about all new market dynamics. But I’m not yet afraid of the things that go beep in the night. . . .

* * *

Concerns about algorithmic collusion are starting to appear in litigation. In 2023, renters of multifamily units and renters of student accommodation alleged that a software company, RealPage, had used its “revenue management software” product to facilitate a conspiracy that included not only RealPage but also the landlords from which the plaintiffs had rented accommodation. The defendants moved to dismiss the complaint. The following extract focuses on the court’s analysis of whether the multifamily plaintiffs had adequately alleged an agreement. Assuming the truth of the allegations described in the extract, and in light of antitrust’s definition of an agreement (look back at Chapter IV for a reminder!), do you agree that a conspiracy was adequately alleged here?

In re RealPage, Inc., Rental Software Antitrust Litigation (No. II)

Case No. 3:23-md-3071, 2023 WL 9004806 (M.D. Tenn., Dec. 28, 2023)

Judge Crenshaw.

[1] The allegations suggest that . . . multifamily rental housing markets throughout the United States have been tainted by an illegal price-fixing conspiracy. The conspiracy is facilitated by revenue management software that takes property owners’ and managers’ sensitive pricing and supply data, applies its algorithm across this data, and then spits out price recommendations for each rental unit. By co-mingling their sensitive pricing and supply data within this revenue management software, horizontal competitors conspire to fix prices in their respective rental housing markets.

[2] RealPage . . . is a software company that developed an integrated technology platform that provides software solutions for the multifamily and student housing markets. Only one of these types of software solutions is relevant to this case—RealPage’s revenue management software [“RMS”]. . . .

[3] RealPage solicits clients to use its Revenue Management Solutions by promising that they will “outperform the market” with software that uses a database of rental prices in each client’s area (including competitors’ prices) and provides the optimal price to charge prospective tenants, with both short-and long-term goals of increasing

revenues by raising rents. To achieve this promised revenue outperformance, RealPage's clients must allow RealPage to use their commercially sensitive pricing and supply data in its RMS algorithms, both to set each client's own rent prices and to help set rent prices of its horizontal competitors. These clients must also be willing to outsource their daily pricing and ongoing revenue oversight to RealPage by accepting RealPage's price recommendations upwards of 80–90% of the time and allowing RealPage to set prices for their properties as though RealPage owns them itself. RealPage's RMS clients either accept oversight of their pricing activities by a RealPage pricing advisor or allow RealPage to train their internal revenue managers who perform similar oversight.

[4] Plaintiffs allege that RealPage and [its clients, including the “RMS Client Defendants,”] have formed an illegal price-fixing cartel by jointly using RealPage's RMS software. As the cartel leader or the “hub” of the conspiracy, RealPage serves as an intermediary between horizontal competitors in the multifamily and student housing markets. It takes its clients['] commercially sensitive pricing and supply data, runs its RMS algorithm against that collective data pool, and then spits out rental pricing recommendations for each of its clients' properties. RMS Client Defendants agree to set prices based on a pool of their horizontal competitors' proprietary data and reasonably believe that their competitors are using the same data and methods to price their properties. [. . .]

[5] In addition to paying RealPage's fees, RMS Client Defendants also provide RealPage their independent commercially sensitive pricing and supply data and allow RealPage to use this data to set prices for not only their own properties, but also the properties of their horizontal competitors who use RMS. RealPage then applies its RMS algorithm to this data pool of client information to determine the daily optimal rent prices for each of RealPage's clients, which is then available for each RealPage client to apply to multifamily and student apartment units in each of the markets where those clients are located. By using RMS, RMS Client Defendants are able to price their units according to their collective goal of securing revenue lifts by increasing rents without regard for the typical market forces that drive supply and demand in a competitive environment. They do this by collectively agreeing to price their rental units in accordance with RealPage's RMS pricing recommendations. RMS Client Defendants with multifamily properties also artificially control the supply of rental units by allowing a larger share of their units to remain vacant, and staggering lease renewals to minimize naturally occurring periods of oversupply.

[6] To [ensure that its clients actually set the prices that are recommended], RealPage has created a robust multi-layered monitoring system. RealPage's clients are assigned pricing advisors or revenue managers, employed by RealPage, who closely monitor clients' conformance with RealPage's pricing recommendations, including through reviewing client pricing recommendations daily and issuing weekly reports. Some clients use their own in-house pricing advisors, but these individuals are trained by RealPage. When a client deviates from a pricing recommendation, pricing advisors challenge that deviation and impart the notion that a client's explanation for a deviation has to provide acceptable reasons pertaining to property management operations to override a pricing recommendation. To ensure clients remain in the 80 to 85% acceptance rate target that RealPage seeks, Pricing Advisors often spend considerable time educating clients on the pricing methodology and associated benefits of accepting all, or almost all RealPage pricing recommendations, despite increasing vacancy rates. One former RealPage Pricing Advisor reported that RealPage recommended RMS clients accept RealPage's pricing recommendations 100% of the time, other than in limited circumstances. [. . .]

[7] RealPage also conducts quarterly Performance to Market meetings with some client executives, designed to identify how compliant the client was with RealPage's pricing recommendations during the prior quarter, and quantify any purported revenue loss that RealPage attributed to the client's deviations from its pricing recommendations. In late 2019, RealPage improved upon its price-monitoring arsenal by tracking not only a client's acceptance rate, but also the identity of the personnel within a client's business that issued a price deviation request. When the obstinate employee is identified, RealPage aims to [rein] in that employee. . . .

[8] RMS Client Defendants acknowledge their strict alignment with the RMS pricing recommendations. Camden Property Trust “confirmed that once RealPage is engaged, there is not much to do beyond checking the software to ensure that it is continuing to push prices higher.” . . .

[9] This collective behavior, driven by RealPage’s pricing recommendations and monitoring procedures, has, according to Multifamily Plaintiffs, resulted in parallel pricing that cannot be explained by typical economic factors among RMS Client Defendants. Between March 2015 and March 2023, increased usage of RealPage’s RMS corresponded with increasing multifamily rents over the same period. [. . .]

[10] Defendants argue that Plaintiffs have not plausibly alleged any conspiracy between RMS Client Defendants. [. . .]

[11] Multifamily Plaintiffs allege that RMS Client Defendants used RealPage’s RMS to fix the prices of their rental properties above market and agreed to participate in the data co-operative and price their multifamily rental units according to RealPage’s RMS. They characterize this as a straightforward horizontal price-fixing agreement between competitors in the multifamily housing market, using RealPage as an intermediary to effectuate the conspiracy. Plaintiffs reject the characterization of the alleged agreement as a hub and spoke conspiracy because “RealPage is [not] in a true vertical relationship to these property defendants. They’re a facilitator. They’re not in the real estate business.”

[12] In contrast to Plaintiffs’ characterization, Defendants argue that Plaintiffs have alleged, at most, a hub and spoke conspiracy with no rim—i.e., a series of vertical agreements between RealPage and RMS Client Defendants, but no horizontal agreement between the competing . . . Defendants. [. . .]

[13] The Court agrees . . . that Plaintiffs have alleged vertical agreements between RealPage and each of RMS Client Defendants. RealPage is the developer of an integrated technology platform that provides software solutions for the multifamily rental housing markets. Its “software solutions” are products that RealPage provides to RMS Client Defendants, and RealPage also provides these Defendants ongoing services related to the pricing and price-monitoring of the multifamily rental properties. This is no different from a vertical relationship between a supplier of fish (fisherman) and a seller of fish (fish market). Therefore, the Court finds that Plaintiffs have alleged vertical relationships between RealPage and each of RMS Client Defendants. [. . .]

[14] [But the] heart and soul of [some of the] allegations is the alleged horizontal agreement between RMS Client Defendants to use RealPage to fix the prices of their multifamily rental properties above market rates. The [relevant plaintiffs] allege that this horizontal agreement had the following “overarching principles”:

- (1) all members, who were otherwise horizontal competitors, would share the proprietary data necessary for RealPage’s RMS to generate rental price recommendations; (2) all members would delegate their rental price and supply decisions to a common decision maker, RealPage; and (3) knowing that cooperation was essential to the successful operation of the scheme, all members would abide by RealPage’s price and supply decisions generated by RMS.

Plaintiffs argue that they have alleged both direct and circumstantial evidence of this agreement, while Defendants argue that the allegations are too deficient to plausibly allege a horizontal conspiracy.

[15] Multifamily Plaintiffs argue that they have alleged direct evidence of a horizontal conspiracy through a statement made by an executive employee of one of Defendants, ECI Group, Inc. (“ECI”), which RealPage used in a case study posted to its website. In that case study, the ECI executive stated:

The design and functionality of RealPage’s [product] offers detailed insight into how actual competitors impact pricing strategies[.] With [it] we rarely make any overrides to the pricing recommendations[.] We are all technically competitors, [the product] helps us to work together to make us all more successful in our pricing[.] [It] is designed to work with a community in pricing strategies, not work separately.

. . . Plaintiffs argue that you can’t get any more direct than a competitor saying although we’re technically competitors, we work with our competitors on pricing strategy.

[16] The Court finds that the ECI executive’s statement is not, independently, direct evidence of a horizontal conspiracy. The statement requires the Court to infer that ECI and RealPage’s other LRO clients worked together as competitors to accomplish an unlawful purpose. [. . .]

[17] Multifamily Plaintiffs [also] allege circumstantial evidence, including allegations that RMS Client Defendants engaged in parallel conduct. The parallel conduct consists of a parallel change in pricing strategy once a critical level of RealPage RMS adoption had been reached around January 2016. The new pricing strategy prioritized raising rent prices even if doing so resulted in higher vacancy rates. Plaintiffs further allege that Defendants began raising their rent prices in parallel fashion upon adopting their new pricing strategies.

[18] Defendants argue that Plaintiffs' allegations of parallel strategy and parallel pricing do not constitute uniform business conduct. They . . . [argue] that Plaintiffs must allege that Defendants all became clients of RealPage close-in-time to each other, used the same RMS software offered by RealPage, accepted RealPage's price recommendations 100% of the time, and only received and accepted price increases from RealPage, to the exclusion of any price decreases. Because Plaintiffs have not alleged any of this parallel behavior, Defendants argue that Plaintiffs have not alleged any parallel conduct necessary to show circumstantial evidence of a horizontal conspiracy.

[19] . . . [C]ourts accept allegations of close-in-time agreements as evidence of a horizontal conspiracy, as Defendants argue Plaintiffs must do here. But temporal proximity of the parallel conduct is only one factor[.] . . . Parallel conduct can be any parallel behavior that would probably not result from chance, coincidence, independent responses to common stimuli, or mere interdependence unaided by an advance understanding among the parties. Courts accept allegations of parallel pricing and parallel changes in policies or strategies as evidence of parallel conduct. [. . .]

[20] Multifamily Plaintiffs allege that before the widespread adoption of RealPage's RMS, competition in the multifamily rental housing market was driven by property owners' and managers' desire to keep "heads in beds"—in other words, maintain the highest possible occupancy levels and keep turnover among tenants to a minimum. By 2016, RealPage's clients, including RMS Client Defendants, had adopted a different pricing strategy. This new strategy was to prioritize increasing prices regardless of apartment vacancies or market downturns. Previously, multifamily rental lessors, drawn by market forces, had prioritized increasing occupancy, which could require reducing rent prices from time to time to fill vacant rentals. This previous strategy is referred to as the "heads in beds" strategy. The change in pricing strategy from "heads in beds" to "price over volume" is the meat of Plaintiffs' parallel conduct allegations.

[21] Plaintiffs offer both statements from individual Defendants acknowledging this change in strategy and a regression analysis to support this strategy change. Examples of the statements include:

- In 2017, then-CEO of RealPage, Steve Winn, stated that one client, Morgan Communities, increased its profits by operating at a vacancy rate that would have made that property manager's management uncomfortable before."Specifically, after outsourcing rent prices and lease terms to RealPage, the company began targeting 3%-4% revenue growth while operating at a 95% occupancy rate (i.e., 5% vacancy rate).
- A senior vice president at Morgan Group, David Hannan, acknowledged in 2011: "My generation grew up worshipping the occupancy gods. We learned that if you were not 95 percent-plus occupied, the asset was failing. But that's not necessarily true anymore . . . [RealPage] totally turns the industry upside down." [. . .]

[22] Plaintiffs also offer regression analyses of four markets demonstrating that prior to 2016, rent prices were correlated with vacancy rates. Simply put, when vacancy rates increased, rent prices decreased, and vice versa. In contrast, the regression analyses show that after 2016, rent prices in these markets became far less correlated with vacancy rates. For instance, in Atlanta from 2011 to 2016 there was a negative relationship between effective rents and vacancy rates[.] showing that an increase in vacancy rates (supply) generally resulted in a decrease in rental price. During this 2011-2016 period, the regression analysis showed that 83% of rental price variations in the Atlanta Submarket can be explained by the operative vacancy rate. From 2016 to 2022, the previously strong relationship between vacancy rates and rental prices had been severed, with only 19.3% of rental price variations able to be explained by vacancy rates. The regression analyses tell similar stories in Orlando, Dallas, and Phoenix. . . . Plaintiffs argue that these regression analyses support their allegation that as of 2016, Defendants had adopted a seismic shift in pricing strategy from "heads in beds" to prioritizing rent increases over occupancy. [. . .]

[23] Multifamily Plaintiffs also allege parallel conduct in the form of parallel price increases in nine . . . alleged submarkets. To show these parallel price increases, Plaintiffs purchased Defendant-specific pricing data from an allegedly respected industry data source, CoStar. They allege that price graphs . . . depict perfectly coordinated price increases by [RMS Client] Defendants in each MSA [metropolitan statistical area] during and throughout the [alleged conspiracy period]. [. . .]

[24] Multifamily Plaintiffs allege several plus factors in addition to parallel conduct. The most important of these is the allegation that RMS Client Defendants’ price-raising during periods of high vacancy and/or market downturns is inconsistent with their individual economic self-interest. But, to be clear, there are additional plus factors, including Defendants’ exchange of competitively sensitive information, Defendants’ motive, opportunities, and invitations to collude, and characteristics of the multifamily housing market that make it more susceptible to price-fixing conspiracies. These market characteristics include that the market (i) is highly concentrated; (ii) has high barriers to entry for would-be competitors; (iii) has high switching costs for renters; (iv) has inelastic demand; and (v) offers a fungible product.

[25] Defendants separately attack each of Plaintiffs’ plus factors as deficient. Specifically, they contend Plaintiffs have not actually alleged that Defendants adopted price over volume strategies, instead alleging only that vacancy rates for some Lessors in some locations increased at some times. Next, they dispute that Plaintiffs have alleged no motive to conspire, as maximizing profits or optimizing rents based on supply and demand are simply individual motives to use RealPage’s RMS. Defendants also dismiss Plaintiffs’ contention that Defendants had opportunities to conspire through participation in trade associations. They further argue that Plaintiffs have not alleged that RMS Client Defendants shared their sensitive pricing and supply information with each other, and that any horizontal competitor data they did have access to was aggregated and anonymized. Finally, they believe that Plaintiffs’ allegations concerning the multifamily housing market structure do not imply collusion without more.

[26] At the outset, the Court notes that Defendants’ approach of separately evaluating and dissecting each plus factor is legally flawed. The Court must assess plus factors holistically. [. . .]

[27] Viewing all of the alleged circumstantial evidence holistically, including the parallel conduct discussed earlier, the Court finds that the . . . most persuasive evidence of horizontal agreement is the simple undisputed fact that each RMS Client Defendant provided RealPage its proprietary commercial data, knowing that RealPage would require the same from its horizontal competitors and use all of that data to recommend rental prices to its competitors. In doing so, RealPage would make true its vow to its RMS clients to “outperform the market,” primarily by increasing rent prices. It would clearly not be in any individual Defendant’s economic self-interest to contribute its data to RealPage without knowing that it would benefit from its horizontal competitors doing the same. Put another way, the contribution of sensitive pricing and supply data for use by RealPage to recommend prices for competitor units is in Defendants’ economic self-interest if and only if Defendants know they are receiving in return the benefit of their competitors’ data in pricing their own units. While Defendants may not have contracted with RealPage close-in-time to one another, their data contributions still constitute parallel behavior. These allegations are bolstered by other allegations:

- RealPage discloses to its RMS clients exactly whose non-public data is being used for pricing decisions. For each client . . . , RealPage maintains a “peer list” of that client’s competitors within a specific distance and whose transaction data will be used as an input in RealPage’s RMS for that client’s specific property. Peer lists explicitly state that the competitors listed will be used to determine the magnitude of a change in rent. In fact, clients . . . are able to review and comment on their peer list, and can even request that specific competitors are included on the list.
- Defendants paid RealPage substantial monthly fees of as much as \$1 to \$2 per unit for RealPage’s pricing recommendations, leading to the inference that Defendants’ intended to abide by those recommendations.
- Defendants used either RealPage-employed pricing advisors or RealPage-trained revenue managers to closely monitor their adherence to RealPage’s price recommendations. For those using pricing advisors, each pricing advisor oversaw multiple horizontal competitors.

- Defendants could determine who among their competitors were also RealPage clients because RealPage provided them with the property addresses using RealPage’s RMS.
- RealPage offered opportunities for horizontal competitors to engage directly with one another through webinars, screen-sharing training modules, frequent calls, in-person roundtables, hosted happy hours, and annual conferences. Competitors also interact with each other through trade associations.
- RealPage enforced adherence to its pricing recommendations through assigning pricing advisors to its clients, providing “lease compliance reports” listing the names of individual employees who overrode price recommendations, requiring employees to provide business justifications for price overrides, and offering some clients quarterly “performance to market” meetings designed to identify how compliant the client was with RealPage’s pricing recommendations during the prior quarter.
- The multifamily housing market is unique compared to other product markets because at any given time, the available inventory is much smaller than the total market inventory, and there are significant costs to moving that may make consumers more likely to renew their leases even if their rents are raised above market prices. This unique structure gives renters less power to choose alternative housing options than in a more traditional buyer/seller commodity structure.

[28] These allegations touch on multiple plus factors recognized by the Sixth Circuit, including the exchange of commercially sensitive information and the existence of a common motive to conspire. Taken together, they support a reasonable expectation that discovery will reveal evidence of an illegal agreement. Indeed, the allegations describe a conspiracy that a former Federal Trade Commission Chair, Maureen Ohlhausen, believes is unlawful under the antitrust laws:

Just as the antitrust laws do not allow competitors to exchange competitive sensitive information directly in an effort to stabilize or control industry pricing, they also prohibit using an intermediary to facilitate the exchange of confidential business information. Let’s just change the terms of the hypothetical slightly to understand why. Everywhere the word “algorithm” appears, please just insert the words “a guy named Bob.” Is it ok for a guy named Bob to collect confidential price strategy information from all the participants in a market, and then tell everybody how they should price? If it isn’t ok for a guy named Bob to do it, then it probably isn’t ok for an algorithm to do it either.

[29] As Ohlhausen explained, whether Defendants shared their sensitive information with each other or through an intermediary, their knowledge that that information would be used to price each other’s units is circumstantial evidence of a conspiracy. [. . .]

[30] . . . As [another court recently] acknowledged, a successful hub and spoke theory of Sherman Act liability based on the use of algorithmic pricing depends in part on the exchange of nonpublic information between competitors through the algorithm. That is what the Multifamily Plaintiffs have alleged here.

b) Personalized Pricing

The massive collection of personalized data regarding the behavior and preferences of individual consumers raises an intriguing possibility: online retailers might be able to charge a different, “personalized,” price to each user. In the most plausible version, a retailer would charge higher prices to inframarginal customers (*i.e.*, those least likely to switch away in response to a price increase) and lower prices to marginal customers (*i.e.*, those most likely to switch away in response to a price increase). And the collection of user-specific data would help the retailer figure out which users belong in each category.

We have already seen (back in Chapter II) why a business might want to do this. Price discrimination allows a seller with some market power to make more sales and extract more profit, compared to charging the profit-maximizing non-discriminatory price.¹⁴⁷ And we have also seen that the social consequences are ambiguous. As price discrimination becomes more complete, deadweight loss is reduced, so customers who value the product or

¹⁴⁷ See *supra* § II.K. See generally, *e.g.*, Lars A. Stole, *Price Discrimination and Competition* in M. Armstrong & R. Porter (eds.), 3 HANDBOOK OF INDUSTRIAL ORGANIZATION (2007) Ch. 34.

service at more than its cost of production are able to purchase it. But as the price discrimination becomes more perfect, more of the surplus is extracted by the producer. Under perfect price discrimination, each customer pays exactly as much as they are willing to pay for the product or service. Different settings imply different outcomes.¹⁴⁸

We have also already seen that price discrimination, in various forms, is common across the economy. When businesses make offers in negotiation that reflect their assessment of the deal’s value to the counterparty; when businesses shift margin from one product to another (*e.g.*, from printers to ink) in order to extract more profit from inelastic users; when businesses offer discounted tickets for specific classes of consumers like seniors or students—in these and many other cases, they are engaged in price discrimination. This kind of thing happens all the time in brick-and-mortar settings.

Despite plenty of speculation, it is not clear how much price personalization is actually going on online.¹⁴⁹ Certainly it does occur to some extent: for example, through discounts and coupons that are targeted to individual consumers in light of their online behavior. And there have been some reports of digital retailers charging different prices to different consumers.¹⁵⁰ But many commentators agree that it is likely to become more common in future, as technology improves and as consumer expectations change.¹⁵¹

Courts do not treat price discrimination, without more, as a violation of the Sherman Act. As unilateral conduct, it can in principle be analyzed through the lens of the monopolization offense in Section 2, but no court has suggested that it is exclusionary, or otherwise unlawful, to charge a price that reflects a judgment about the customer’s willingness to pay. On the contrary, courts and some commenters suggest that charging an unconditional above-cost price exemplifies the kind of thing that monopolization law does not and should not punish or prohibit.¹⁵² The Robinson-Patman Act, by contrast, *is* centrally concerned with price discrimination.¹⁵³ But its application to digital discrimination is limited as it does not cover consumer pricing, and as it is limited to sales of “commodities”: a term that does not appear to cover digital products or services.¹⁵⁴

Nevertheless, the possibility that price discrimination might become ubiquitous online might challenge some of our intuitions about the kind of antitrust system we might want: including, for example, by making the consequences of monopoly more burdensome for consumers and users. This might inform the case for legislative reform, or for new interpretations of the laws we have.

The following extracts present sharply different perspectives on the antitrust analysis of personalized pricing. The first, an academic article, makes a provocative argument that personalization of prices should itself be an antitrust violation in some cases, even though courts have not recognized it as such. The second, a policy paper submitted by the United States enforcers to the OECD, summarizes the traditional view that personalization as such is not an antitrust concern. What do you think?

Ramsi A. Woodcock, Personalized Pricing as Monopolization

51 Conn. L. Rev. 415 (2019)

In order for a firm to engage in monopolization in violation of Section 2 of the Sherman Act, the firm must (1) engage in anticompetitive conduct, meaning behavior that both harms consumers and causes the market to deviate

¹⁴⁸ See, *e.g.*, James C. Cooper, Luke Froeb, Daniel P. O’Brien & Steven Tschantz, *Does Price Discrimination Intensify Competition? Implications for Antitrust*, 72 Antitrust L.J. 327 (2005) (considering effects of discriminatory price reductions in spatial models).

¹⁴⁹ See, *e.g.*, Ben Unglesbee, *Why Dynamic and Personalized Pricing Strategies Haven’t Taken Over Retail — Yet*, RETAILDIVE (July 22, 2019).

¹⁵⁰ See, *e.g.*, Rafi Mohammed, *How Retailers Use Personalized Prices to Test What You’re Willing to Pay*, Harvard Business Review—Pricing Strategy (Oct. 20, 2017) (noting example from online travel agent); Kimia Heidary, *Personalised Pricing Is Happening: Here’s What You Need to Know*, LEIDEN LAW BLOG (July 29, 2022) (noting example from European e-commerce platform).

¹⁵¹ See, *e.g.*, Brian Wallheimer, *Are You Ready for Personalized Pricing?* CHICAGO BOOTH REV. (Feb. 26, 2018); Daniel A. Crane, *Antitrust After the Coming Wave*, N.Y.U. L. Rev. (forthcoming 2024).

¹⁵² See, *e.g.*, Brooke Group Ltd. v. Brown & Williamson Tobacco Corp., 509 U.S. 209, 223 (1993); Daniel Francis, *Making Sense of Monopolization*, 84 Antitrust L.J. 779, 813 (2022); Mark S. Popofsky, *Defining Exclusionary Conduct: Section 2, the Rule of Reason, and the Unifying Principle Underlying Antitrust Rules*, 73 Antitrust L.J. 435, 465 (2006).

¹⁵³ See *supra* Chapter XIII.

¹⁵⁴ See 15 U.S.C. § 13; but see, *e.g.*, Mark Klock, *Unconscionability and Price Discrimination*, 69 Tenn. L. Rev. 317, 358–60 (2002) (considering room for expansion in software cases).

from the perfectly competitive ideal, and (2) have monopoly power, meaning that the firm must have the power profitably to raise its prices above some measure of its costs. A firm that engages in personalized pricing will usually meet both criteria.

Personalized pricing satisfies the consumer harm requirement, because the charging of a price equal to the maximum that a consumer is willing to pay ensures that the consumer derives a vanishingly small benefit from the transaction. . . . When the price equals the maximum that the consumer is willing to pay, the consumer is technically indifferent between buying and not buying at all, because the price just equals the value the consumer places on the product. Firms set prices slightly below maximum willingness to pay in order to be sure that consumers will buy. But the infinitesimal gain to consumers from being induced to buy might as well be zero. Personalizing prices has the extraordinary characteristic of charging consumers prices so high that consumers are rendered no better off—more or less—than if they had made no purchases at all. [. . .]

[The] underlying anticompetitive practice [for the purpose of monopolization analysis] is the prevention of arbitrage. In order for personalized pricing to work, the firm must be able to prevent low-willingness-to-pay consumers, to whom the firm charges low prices, from making profits by reselling the units they buy from the firm at low prices to consumers who are willing to pay high prices and who would otherwise buy at high personalized prices directly from the firm. By charging these “high-price consumers” only very slightly less than the high prices that the firm would personalize to them, the “low-price consumers” engaged in resale can induce high-price consumers to buy resold units, rather than units sold directly by the firm, while still earning a profit. If the firm fails to prevent this “arbitrage” of its personalized prices, then high-price consumers will not buy from the firm, but instead from low-price consumers acting as resellers. All consumer demand will be satisfied through sales of the firm’s product to low-price consumers, part of which product will be consumed by low-price consumers and part resold to high-price consumers. The firm will therefore effectively find itself selling its entire inventory at the lowest price the firm personalizes to consumers, and will therefore give up on personalized pricing and revert to uniform pricing, which will allow the firm to choose a higher uniform price at which to sell its product. . . . The only way for the firm to prevent arbitrage is to sell at the low price to low-price consumers only in an amount equal to the low-price consumers’ personal needs and to refuse to sell any additional units that low-price consumers might use for resale. This refusal of the firm to permit low-price consumers to buy for the purpose of resale is the anticompetitive conduct that brings personalized pricing within the ambit of the antitrust laws. [. . .]

[But] personalized pricing might persist despite the absence of restraints on, and concomitant financial viability of, arbitrage [because] even when resale is unrestrained and financially viable, there is no guarantee that resellers will in fact fully exploit the opportunity to resell, and therefore no guarantee that personalized pricing will disappear. . . . It follows that, at least in some markets, personalized pricing will persist despite antitrust condemnation of arbitrage prevention, and consumers will therefore continue to be harmed. If antitrust wishes fully to protect consumers from personalized pricing, and antitrust’s consumer protection mission suggests that antitrust should wish to do that, then antitrust should go beyond treating arbitrage prevention as an antitrust violation to treat the act of personalizing prices itself as a violation of the antitrust laws. Without directly condemning the act of personalizing prices, antitrust cannot hope fully to stamp out that act.

The courts should treat the act of personalizing prices as a free-standing violation of Section 2 of the Sherman Act, tied perhaps to the general language of Section 2, which prohibits “monopoliz[ation]” without defining the term. The courts cannot take the alternative approach of tying the prohibition to the monopolization rules discussed in this article—the requirements of anticompetitive conduct and monopoly power that have been developed by the courts as interpretations of the language of Section 2—because of the difficulty associated with treating the act of personalizing prices itself as anticompetitive conduct. Unlike the act of limiting arbitrage, the act of personalizing prices does not itself stifle intrabrand competition, and so the requirement of harm to competition, an essential element of a traditional monopolization claim, is missing.

Relying upon antitrust’s consumer protection goal to create a freestanding prohibition on personalized pricing out of whole cloth would not be altogether unprecedented, because antitrust has relied on the consumer welfare standard radically to alter antitrust rules in the past. Indeed, the Chicago School of antitrust analysis brought the consumer welfare standard into antitrust precisely for that purpose. The Chicago School believed that prevailing antitrust rules punished firms that dominated markets for the legitimate purpose of controlling the resources

necessary to produce the best quality products at the lowest cost. The courts ultimately used the consumer welfare standard as the sole justification for altering the antitrust laws to tolerate salutary dominance, despite the lack of any other basis in statute or caselaw for doing so. The courts reversed longstanding prohibitions on exclusive dealing and tying arrangements, for example, replacing those prohibitions with case-by-case review for harm to consumers. And the courts stopped condemning mergers in concentrated industries out of hand. The courts made those and other changes without express authorization from Congress, or the aid of precedent, but simply because they concluded that antitrust's mission is to protect consumers—the consumer welfare standard—and they believed that these changes to the law would be good for consumers. There is no reason for which the consumer welfare standard should only be used to restrict the ambit of antitrust rules, sparing some conduct for the sake of expanding consumer welfare, but should never be used to expand the ambit of antitrust rules, by extending them to condemn new categories of conduct, such as personalized pricing.

OECD Note by the United States, Personalized Pricing in the Digital Era

OECD Document No. DAF/COMP/WD(2018)140 (Nov. 21, 2018)

[1] Personalized pricing involves the use of data analytics to provide distinct prices to consumers based on personal characteristics and behaviors. For example, an online merchant may be able to use web browsing habits and other data sources to glean the likely gender, income, and age of an individual, and offer a personalized price based on this information.

[2] Personalized pricing has potential implications for both competition and consumer protection policy. From a competition standpoint, personalized pricing is a form of price discrimination, where each consumer receives an individual price based on the available information about the consumer. As such, the potential competitive effects of personalized pricing are similar to those spelled out in the U.S.'s 2016 submission on price discrimination. There, we concluded that:

Price discrimination is common in many markets. In many instances, price discrimination enhances market competition. In the United States, price discrimination is often viewed as efficient. In certain limited circumstances, price discrimination might feature as an aspect of an exclusionary strategy meant to enhance or protect market power. Intervention should be limited to preventing these exclusionary abuses.

[3] Nor does the mere fact that different consumers pay different prices raise consumer protection concerns. U.S. consumer protection laws are designed to assure that markets are free from fraud and deception so that consumers can make informed choices. Absent accompanying unfair or deceptive conduct, personalized pricing alone does not raise any of these concerns, and therefore provides no basis for intervention.

[4] In some circumstances, however, deception surrounding personalized pricing could raise consumer protection issues. For example, a firm might harm some consumers if it were to break a material promise not to engage in personalized pricing. Similarly, the collection and use of personal data used in personalized pricing could implicate privacy concerns. For example, consumer harm could arise if a company collecting personal data that helps inform a personalized pricing algorithm violated material promises related to the collection and use of those data. Further, if personalized pricing were based on factors like race, religion, gender, or national origin, it could violate certain U.S. antidiscrimination laws.

[5] Personalized pricing occurs when firms tailor prices based on observed and inferred information about individuals. According to one definition, personalized pricing is a type of price discrimination in which:

businesses may use information that is observed, volunteered, inferred, or collected about individuals' conduct or characteristics, to set different prices to different consumers (whether on an individual or group basis), based on what the business thinks they are willing to pay.

[6] Theoretically, a personalized pricing regime by a monopolist seller with perfect information on consumer preferences would charge each customer his or her willingness to pay for the good or service in question. Personalized pricing should be distinguished from dynamic pricing where prices vary with market conditions. For example, ride-sharing apps, airlines, hotels, and event venues engage in yield management strategies that result in prices changing based on supply and demand conditions.

[7] The technology for some degree of personalized pricing appears to exist: even if they do not have perfect information, companies already collect and use large amounts of data based on online and offline consumer interactions to target advertisements. But there is little evidence of widespread use of data to tailor prices to individual consumers. Companies may be reluctant to engage in personalized pricing online because of competition from other sellers, or because consumers could learn to game the system, which may undercut a firm's ability to tailor prices. Some research also suggests that consumers may be uncomfortable with the general idea of personalized pricing.

[8] Of course, that some consumers do not receive the lowest price offered does not raise the type of consumer protection concerns that would merit market intervention. Nor does market intervention appear to be necessary to curb personalized pricing conduct.

[9] Antitrust laws seek to protect price competition, which is a tenet of the U.S. economy. However, antitrust laws do not condemn, absent harm to the competitive process, a firm's charging whatever price the market may bear. Accordingly, antitrust laws would likely not condemn a firm's use of personalized pricing unless it is part of a collusive agreement or some other arrangement that harms the competitive process.

[10] Economic analysis sheds light on the potential welfare effects of personalized pricing, and can assist policy makers in understanding its potential competitive effects. The welfare effects of price discrimination are complicated and difficult to generalize. Third-degree price discrimination involves offering different prices to different consumer segments based on characteristics that may be correlated with willingness to pay. A common example is offering discount movie tickets for students or discounted "early-bird" dinners designed to attract seniors. Second-degree price discrimination uses techniques like metering and quantity discounts to segment consumers according to their preferences and willingness to pay. For example, a firm selling printers may extract more revenue from heavy users through sales of ink cartridges. Finally, first-degree or "perfect" price discrimination involves charging each consumer his or her exact willingness to pay.

[11] Although the welfare effects of second- and third-degree price discrimination are theoretically indeterminate, first-degree price discrimination unambiguously increases total welfare. By offering discounts to consumers whose marginal value of the good is greater than the good's marginal cost of production, a firm engaging in first-degree price discrimination expands output and eliminates the deadweight loss associated with market power. With price discrimination, more consumers are able to purchase the monopolist's product. Although perfect price discrimination expands total welfare, a monopolist employing it extracts all consumer surplus, leaving some consumers worse off than under simple monopoly pricing.

[12] It is important to note that in practice, personalized pricing is unlikely to arrive at prices that are equal to each individual's willingness to pay, like the theoretical perfect price discrimination. Instead, firms are likely to be able to use data to place consumers into increasingly narrower groups of consumers who exhibit similar traits and behaviors. The quality of the information about consumer preferences is a limiting factor in identifying consumers' willingness to pay. Therefore, actual personalized pricing may be closer to third than to first-degree price discrimination.

[13] Nonetheless, to the extent that personalized pricing allows firms to engage in something resembling perfect first-degree price discrimination (with prices tailored to estimated willingness to pay), it will tend to improve total welfare as explained above. Further, personalized pricing may raise consumer welfare by enhancing competition.

[14] Personalized pricing could in some cases enhance competition, increasing both total and consumer welfare. In particular, personalized pricing may intensify competition by allowing firms to target prices to poach their rivals' customers. For example, if data show that a consumer prefers firm A to firm B, personalized pricing may allow firm A to charge this consumer a higher price. However, if firm B has similar knowledge about this consumer, it can target a discount to compensate them for their preference for firm A. This competitive pressure may force firm A to lower its price to win this consumer's purchase. In this manner, the competitive use of personalized pricing could lower prices for all consumers, increasing both total welfare and consumer welfare.

[15] Finally, U.S. antitrust laws do not prohibit a firm with market or monopoly power from charging any price that the market will bear. Such market prices are integral to well-functioning markets because they provide

informative signals about market conditions. This prescription also applies to personalized pricing, which has the potential to ameliorate static welfare losses from monopoly and oligopoly pricing.

[16] Personalized pricing by itself does not raise consumer protection issues that require intervention because it does not impact the accuracy of marketplace information available to consumers. Instead, personalized pricing is redistributive—some consumers benefit, because they have access to products at lower prices than they otherwise would; while some consumers may lose, because they could pay higher prices than they would if the firm were to charge a single price. Further, unlike unfair or deceptive practices, personalized pricing generally has the potential to enhance total welfare. As discussed in more detail below, absent some indication of deception or discrimination, personalized pricing is not likely to raise consumer protection concerns.

[17] Although personalized pricing by itself does not appear to raise consumer protection issues under U.S. law, there are scenarios in which consumer protection concerns could arise. For example, if a firm were to break a promise or misrepresent that it would refrain from engaging in personalized pricing, it would harm . . . those consumers who found the promise material to their purchase decision. Further, although the use of consumer data to tailor prices alone would not violate the FTC Act in the absence of deception or unfairness, if the data feeding a pricing algorithm were collected or used in a manner that violated a material promise, it could cause consumer harm and implicate the FTC Act. For example, the FTC has charged digital advertising platforms with violations of the FTC Act for falsely representing the ability of consumers to restrict online or location tracking.

[18] Personalized pricing also could violate antidiscrimination law if pricing were based on certain protected consumer characteristics. For example, the FTC enforces the Equal Credit Opportunity Act (ECOA), which prohibits credit discrimination on the basis of race, color, religion, national origin, sex, marital status, age, or the receipt of public assistance. Offering prices for credit based on these protected characteristics could trigger the ECOA. Other equal opportunity laws, such as Title VII, the Age Discrimination in Employment Act, the Fair Housing Act, and the Genetic Information non-discrimination Act, protect consumers from “disparate treatment” or “disparate impact,” based on protected characteristics, such as race, gender, religion, age, disability status, national origin, marital status, and genetic information. Personalized prices (or wages) based on some of these protected characteristics could implicate some of these laws.

[19] Finally, the FTC also enforces the Fair Credit Reporting Act (FCRA), which covers the reporting of consumer data by consumer reporting agencies, when the data are used for decisions about credit, employment, insurance, or similar eligibility requirements. In some circumstances, determining eligibility for access to certain price offers (e.g., interest rates, rent, or insurance rates) could trigger FCRA requirements.

[20] Antitrust and consumer protection law are complementary tools conceived to assure that markets function for consumers. Antitrust enforcement polices the market for behavior that unreasonably restricts the competitive process, while consumer protection enforcement is designed to remove deception and fraud from the marketplace. In the absence of accompanying anticompetitive, unfair, or deceptive conduct, personalized pricing, in and of itself, provides no justification for intervention under either body of law, as the practice does not appear to hinder market function and, indeed, has the very real potential to increase welfare. In light of the theoretical ambiguities and with virtually no real-world experience on which to evaluate the practice, there is not a compelling case for banning personalized pricing.

NOTES

- 1) What do you make of then-Acting-Chair Ohlhausen’s proposal to use the “guy called Bob” test to appraise the legality of algorithmic conduct? Where and in what ways do you think that approach is most, and least, persuasive?
- 2) Some writers, like Jon Baker, have examined the “political bargain” that underpins the antitrust laws (*i.e.*, the underlying set of political interests and demands for certain kinds of antitrust policy).¹⁵⁵ Suppose that the advent of algorithmic pricing means that tacit collusion will become much more common and much more

¹⁵⁵ Jonathan B. Baker, *Preserving a Political Bargain: The Political Economy of the Non-Interventionist Challenge to Monopolization Enforcement*, 76 Antitrust L.J. 605 (2010).

effective, so prices will likely rise economy-wide. How do you think this will change the political acceptability of existing antitrust doctrine, and what specific changes to the law do you think could result?

- 3) What do you make of this statement? “Algorithmic collusion—whatever we might mean by that—might be a serious risk in settings where each firm charges a single nondiscriminatory price. But the advent of personalized pricing will be a helpful antidote to that concern. That’s because it will make it practically impossible for firms to monitor and enforce implicit terms of coordination, and will instead lead to aggressive competition for the business of each individual consumer. So if you’re worried about algorithmic coordination, you should welcome algorithmic discrimination!”
- 4) Look back at the *RealPage* decision. How much weight is the court putting on the fact of pure parallelism to infer an agreement among competing landlords? What is the court relying on beyond parallel conduct?
- 5) How, if at all, would the *RealPage* analysis be different if the pricing recommendations were coming from a guy called Bob rather than the RMS algorithm?
- 6) How would you summarize Ramsi Woodcock’s argument that personalized pricing should violate Section 2? What do you find most and least persuasive about that approach—and why do you think courts do not currently do this?
- 7) The OECD submission suggests that personalized pricing may be more of a consumer-protection concern than an antitrust one. Do you agree? And do you think there are any circumstances in which the presence of consumer protection concerns should affect the antitrust analysis of a practice?

3. Social Networking: Big Tech Merger Policy

Few topics in “digital markets antitrust” have a higher profile than merger policy. Are mergers in “tech sectors” (and what *are* those exactly?) more harmful or risky than those in other sectors? Have the antitrust agencies been asleep at the wheel in their handling of tech mergers—and, if so, which deals should have been challenged? Do we need special rules, presumptions, enforcement policies, or merger-notification laws for acquisitions by Big Tech firms? When a major digital platform acquires a complementary business with a view to integrating it into the platform, should we be alarmed? Should enforcers hesitate before challenging a consummated deal that was reviewed, and not challenged, by the agencies when originally concluded? These and countless other questions have been the subject of lively debate among enforcers, scholars, practitioners, and legislators for some years.¹⁵⁶

Several themes combine to make tech merger policy a particularly tricky area. One is the prominence of concerns about Big Tech buying up businesses that are not yet important rivals but which might become so in the future. These acquisitions might involve nascent competitors (*i.e.*, new or emerging businesses that are already in, or entering, the relevant market) or potential competitors (*i.e.*, businesses that are not yet active in the relevant market but which could or will become so in future) of the acquirer.¹⁵⁷ Analyzing such deals can require peering into an uncertain future: it may not even be clear what the target’s product or service will look like, nor whether it will really turn out to be a competitive success or a genuine threat. This uncertainty can make antitrust analysis hard for businesses, enforcement agencies, and courts. As you might imagine, views differ regarding the right level of risk aversion in digital merger policy, and the right way to execute Section 7’s “prophylactic” function of prohibiting mergers for which the effect “may be” substantially to lessen competition or to tend to create a monopoly.¹⁵⁸

Another challenge arises from the fact that some deals in this category—particularly those involving the acquisition of a new or startup business—may fall beneath the HSR Act’s merger notification thresholds, perhaps denying

¹⁵⁶ See, e.g., Babette Boliek, *Antitrust and High Tech: A Tale of Two Mergers*, 71 Emory L.J. 933 (2022); Robert W. Crandall and Thomas W. Hazlett, *Antitrust in the Information Economy: Digital Platform Mergers*, 65 J.L. & Econ. S499 (2022); Geoffrey Parker, Georgios Petropoulos & Marshall Van Alstyne, *Platform Mergers and Antitrust*, 30 Indus. & Corp. Change 1307 (2021); Kevin A. Bryan & Erik Hovenkamp, *Startup Acquisitions, Error Costs, and Antitrust Policy*, 87 U. Chi. L. Rev. 331 (2020); C. Scott Hemphill & Tim Wu, *Nascent Competitors*, 168 U. Pa. L. Rev. 1879 (2020); Anne C. Witt, *Big Tech Acquisitions: The Return of Conglomerate Merger Control?* Concurrences (2020); Carl Shapiro, *Protecting Competition in the American Economy: Merger Control, Tech Titans, Labor Markets*, 33 J. Econ. Persp. 69 (2019); Wilson C. Freeman & Jay B. Sykes, Congressional Research Service, ANTITRUST AND “BIG TECH” (Sept. 11, 2019); Ilene Knable Gotts, Scott Sher & Michele Lee, *Antitrust Merger Analysis in High-Technology Markets*, 4 Eur. Comp. J. 463 (2008).

¹⁵⁷ See *supra* § VIII.B.2.(c) (merger analysis in nascent and potential competition cases).

¹⁵⁸ See, e.g., Herbert Hovenkamp, *Prophylactic Merger Policy*, 70 Hastings L.J. 43 (2018); see *supra* § VIII.A. (Section 7 overview).

the agencies an opportunity to examine the deal before it closes.¹⁵⁹ By the time such a deal is on the agencies' radar, enforcers may face tremendous difficulties in unwinding it or devising an effective remedy for any harms.

A third difficulty, in at least some tech merger cases, lies in measuring and predicting effects when digital products and services are provided for free and therefore lack a money price. It's one thing to say that welfarist antitrust analysis cares about quality and innovation of a social network or other tech product, but quite another to figure out what "quality" or "innovation" effects look like, or how they should be measured in some specific case.¹⁶⁰

And yet more puzzles can arise from market definition in an economy of differentiated, partly-substitutable online products and services.¹⁶¹ Many digital offerings are provided by integrated platforms or other businesses that furnish multiple services at once, many of which may be able to add new features and services by rolling out updates and tweaks. In such circumstances, it can be difficult to figure out who is a competitor, entrant, or out-of-market player.

So, for these and other reasons, tech merger policy is hard! Some writers propose that an elevated standard of scrutiny should apply to such deals, citing the risks that an incumbent tech monopolist might simply buy up promising competitors rather than compete against them.¹⁶² In a related vein, some suggest that market features like network effects and "ecosystem lock-in" make it particularly important to maintain a vigilant guard against harmful acquisitions: particularly acquisitions of targets that are well placed to exploit a change in demand or technology that might weaken an incumbent's grip on the market.¹⁶³ Some writers have emphasized the risk of "killer acquisitions," in which a target business is purchased only to be effectively destroyed rather than utilized; others suggest that such acquisitions are rare.¹⁶⁴ And some have charged a generational failure by enforcers to scrutinize tech deals.¹⁶⁵ Indeed, some legislators have proposed specific statutory curbs on the ability of Big Tech companies to merge with, or acquire, other businesses.¹⁶⁶

On the other side of the debate, others emphasize the benefits of integrating innovative new technologies with the largest platforms where they can reach the most users. They warn that the possibility of being acquired by a Big Tech firm is a crucial driver of the incentive to innovate and invest in the first place, so cracking down too heavily on acquisitions might result in less innovation and entry.¹⁶⁷ And some writers suggest that if we're looking for sectors of the economy that seem to have stagnated and stultified, the tech sector should be nowhere near the top of our list!¹⁶⁸ Sounding a similar note, some suggest that the idea that there is a long string of notorious tech mergers that should clearly have been challenged when they were announced is overblown, emphasizing the

¹⁵⁹ For more information about the HSR Act and the practice of merger review, see *supra* § XI.E.

¹⁶⁰ See generally, e.g., John M. Newman, *Antitrust in Zero-Price Markets: Applications*, 94 Wash. U. L. Rev. 49 (2016).

¹⁶¹ See, e.g., Sarah Oxenham Allen, Brian Christensen, Joseph Conrad, Nicholas Grimmer & Jennifer Pratt, *Market Definition in the Digital Economy: Considerations for How to Properly Identify Relevant Markets*, AAI White Paper (June 17, 2020); Geoffrey A. Manne, *Error Costs in Digital Markets* in GAI, *THE GLOBAL ANTITRUST INSTITUTE REPORT ON THE DIGITAL ECONOMY* (2020) 103–08.

¹⁶² See, e.g., Tommaso Valletti, *How to Tame the Tech Giants: Reverse the Burden of Proof in Merger Reviews*, PROMARKET (June 28, 2021) ("The solution is to reverse the burden of proof with what we call a 'rebuttable structural presumption.' Instead of making the regulator prove that a merger will cause harm, make the merging parties prove that it won't. Start with a list of firms that are super-big in size, systemic importance, or economic power (that's the structural bit) and revise the list every five years."); Diana L. Moss, *The Record of Weak U.S. Merger Enforcement in Big Tech*, American Antitrust Institute White Paper (July 8, 2019) (calling for "stronger presumptions" for Big Tech deals).

¹⁶³ A concern of this kind is arguably discernible in the 2023 Merger Guidelines' introduction of a Guideline focused on the entrenchment or extension of a dominant position. See U.S. Dept. of Justice & FTC, *MERGER GUIDELINES* (2023) § 2.6.

¹⁶⁴ Colleen Cunningham, Florian Ederer & Song Ma, *Killer Acquisitions*, 129 J. Pol. Econ. 649 (2021); Oliver Latham, Isabel Tecu & Nitika Bagaria, *Beyond Killer Acquisitions: Are There More Common Potential Competition Issues in Tech Deals and How Can These Be Assessed?* CPI Antitrust Chronicle (May 2020); Marc Ivaldi, Nicolas Petit & Selçukhan Ünekbaş, *Killer Acquisitions in Digital Markets May Be More Hype Than Reality*, VoxEU (Sept. 15, 2023).

¹⁶⁵ See, e.g., AI Now Institute, *Antitrust and Competition: It's Time for Structural Reforms to Big Tech* (Apr. 11, 2023) ("Over the past two decades, a handful of tech firms have adopted policies and infrastructural designs that enabled them to grow their power massively. They were enabled by conservative and hands-off enforcement of antitrust laws[.]").

¹⁶⁶ See, e.g., Sen. Amy Klobuchar, Press Release, *Klobuchar, Cotton Introduce Bipartisan Legislation to Protect Competition and Consumer Choice Online* (Nov. 5, 2021) (describing the proposed "Platform Competition and Opportunity Act").

¹⁶⁷ See, e.g., D. Daniel Sokol, *Vertical Mergers and Entrepreneurial Exit*, 70 Fla. L. Rev. 1357 (2018).

¹⁶⁸ See, e.g., Herbert Hovenkamp, *Gatekeeper Competition Policy*, Mich. Tech. L. Rev. (forthcoming 2023) ("Whenever enforcement resources are limited, as they typically are, it is important that they be spent in the right place. For antitrust policy, the right places are markets and products that exhibit stagnant growth, stable market shares, lack of new entry, signs of oligopoly or widespread price fixing, or lack of innovation. Focusing on the internet economy is a bad choice on every score.").

difficulties in showing that many high-profile tech deals were or are actually harmful; the modest odds of success before (generally skeptical) courts; the opportunity costs of litigating a novel, complex case; and the complicated relationship between acquisitions and innovation.¹⁶⁹

The following two extracts showcase some prominent scholarly perspectives on the direction of tech merger policy. Scott Hemphill and Tim Wu put the spotlight on antitrust’s treatment of nascent (*i.e.*, emerging) rivals, while Danny Sokol emphasizes the relationship between merger policy and entrepreneurial incentives, particularly in the context of vertical deals. Are these two perspectives contrasting? Complementary? What does the Hemphill-Wu perspective featured here imply for our analysis of vertical deals? How might the argument of the Sokol extract apply to horizontal deals? And to what extent are these authors’ themes and arguments specific—or applicable with special force—to tech markets, rather than to all mergers?

C. Scott Hemphill & Tim Wu, Nascent Competitors

168 U. Pa. L. Rev. 1879 (2020)

Government enforcers have expressed interest in protecting nascent competition, particularly in the context of acquisitions made by leading online platforms. However, enforcers face a dilemma. While nascent competitors often pose a uniquely potent threat to an entrenched incumbent, the firm’s eventual significance is uncertain, given the environment of rapid technological change in which such threats tend to arise. That uncertainty, along with a lack of present, direct competition, may make enforcers and courts hesitant or unwilling to prevent an incumbent from acquiring or excluding a nascent threat. A hesitant enforcer might insist on strong proof that the competitor, if left alone, probably would have grown into a full-fledged rival, yet in so doing, neglect an important category of anticompetitive behavior. [. . .]

Enforcers have several options for protecting nascent competition, including Section 7 of the Clayton Act, Section 2 of the Sherman Act, and, for the FTC, Section 5 of the FTC Act. Section 7 applies to acquisitions and is the standard antitrust tool for drawing the line between dangerous and benign mergers, prohibiting deals whose effect may be substantially to lessen competition, or to tend to create a monopoly. [. . .]

When an incumbent acquires a nascent competitor, the government, to build a *prima facie* case, will be required to make some demonstration that the acquisition is anticompetitive. In that undertaking, several forms of evidence may be relevant, including the beginnings of direct competition, or the existence of competition in markets adjacent to the incumbent’s primary market, which would be lost if the deal is permitted. [. . .]

If the plaintiff presents evidence sufficient to build a *prima facie* case that the acquisition is anticompetitive, the parties will have the opportunity to offer a procompetitive justification for the transaction. . . .

One particularly important justification is “incubation”: that the acquirer improves the targeted business in a fashion that would otherwise never occur. However, credit for incubating a startup is subject to the caveat, common to all merger analysis, that the benefit must be a merger specific efficiency. Consider, for example, Facebook’s acquisition of Instagram. Facebook has argued that the purpose of this acquisition was to incubate a promising company, not to cabin a future threat, and that Instagram only proved a success because of the care, attention, and engineering talent that it supplied.

Incubation claims merit careful consideration. To make the case that its acquisition was a merger-specific efficiency, an acquirer would need to present evidence that similar benefits could not have been achieved if the target had been allowed to grow on a standalone basis or in the hands of an alternative acquirer. Such a case would need to contend with contrary evidence, where present, of the funding and support offered (or available) from alternative acquirers or independent investors. When one or more alternatives are similarly well positioned to fuel the firm’s growth, a claim of merger-specific efficiencies is likely to fail.

As this suggests, in the evaluation of the competitive effects, the difficult challenge is to distinguish an anticompetitive acquisition from a harmless or procompetitive deal. Given the uncertainties and faced with a lack

¹⁶⁹ See, e.g., Joe Kennedy, *Monopoly Myths: Is Big Tech Creating “Kill Zones”?* ITIF WHITE PAPER (Nov. 2020).

of clear economic evidence of effects, we suggest that strong evidence of anticompetitive intent is a fruitful way to draw the line. The relevant intent that we have in mind is that the incumbent sought to eliminate a competitive threat, and that the acquisition was designed to accomplish that goal. Intent evidence of this kind is useful as a way to shed light on the acquisition's effects. It helps the court to interpret facts and to predict consequences. An enforcer should look for, and the court should weigh, such evidence in its various forms.

Intent evidence in antitrust cases is frequently criticized, and we agree with some of the criticism. To be clear, we do not favor liability simply because an investigation uncovers a sales manager's expressed wish "to destroy the competition." Such evidence lacks probative value. What agencies and courts should care about, as always, is evidence of an anticompetitive plan, design, or program. We do not attempt to enumerate all the types of evidence that might be relevant to an evaluation of intent, but focus on several that are particularly important in practice.

The simplest form of intent evidence is documents showing a specific concern with future threats, coupled with conduct that eliminates the threat. When the parties say something specific and detailed about their anticompetitive plan, we should believe them. . . .

Beyond documentary evidence, an anticompetitive design might also be shown by conduct. For example, a firm's broader pattern of acquiring nascent competitors sheds light on its intent in making each acquisition. Such evidence might be reinforced by proof of an internal program to identify rising competitors that matches the firm's completed and attempted acquisitions.

Economic evidence of sacrifice, though not an essential identifying feature, would buttress the proof of intent. For example, an overpayment to acquire the firm, compared to the benchmark offers of other would-be acquirers, may suggest an anticompetitive purpose, though consideration must be given to benign explanations for the premium, including an incumbent's superior information about the standalone value of the firm. Moreover, a firm pursuing a defensive acquisition strategy may be willing to repeatedly overpay to acquire relative longshots in order to preserve its position, as opposed to developing the business. A track record of multiple acquisitions of nascent competitors that turned out in retrospect to be duds is a further indication of such sacrifice.

D. Daniel Sokol, Vertical Mergers and Entrepreneurial Exit

70 Fla. L. Rev. 1357 (2018)

Antitrust populism is on the rise. This populism has taken on a "big is bad" emphasis, particularly against tech companies. Under such an approach, large firms are to be feared and vertical mergers by such firms (acquisitions of smaller tech companies) are to be treated with particular suspicion, both in the United States and Europe. In the United States, even the traditionally mainstream press, with its own business model threatened, has at times shown bias against vertical mergers and has even asked for antitrust immunity in its own vertical relations with online platforms. This backlash against tech—and the use of antitrust as a tool against large tech companies—has attracted support from left and right wing populist forces. [. . .]

The current set of policy presumptions on vertical mergers, for both opponents and proponents of the current system, is often based on the same handful of empirical industrial organization studies. Yet, the debate has overlooked important empirical contributions regarding innovation-related mergers in the strategy literature. This strategy literature identifies a procompetitive basis that supports vertical mergers as efficiency enhancing. Such a literature solidifies the current vertical merger presumption that agencies undertake in their analysis, which favors a procompetitive vertical merger policy for purposes of enforcement.

The procompetitive benefit of a presumption of merger approval for vertical mergers does not end with the synthesis of an under-explored literature. Rather, the broader implications of vertical mergers and presumptions of legality have another overlooked implication—a change of policy may dampen entrepreneurial investment and innovation.

Entrepreneurial exit is critical to a well-functioning entrepreneurial ecosystem, as the possibility of entrepreneurial exit via vertical merger is now the most usual form of liquidity event/exit for founders and venture capitalists. Vertical merger policy that would unduly restrict large tech firms from undertaking acquisitions in industries as

diverse as finance, pharmaceuticals, medical devices, hardware, and internet platforms would hurt incentives for innovation in the economy by chilling business formation in start-ups. Increased difficulty in the exit for founders and venture capitalists makes investment in such ventures less likely, since the purpose of such investment is to reap the rewards of scaling a venture to exit. Thus, a general inference that makes vertical acquisitions, particularly in tech, more difficult to approve leads to direct contravention of antitrust's role in promoting competition and innovation. [. . .]

Antitrust has not effectively integrated knowledge about the start-up ecosystem. Such knowledge is critical to understand vertical mergers and acquisitions that impact questions of competitive effects dealing with nascent acquisitions. Investment by incumbent firms to acquire nascent firms implicates issues of corporate venture capital; non-financial investments in nascent firms via contract such as strategic alliances and joint ventures; and the entrepreneurial ecosystem, that includes, among other components, venture capitalists, and angel investors. This study of ecosystems is critical as one strategy of established tech firms is to push R&D in new products or services down to startups as a way to decrease or shift risk. The more successful startups are then acquired by larger technology firms. [. . .]

One aspect that is missing in the antitrust discussion is the broader structural shift that a change of merger policy would mean to how the innovation ecosystem is structured, based on the ability for entrepreneurs and venture capitalists to exit their investments. This discussion is beyond antitrust doctrine. However, this implication of entrepreneurial exit (fewer initial public offerings (IPOs) and more vertical mergers) impacts competition policy, market structure, and innovation.

Traditionally, the goal of entrepreneurial exit was an IPO. Today, there are far fewer IPOs in the United States than in prior years. Indeed, between few new listings and an increase in delistings, the number of publicly traded companies is much smaller than it has been historically. [. . .]

The lack of IPOs has implications for entrepreneurial exit. An IPO allows exit for the early investors in a firm through a public offering of securities. The nature of the securities regime shapes the opportunities for firms to exit through IPOs, but with IPOs now scarce, vertical mergers are the default for entrepreneurial exit. Given that many businesses are built for exit via vertical merger, to close off this form of entrepreneurial exit at a time when the IPO market is at a significant low would chill innovation.

* * *

Personal social networking services—services that allow users to share personal content with friends and family online—have been front and center in discussions about tech merger policy. In particular, the acquisitions by Facebook (now Meta) of Instagram (in 2012) and WhatsApp (in 2014)—both of which were reviewed but not challenged by the FTC—have attracted considerable public attention. In 2020, the FTC filed a suit challenging these acquisitions as elements of an ongoing practice of monopolization, on the ground that Instagram constituted a particularly promising nascent competitor in the personal social networking market, while WhatsApp constituted an important potential competitive threat given its position in the mobile messaging market.

There has been plenty of other action on the tech merger front in recent years. Meta's subsequent attempt in 2021 to acquire the VR app company Within provided another opportunity for enforcers to test the bounds of potential-competition merger law: in rejecting the FTC's challenge to that deal, the district court took the opportunity to provide an extended discussion of the law that governs potential-competitor acquisitions.¹⁷⁰ The FTC's 2022 challenge to Microsoft's acquisition of the video game developer Activision was also knocked back by the district court, on the ground that the FTC had not established a sufficient basis for its concerns about anticompetitive foreclosure of rivals.¹⁷¹ The Justice Department's 2023 ad-tech-focused monopolization complaint against Google (not to be confused with its 2020 search foreclosure monopolization case, excerpted above!¹⁷²) included a challenge to several consummated Google acquisitions which were alleged to form part of a multi-year practice of

¹⁷⁰ *FTC v. Meta Platforms Inc.*, 654 F. Supp. 3d 892 (N.D. Cal. 2023).

¹⁷¹ *FTC v. Microsoft Corp.*, __ F. Supp. 3d __, 2023 WL 4443412 (N.D. Cal. July 10, 2023).

¹⁷² See *supra* § XIV.C.1.a).

monopolization,¹⁷³ although the district court rejected those claims.¹⁷⁴ And other enforcement actions have targeted high-technology businesses beyond the most prominent “Big Tech” platforms.¹⁷⁵

The agencies’ tech merger efforts have not been limited to litigation. In February 2020, the FTC launched a market study into non-reportable acquisitions by a selected set of technology companies—Alphabet/Google, Amazon, Apple, Facebook, and Microsoft—using its investigational powers under Section 6(b) of the FTC Act.¹⁷⁶ The announcement explained that the study was intended to “help the FTC deepen its understanding of large technology firms’ acquisition activity, including how these firms report their transactions to the federal antitrust agencies, and whether large tech companies are making potentially anticompetitive acquisitions of nascent or potential competitors that fall below HSR filing thresholds and therefore do not need to be reported to the antitrust agencies.”¹⁷⁷ In September 2021, the FTC published a 40-page report, which did not appear to identify any anticompetitive transactions or categories of transactions, but instead contained observations about the number and nature of the tech giants’ acquisitions.¹⁷⁸ (Do you think this implies that no anticompetitive transactions were found? Or that the FTC chose not to tackle that topic in the report?)

Let’s take a look at how courts analyze these cases in practice. The next two extracts present two district court perspectives on tech merger analysis: both involving FTC cases against Meta! In the first extract, the U.S. District Court for the District of Columbia considers the FTC’s challenge to the acquisition by Facebook of Instagram (on the ground that it was an important nascent personal social networking rival) and WhatsApp (on the ground that it was an important potential entrant into personal social networking), in light of Meta’s motion for summary judgment. In the second extract, the U.S. District Court for the Northern District of Columbia considers the FTC’s motion for a preliminary injunction to halt Meta’s intended acquisition of Within, the developer of the virtual reality fitness app Supernatural, on the ground that the acquisition eliminated the prospect that Meta would itself have entered the VR fitness-app market but for the acquisition. The FTC won one and lost one of these battles: that is, it persuaded the court to deny Meta’s motion for summary judgment in the Instagram and WhatsApp matter, but it was unable to persuade the court to issue a preliminary injunction to halt the planned Within acquisition.

Note the different legal provisions at issue in these two cases. Does it matter that the Instagram-WhatsApp case is a monopolization challenge under Section 2 of the Sherman Act, while the Within case was brought under Section 7 of the Clayton Act? Should the legal standards be different or the same in merger cases? (You may want to think, among other things, about Section 2’s “reasonably capable” causation standard; the “may be” language in Section 7; the role of the structural presumption under Section 7; the kinds of effects analysis required under each provision; and the difference between justification analysis under Section 2 and efficiencies analysis under Section 7. What are the consequences of having different merger legality standards under the two provisions?)

And note also that the Instagram and WhatsApp deals were long consummated, while the Within acquisition was merely proposed. What are the advantages and disadvantages, for an enforcer, of waiting until post-consummation to challenge a deal? How do you think consummation might affect the court’s analysis of liability or remedy? Should agencies hesitate before challenging a consummated deal? What are the advantages, and disadvantages, of waiting a few years to see if prices rise or quality falls?

FTC v. Meta Platforms, Inc.

__ F. Supp. 3d __, 2024 WL 4772423 (D.D.C. Nov. 13, 2024)

Judge Boasberg.

¹⁷³ See Complaint, *United States v. Google LLC*, Case No. 1:23-CV-108 (E.D. Va. filed Jan. 24, 2023) ¶ 319.

¹⁷⁴ *United States v. Google LLC*, __ F. Supp. 3d __, 2025 WL 1132012, at *36–37 (E.D. Va. Apr. 17, 2025).

¹⁷⁵ See, e.g., FTC, Press Release, *Statement Regarding Termination of Nvidia Corp.’s Attempted Acquisition of Arm Ltd.* (Feb. 14, 2022) (semiconductor chips); FTC, Press Release, *Statement Regarding Illumina’s Decision to Divest Grail* (Dec. 18, 2023) (cancer testing).

¹⁷⁶ See *supra* § XI

¹⁷⁷ FTC Press Release, *FTC to Examine Past Acquisitions by Large Technology Companies* (Feb. 11, 2020).

¹⁷⁸ FTC, *NON-HSR REPORTED ACQUISITIONS BY SELECT TECHNOLOGY PLATFORMS, 2010–2019: AN FTC STUDY* (Sept. 2021).

[1] How times have changed. Not so long ago, a company called Facebook so dominated the provision of personal social-networking [“(PSN”)”] services that a movie charting its rise was entitled simply “The Social Network.” Fifteen years later—and four years into the Federal Trade Commission’s antitrust suit against it—that company (now called Meta) argues that the market with which it was once nearly synonymous does not even exist. Gazing across an online landscape teeming with companies catering to every conceivable interest, Meta sees a bloody battle for users’ time and attention in which its products face withering competition. After over two years of discovery, it now moves for summary judgment on the FTC’s claims that it violated Section 2 of the Sherman Act through its acquisitions of Instagram and WhatsApp. [. . .]

[2] Merely possessing monopoly power . . . does not violate Section 2. It is only when a monopolist engages in anticompetitive conduct that the Sherman Act is properly invoked. . . . [The FTC] alleges that Meta engaged in such conduct by acquiring Instagram and WhatsApp. . . .

[3] In evaluating these, the Court is guided by the Circuit’s holding in *Microsoft*. . . . [T]he *Microsoft* court articulated several principles that emerge from a century of case law on monopolization under § 2. First, to be condemned as exclusionary, a monopolist’s act must have an anticompetitive effect. That is, it must harm the competitive process and thereby harm consumers. Second, the plaintiff, on whom the burden of proof of course rests, must demonstrate that the monopolist’s conduct indeed has the requisite anticompetitive effect. Third, if a plaintiff successfully establishes a prima facie case under § 2 by demonstrating anticompetitive effect, then the monopolist may proffer a procompetitive justification for its conduct. And fourth, if the monopolist’s procompetitive justification stands un rebutted, then the plaintiff must demonstrate that the anticompetitive harm of the conduct outweighs the procompetitive benefit. [. . .]

[4] [I]t is hard to imagine an action that better fits the definition of conduct with anticompetitive effects than a monopolist’s buying out its rivals. It has been long established . . . that a horizontal merger between two competitors that produces a firm controlling an undue percentage share of the relevant market is presumptively anticompetitive. Extending that logic, horizontal acquisitions must also presumptively qualify as anticompetitive when one of the merging firms is already a monopolist, as is the case in any monopoly-maintenance suit. [. . .]

[5] . . . The key question in this case thus becomes whether Instagram and WhatsApp reasonably constituted nascent threats (or actual competitors) at the time Meta acquired them. If so, then the Commission has made out a prima facie case of monopolization, and the burden shifts to Meta to show that the acquisitions nonetheless have sufficient procompetitive justifications. [. . .]

[6] [I]f the acquiring firm itself—a rational economic actor in possession of relevant information about the market’s competitive dynamics—reasonably viewed the acquisition as a nascent competitor, that is likely to be highly probative evidence that the acquired firm constituted such a threat. This approach aligns with the accepted rule that evidence of anticompetitive intent is relevant only to the extent it helps us to understand the likely effect of the monopolist’s conduct. [. . .]

Instagram

[7] The FTC’s story of the Instagram acquisition begins with what it calls the “shift to mobile”: a period beginning in 2010 with the launch of the iPhone 4 where the competitive dynamics of social media shifted. Designed for desktop computers, Facebook had enormous disadvantages in adapting to the new environment compared to “mobile first” start-ups. According to the FTC, moreover, Facebook’s transition to mobile was not going well: users complained of the mobile application’s poor quality, lack of speed, and propensity to crash, even as, by 2012, most of its users were accessing Facebook on their mobile devices. The application’s photo features were a particular pain point. In 2012, for instance, Zuckerberg wrote that “when you look at Instagram and Path and then go back to our Newsfeed, it looks like ours was built in the stone age.” A few months later, he admitted that Facebook was “behind” Instagram in developing a compelling mobile experience.

[8] Meta, meanwhile, fretted over the challenge posed by Instagram. Zuckerberg noted in 2011 that Instagram was “kick[ing] ass,” and he worried that “they could easily add pieces of their service that copy what we’re doing now,” which could pose “a real issue for Meta.” “[F]rom a defense perspective,” a Meta engineer also told Zuckerberg, Instagram was a “compelling” acquisition “because of the potential for someone like Apple to use

them as a foothold.” By February 2012, Zuckerberg described Meta as “very behind” Instagram, and the prospect of having to catch up was “really scary”—so Meta “might want to consider paying a lot of money” to acquire it. Four months later, his worries only intensified. He noted that Instagram could “hurt Meta meaningfully” by shifting “a core use case” away from Meta, and that “it’s kind of going to be tough to dislodge” Instagram.

[9] . . . [T]he case for acquiring Instagram focused heavily on neutralizing a competitive threat. By February 2012, Zuckerberg was suggesting to colleagues that Meta “should consider buying Instagram, even if it costs ~\$500m” because “they seem to have two things that we don’t: a really good camera and a photo-centric sharing network.” On camera features, he worried that it would take Meta “a huge amount of work” and “too long to catch up to Instagram, if we even will,” and the company would thus “be very behind in both functionality and brand on how one of the core use cases of Facebook will evolve in the mobile world, which is really scary and why we might want to consider paying a lot of money for this.” Discussing the potential acquisition with his CFO, Zuckerberg wrote that Instagram and another potential acquisition target—Path—were “nascent but the networks are established, the brands are already meaningful[,] and if they grow to a large scale they could be very disruptive to us.” He then wrote that his purpose in acquiring Instagram and potentially other startups would be a combination of “neutralizing a potential competitor” and “integrating their products with ours in order to improve” Meta’s service.

[10] He then explained his reasoning at length:

The basic plan would be to buy these companies and leave their products running while over time incorporating the social dynamics they’ve invented into our core products.

One thing that may make [neutralizing a potential competitor] more reasonable here is that there are network effects around social products and a finite number of different social mechanics to invent. Once someone wins at a specific mechanic, it’s difficult for others to supplant them without doing something different

[Integrating their products to improve Meta] is also a factor but in reality we already know these companies’ social dynamics and will integrate them over the next 12–24 months anyway. The integration plan involves building their mechanics into our products rather than directly integrating their products if that makes sense.

One way of looking at this is that what we’re really buying is time. Even if some new competitors spring up, buying Instagram, Path, Foursquare, etc. now will give us a year or more to integrate their dynamics before anyone can get close to their scale again. Within that time, if we incorporate the social mechanics they were using, those new products won’t get much traction since we’ll already have their mechanics deployed at scale.

[11] In light of these justifications, Zuckerberg and his team were willing to pay a pretty penny to buy Instagram. By April 2012, he was expressing the view that Instagram could be worth the “really expensive—probably ~\$1 billion” cost because it was “pretty threatening” and could “hurt Meta meaningfully.” Sure enough, Meta paid \$1 billion to acquire the company.

[12] This evidence is sufficient to convince a reasonable factfinder that Instagram was already a competitive threat to Meta at the time of its acquisition; that few other firms posed a comparable threat; and that Meta’s acquisition of Instagram while it enjoyed monopoly power was thus presumptively anticompetitive. Were there doubt, however, Plaintiff has also provided evidence of specific harms to consumers. Most relevantly, Instagram’s ad load has grown enormously over time: by 2022, ad load on Instagram Feed was [Redacted] what it was in 2015, while the increase on Instagram stories was [Redacted] the 2015 level. That includes a [Redacted] over just one year, from 2017–18, over the objections of [an Instagram co-founder]. In addition, Meta has been able to adjust ad loads on both Instagram and Facebook to make up for revenue shortfalls on one of the products. Because displeased users would simply switch between the products, “Meta knew it would recapture ad revenues” lost on one platform from the switching.

[13] The FTC has collected other evidence, moreover, of consumer harm, including Meta’s explicit policy of not prioritizing Instagram’s growth so as not to cannibalize too much from Facebook; [and] declining user sentiment

on privacy Finally, Plaintiff points out that Defendant decided to discontinue Facebook Camera—its competitive response to Instagram—as a standalone application shortly after the acquisition. [. . .]

WhatsApp

[14] Unlike Instagram, WhatsApp was not Meta’s actual competitor when acquired. Instead, the FTC’s theory is that WhatsApp was a nascent competitor: a messaging application with the potential to expand into the PSN market. Although Plaintiff’s evidence on this front is less extensive than it is for Instagram, it also creates a triable issue of fact over whether the WhatsApp acquisition was anticompetitive.

[15] The switch to mobile again provides the starting point for this tale. As part of that transformation, OTT [“over the top”] mobile-messaging applications—which relied on the internet to send messages—became newly available. One such application was Meta’s own Facebook Messenger; another was WhatsApp. As previously recounted, WhatsApp grew quickly, especially overseas. Meta executives assessed at the time that WhatsApp was outperforming Facebook Messenger along multiple dimensions, including its ability to notify users that they had received a message. As a result, more users relied on WhatsApp than on Messenger to send messages.

[16] The real danger, however, was not WhatsApp’s dominance of OTT mobile messaging. It was the possibility that it might pivot into providing PSN services. As Plaintiff notes, other OTT mobile-messaging services had made such a pivot in Asia by 2012, mostly to grand success. Meta executives, noting WhatsApp’s growth as a messaging service, began tracking such pivots. Leadership was openly nervous: one internal presentation called mobile messengers “one of the most significant competitive threats Meta faces” because they were “increasingly moving into core social-networking product areas,” posing “a direct threat to Meta’s primary products.” In February 2013, Zuckerberg told Meta’s board of directors that he wanted to “use M&A to build a competitive moat around Meta on mobile and ads.” He explained that “the biggest competitive vector for Meta is for some company to build out a messaging app for communicating with small groups of people, and then transform that into a broader social network.” A month later, he wrote of “rumors of WhatsApp” doing just that. A different Meta executive said in an email that this possibility kept him “awake every night.”

[17] Record evidence suggests that these fears had some basis in reality. WhatsApp may have been capable of the pivot: the FTC’s expert witness opined that it showed “extraordinary promise as indicated by industry metrics for scale, growth, and engagement.” Sequoia Capital, a prominent venture firm that took a seat on WhatsApp’s board as part of its growth-round investment, provided comprehensive assistance to WhatsApp, from hiring, to acquisitions, to money management and more. Such evidence supports the thesis that WhatsApp could have pulled off an expansion into new markets. In addition to the capability to pivot, moreover, WhatsApp had a reason to do so: it needed a viable monetization approach. . . . Advertising typically provides such a path, but it was a poor match for a messaging service because it detracted from the user experience significantly.

[18] Meta also appeared to worry that another company could snap up WhatsApp and develop it into a PSN service. By April 2012, Zuckerberg was under the impression that WhatsApp had turned down a sizable offer from Google and stated that he was willing to pay \$1 billion “if Meta could get them.” Meta leadership speculated that Google would be interested in trying again, especially after the failure of its own PSN service, Google+. That outcome, all agreed, would be a major issue for Meta. And, as it turns out, Google had been trying to buy WhatsApp—since at least 2010 . . . —potentially to develop it (according to one Google presentation) “into a mobile social network.” Meta was also aware that other suitors, such as WeChat’s owner Tencent, were pursuing a WhatsApp acquisition.

[19] So, Meta acted. Spurred on by renewed interest from Google, Meta leadership began more explicit overtures to WhatsApp’s Jan Koum in early February 2014. By February 17, Meta’s board of directors had met to approve the acquisition, at a total cost of \$19 billion. Two days later, the acquisition was announced at that price. Plaintiff’s evidence suggests that most valuations of WhatsApp prior to that date, either explicit or implied, reached at most \$12.5 billion. It also suggests that Meta did not conduct such a valuation itself. Indeed, using a post-hoc valuation conducted by accounting firm KPMG at Meta’s behest in 2015, the FTC asserts that Meta incurred a \$10.9 billion or 135% transaction premium for its acquisition of WhatsApp.

[20] Defendant amusingly contends that the FTC’s narrative “makes Jack-and-the-Beanstalk sound like a documentary.” It points in rebuttal to several pieces of evidence that WhatsApp did not constitute the threat to Meta that the Commission claims, including statements from WhatsApp’s founders that it had no intention of pursuing growth in the U.S. market, pivoting into providing PSN services, or pursuing monetization via advertising, to which it had a “deep aversion.” Defendant also observes that several other messaging products could have been well positioned to make the pivot, putting pressure on the FTC’s theory that the acquisition of WhatsApp materially reduced competitive pressure on Meta. As for the story about Google’s interest in acquiring WhatsApp to build it into a PSN service? A “chain of speculation,” built on “spectral possibilities.”

[21] Whatever the persuasiveness of Meta’s arguments on this front, however—and they are surely stronger than its maneuvers regarding the Instagram acquisition—they merely raise the existence of deep factual disputes requiring the weighing of various pieces of evidence. At this stage, a reasonable factfinder could conclude, based on the evidence Plaintiff has presented, that WhatsApp constituted a nascent threat to Meta at the time of its acquisition, and that the merger was therefore anticompetitive. The evidence certainly provides reason to think that Meta feared WhatsApp’s potential as a nascent PSN service and that WhatsApp was capable of making such a pivot, as many of its rivals had done outside the United States. That evidence is sufficient to preclude summary judgment. [. . .]

Procompetitive Justifications

[22] Meta asserts ten categories of procompetitive justifications: six related to how it improved Instagram, three related to how it improved WhatsApp, and one related to how WhatsApp strengthened Meta’s strategic position against Apple and Google. The categories encompass, by the FTC’s count, approximately 120 discrete benefits—including, to take just a few examples, improving Instagram’s reliability by bringing to bear Meta’s “world-class data centers”; integrating Instagram more fully with Facebook and thus accelerating the acquisition’s growth; and making WhatsApp free for all users. [. . .]

[23] . . . Defendant has proffered evidence that the company was struggling with scaling its operations to match its growth. Integrity issues were, on Meta’s telling, rampant, which threatened to derail Instagram’s rise. Running on Amazon Web Services, the platform was “under water from an engineering perspective,” such that the founders felt that they had to devote themselves 24/7 to managing infrastructure problems or else Instagram would come “crumbling down.” Complete outages were not uncommon. What Meta therefore had to offer in any potential acquisition was the scale and expertise to address such challenges while incorporating into its product offering a platform that was, from the consumer’s perspective, highly successful.

[24] Record evidence supports that these opportunities motivated the merger with Instagram, at least in part. [. . .]

[25] As for WhatsApp, Meta likewise contends that the FTC’s story does not hold up . . . Substantial record evidence—including testimony from WhatsApp’s founders—disputes the notion that the messaging application was at all interested in pivoting into the PSN-services market. Indeed, Acton testified that there was no doubt in his mind that WhatsApp would not have made such a pivot and instead would have “continued on the trajectory it had been on” absent the acquisition. According to Koum, that was in part because of WhatsApp’s goal of staying “simple to use and elegant and not all burdened with all these complexities with these additional features,” unlike WhatsApp’s competitors in Asia that had pivoted into other markets. At the same time, however, WhatsApp struggled with fragile infrastructure and the lack of a clear path to monetization.

[26] Importantly for present purposes, Meta appears to have been aware of all of the above when formulating the case for the acquisition. Notes from Zuckerberg’s July 2012 meeting with Koum reveal that he knew that WhatsApp, for instance, “looked down on features in Asian clones” and “wanted to stay focused on messages” while remaining “small with no managers.” Documents from Meta’s board meeting to discuss the acquisition also describe multiple rationales for the transaction, including that it could “help Facebook grow by exposing Facebook to people who are not yet part of” it and “help WhatsApp grow by using Meta’s distribution, infrastructure, etc.” Finally, in answer to the FTC’s accusation that Defendant overpaid for the acquisition without conducting a valuation—thus negating any business case for it—Meta points to evidence that the board did conduct such a

valuation and that it showed that the price Meta paid was less than other companies paid in peer transactions on a per-user basis.

[27] In total, this evidence is sufficient to support a finding at trial that Meta’s procompetitive justifications for the acquisition of WhatsApp were not entirely pretextual. [. . .]

[28] Falling back to its second line of attack, the FTC argues that, regardless, these pretextual justifications miss the mark for the additional reason that they are not merger specific. The core of its argument is that any purported consumer-welfare gains from Meta’s investments in Instagram and WhatsApp could have been achieved if Defendant had instead invested in Facebook Camera and Messenger, so the acquisitions could not have been necessary to realize those benefits. . . .

[29] Meta [disputes], however, that it could have grown Messenger or Camera into comparable products. It points out that Camera was not designed to house “the dozens of non-camera features that Meta introduced to Instagram like direct messaging, video, Reels, Stories, Shop, and more,” and that Messenger was linked to Facebook’s social graph and thus was not seen—especially abroad — as a texting replacement the way WhatsApp was. These arguments illustrate a fundamental dynamic of digital applications that Plaintiff elsewhere harnesses to its advantage: differences in norms and usage, coupled with network effects, can differentiate products and cement early advantages. Record evidence from the FTC itself suggests that Camera’s substantial underperformance relative to Instagram in 2012 could not have been remedied merely by throwing more resources at it, especially in light of Instagram’s early lead in mobile photo-sharing and Meta’s stumbles in adjusting to a mobile-first environment. The Court is likewise aware of no evidence or testimony that the significant differences between Messenger and WhatsApp—which stem from the applications’ different purposes, contact infrastructure, and geographic reach—could have been bridged by adequate “investment” from Meta. . . .

[30] At the very least, a reasonable factfinder could find, on the current record, that there were no practical and more than merely theoretical alternatives to combining the unique product features of Instagram and WhatsApp with the infrastructure and resources of Meta. [. . .]

[31] For the foregoing reasons, the Court will . . . deny in [relevant] part . . . Meta’s Motion for Summary Judgment[.]

FTC v. Meta Platforms, Inc.
654 F. Supp. 3d 892 (N.D. Cal. 2023)

Judge Davila.

[1] This action was brought by [the FTC] to block the merger between a virtual reality (“VR”) device provider and a VR software developer. Defendant Meta Platforms Inc. (“Meta”) has agreed to acquire all shares of Within Unlimited, Inc. (“Within,” collectively with Meta, “Defendants”). The FTC has come before the Court to seek preliminary injunctive relief . . . to enjoin Defendants from consummating their proposed merger . . . pending the outcome of ongoing administrative proceedings before the FTC. [. . .]

[2] Defendant . . . Meta operates a collection of social networking platforms referred to as its “Family of Apps,” which includes Facebook, Instagram, Messenger, and WhatsApp. Meta also manufactures VR devices, such as the Quest 2 and the Quest Pro headsets, through its Reality Labs division. [. . .]

[3] Defendant Within Unlimited, Inc. is a privately held corporation organized under the laws of Delaware with headquarters in Los Angeles, California. . . .

[4] Within’s flagship product is Supernatural, a subscription VR fitness service launched in April 2020 on the Quest Store. Supernatural releases new workouts daily and continues to add new modalities (e.g., aerobic boxing, meditation) to its lineup of workouts. Users access Supernatural’s workouts by paying a monthly subscription fee of \$18.99 or an annual subscription fee of \$179.99. [. . .]

[5] The FTC alleges that the relevant market consists of VR dedicated fitness apps in the United States. The government defines “VR dedicated fitness apps” as VR apps that are designed so users can exercise through a

structured physical workout in a virtual setting anywhere they choose to use their highly portable VR headset. [. . .]

[6] Within’s VR app Supernatural is a dedicated fitness app: it was designed specifically for fitness and offers “daily personalized full-body workouts and expert coaching from real-world trainers.”

[7] The FTC proposes a relevant product market consisting of VR dedicated fitness apps, meaning VR apps designed so users can exercise through a structured physical workout in a virtual setting. [. . .]

[8] In this case, the Court finds the FTC has made a sufficient evidentiary showing that there exists a well-defined relevant product market consisting of VR dedicated fitness apps. [. . .]

[9] The FTC has challenged Meta’s acquisition of Within on the basis that the merger would substantially lessen potential competition. [. . .]

Actual Potential Competition

[10] The FTC first argues that the Acquisition would substantially lessen competition because it deprives the VR dedicated fitness app market of the competition that would have arisen from Meta’s independent entry into the market, a theory known as the “actual potential competition” or “actual potential entrant” doctrine. Although the Supreme Court has twice declined to resolve the doctrine’s validity when presented, it has nonetheless identified two essential preconditions before the theory can be applied: (1) the alleged potential entrant must have available feasible means for entering the relevant market other than by acquiring the target company; and (2) those means offer a substantial likelihood of ultimately producing deconcentration of that market or other significant procompetitive effects. [. . .]

[11] There is less consistency among courts as to the proper standard of proof by which the FTC must prove its case on actual potential competition, and it is an issue of first impression within the Ninth Circuit. The Fourth Circuit has held that the FTC must establish its case with “strict proof.” The Second Circuit has asked whether a defendant would likely have entered the market in the near future. The Fifth Circuit adopted the “reasonable probability” standard, which it remarked “signifies that an event has a better than fifty percent chance of occurring [with a] ‘reasonable’ probability represent[ing] an even greater likelihood of the event’s occurrence.” The Eighth Circuit also appeared to adopt the [“reasonable probability” test.] Finally, the FTC itself has unambiguously adopted a “clear proof” standard.

[12] In the absence of guiding Ninth Circuit law, the Court begins with *Brown Shoe’s* teaching that Section 7 deals with neither certainties nor ephemeral possibilities but rather “probabilities.” In the context of an actual potential competition claim, however, the Court must not only consider the effects of future scenarios where the Acquisition occurs and where it is blocked, but it must also gauge the likelihood—in the second scenario—that the blocked would-be acquirer would enter the relevant market independently. Furthermore, the harm to competition the doctrine aims to prevent is not the loss of present competition but rather the potential loss of a future competitor (the acquiring company). Given the many a priori inferences required by the doctrine, the Court is wary of any inquiry that strays too close to the specters of ephemeral possibilities, yet it must nonetheless ensure the standard does not require the FTC to operate on certainties. The Court accordingly holds that the “reasonable probability” standard—as clarified by the Fifth Circuit to suggest a likelihood noticeably greater than fifty percent—is the standard of proof that the FTC must present. [. . .]

[13] . . . [T]he Court now proceeds to apply the doctrine. The inquiry can be stated as follows: “Is it reasonably probable that Meta would have entered the VR dedicated fitness app market de novo if it was not able to acquire Within?” [. . .]

[14] There can be no serious dispute that Meta possesses the financial resources to undertake a de novo entry. Meta has spent over \$12.4 billion in the most recent fiscal year on its VR business, and it anticipates investing more in the VR space. Unsurprisingly, Meta also enjoys a deep and talented pool of engineers in its Reality Labs Division, who could provide the technical VR expertise to develop a VR dedicated fitness app should Meta so choose. . . .

[15] But financial and engineering capabilities alone are insufficient to conclude it was “reasonably probable” that Meta would enter the VR dedicated fitness app market. Indeed, Meta seems willing to concede—as is supported by the evidence—that it does not take a large team or substantial resources to make a successful VR app. [. . .]

[16] First and foremost, although Meta has an abundance of VR personnel on hand, it lacks the capability to create fitness and workout content, a necessity for any fitness product or market. As a comparison, Supernatural’s VR workouts are led by personal trainers and are optimized for VR activity through consultations with experts holding PhDs in kinesiology and biomechanics. Certainly, this absence is not an insurmountable obstacle; Meta could conceivably circumvent it by partnering with an established fitness brand to provide the fitness content, as [another business has done]. Regardless of any potential workarounds, the objective fact that Meta presently lacks the capability to create fitness content is, at the very least, probative as to the reasonable probability that Meta would enter the VR dedicated fitness app market de novo. [. . .]

[17] In addition to fitness content, the evidence also indicates that Meta lacked the necessary studio production capabilities to create and film VR workouts. . . .

[18] When Meta employees were strategizing VR fitness investments, they recognized that “studio production (e.g. green screen ops, stereoscopic capture, post processing pipelines)” was a new function that was “not part of Facebook’s pipelines.” [. . .]

[19] The record is replete with evidence supporting Meta’s interest in the VR fitness space. . . . [F]itness is a use for VR that appeals to a more diverse population, specifically consumers that are female and older. This demographic is notably distinct from the typical VR demographic, which tends to skew younger and more male. Fitness is also “retentive,” meaning that users will tend to regularly use the product or app. Meta’s internal data also indicated that “deliberate fitness apps” were the “fastest growing segment[.]”

[20] Although they undergird Meta’s undisputed interest in VR fitness, the aforementioned factors provide limited probative value in assessing Meta’s likelihood to enter the VR dedicated fitness app market itself. As the Court established earlier in this section, the relevant inquiry is whether it is “reasonably probable” that Meta would have entered the VR dedicated fitness app market de novo, not whether Meta was excited about or interested in more generally investing in VR fitness. [. . .]

[21] Apart from the incentives arising from the VR fitness market itself, the evidence also reflects one other incentive that arises from Meta’s direct participation in the relevant market. Specifically, entering the VR dedicated fitness app market with its own app would facilitate Meta’s subsequent development of fitness-related VR hardware. This is an incentive to “first-party” entry that is acknowledge[d] across multiple instances of internal contemporaneous correspondence at Meta. That said, the evidence also suggests that de novo entry is not strictly necessary to develop fitness hardware, though independent entry into the market could streamline that development. [. . .]

[22] Having reviewed and considered the objective evidence of Meta’s capabilities and incentives, the Court is not persuaded that this evidence establishes that it was “reasonably probable” Meta would enter the relevant market. Meta’s undisputed financial resources and engineering manpower are counterbalanced by its necessary reliance on external fitness companies or experts to provide the actual workout content and a production studio for filming and post-production. Furthermore, the record is inconclusive as to Meta’s incentives to enter the relevant market. There are certainly some incentives for Meta to enter the market de novo, such as a deeper integration between the VR fitness hardware and software. However, it is not clear that Meta’s readily apparent excitement about fitness as a core VR use case would necessarily translate to an intent to build its own dedicated fitness app market if it could enter by acquisition. [. . .]

[23] The evidence contained in [Meta’s] strategy documents is consistent—Meta’s subjective motivations to enter the relevant market were primarily to (1) better develop VR fitness hardware or (2) ensure the continued existence of a high-quality VR fitness app in the market. The Court notes that these incentives would apply to both entry by acquisition and entry de novo, though perhaps not with equal force. [. . .]

[24] Meta’s prior ventures into other VR app markets also do not support a subjective intention or proclivity to build its own apps as opposed to an acquisition. Courts have considered a potential entrant’s history of acquisitions and expansions in determining its likelihood of de novo entry. The evidence indicates that Meta has tended to build its own VR app where the experience did not call for specialized or substantive content Meanwhile, Meta has acquired other VR developers where the experience requires content creation from the developer, such as VR video games, as opposed to an app that hosts content created by others. With respect to fitness, the Court finds that VR dedicated fitness is more akin to a gaming app—where the emphasis is on the content created or provided by the developer—than a browser or world-building app, where the value is derived from the users’ own creativity rather than the developers’. Accordingly, based on Meta’s past entries into VR app markets, the evidence would suggest an interest in entry by acquisition instead of entry de novo.

[25] But even more pertinent than the record of Meta’s past entries into VR app markets is the evidence that Meta had consciously considered and appeared doubtful of the proposition to build its own independent VR fitness app. The pre-read strategy document prepared for Mark Rabkin’s attention contains a separate section that [states that] “[i]t will be hard to build Fitness from scratch.” . . . The document also recognized that Meta would have to “build new kinds of expertise at the intersection of software, instructor-led fitness, music, media.” The decision not to build Meta’s own VR fitness app is corroborated by the lack of any other contemporaneous discussion on the topic. . . .

[26] In sum, the subjective evidence indicates that Meta was subjectively interested in entering the VR dedicated fitness app market itself, either for hardware development or defensive market purposes. However, the Court again notes that these incentives would support both market entry by acquisition and de novo, but the Court’s inquiry is only concerned with the feasibility of de novo entry. [. . .]

[27] [W]here the objective evidence is weak or inconclusive and does not strongly point to the feasibility of entry de novo, it is incumbent on the Court to consider the potential entrant’s actual plans of entry for the purposes of ensuring that Section 7 enforcement does not veer into the realm of ephemeral possibilities. As applied here, the Court holds that the FTC may not rest solely on evidence of Meta’s considerable resources and the company’s clear zeal for the VR dedicated fitness app market as a whole; the evidence must show that Meta had some feasible and reasonably probable path to de novo entry. [. . .]

[28] This brings us to the final means—and the FTC’s main theory—by which Meta could have entered the VR dedicated fitness market: expanding its existing rhythm game app Beat Saber into dedicated fitness and partnering with a fitness brand. The FTC claims that Meta scrapped this Beat Saber proposal once it learned that Within was at risk of being acquired by Apple. However, this theory is neither supported by the contemporaneous remarks regarding the Beat Saber proposal nor the timing of the subsequent investigation into this proposal.

[29] First, the evidentiary record is unclear as to what exactly the widely referenced Beat Saber-Peloton proposal would even look like. On some occasions, Stojavljevic—the proposal’s primary advocate—refers to it as a “brand licensing w/ Peloton” or a “co-branding . . . Peloton mode inside Beat Saber.” On other occasions, Stojavljevic considers whether the proposal would be a separate Quest Store app. Michael Verdu—another proponent of expanding Beat Saber into fitness—also recalled that the proposal never reached a point of “understanding what that partnership would look like.” . . .

[30] Second, the Beat Saber-Peloton proposal did not enjoy uniform or even widespread support among the Meta personnel who were researching VR fitness opportunities. [. . .]

[31] . . . Although Meta employees . . . were excited about Beat Saber’s potential as a vector into fitness, Meta has never been able to execute on that excitement in any of the years since they acquired Beat Saber. Verdu Dep. 178:12–20 (“[I]t was the perpetual white whale quest to get . . . Beat Games to build a fitness version of Beat Saber, which was like pushing on a string. We tried and tried and tried, and they never picked it up.”)[.] [. . .]

[32] For all these reasons, the Court finds that it was not reasonably probable that Meta would have repositioned their top-selling VR app, Beat Saber, into a dedicated fitness app, even assuming that it could have identified a partner willing to provide VR fitness content. [. . .]

[33] Accordingly, the Court finds that Meta did not have the “available feasible means” to enter the relevant market other than by acquisition. . . .

[34] In so finding, the Court concludes that the FTC has failed to establish a likelihood that it would ultimately succeed on the merits as to its Section 7 claim based on the actual potential competition theory.

Perceived Potential Competition

[35] In addition to its claim that the Acquisition would lessen competition pursuant to the actual potential competition theory, the FTC also claims that the Acquisition violates Section 7 under the perceived potential competition theory. Under this theory, the FTC argues that the Acquisition would eliminate the competitive influence that Meta exerts on firms within the relevant market by virtue of its presence on the fringes of the market.

[35] To prevail on a claim that the Acquisition would have eliminate perceived potential competition, the FTC must establish—in addition to showing a highly concentrated market—the following: (1) Meta possessed the characteristics, capabilities, and economic incentive to render it a perceived potential de novo entrant; and (2) Meta’s premerger presence on the fringe of the target market in fact tempered oligopolistic behavior on the part of existing participants in that market. The same objective facts regarding Meta’s capability of entering the market under an actual potential competition theory are also probative of violation of § 7 through loss of a procompetitive on-the-fringe influence. However, whereas a claim for actual potential competition may consider the potential entrant’s intent to enter the market, a perceived potential competition claim ignores the potential entrant’s subjective intent to enter the market and instead focuses on the subjective perceptions of the in-market firms.

[36] . . . Unsurprisingly, and for the same reasons explained above, the objective evidence in the record is insufficient to support a finding that it was reasonably probable Meta would enter the relevant market for purposes of the perceived potential competition doctrine. [. . .]

[37] Under the second element of the perceived potential competition claim, the FTC must establish that Meta’s premerger presence on the fringe of the target market in fact tempered oligopolistic behavior on the part of existing participants in that market. In other words, the FTC must present evidence that it was reasonably probable that Meta’s presence as a potential competitor had a direct effect on the firms in the VR Dedicated Fitness market.

[38] In setting forth this standard, the Court rejects the FTC’s suggestion that it need only provide probabilistic proof of likely influence on existing competitors. . . . The Court reads [applicable law] to mean the FTC need not provide direct evidence of Within adopting {Eds.: possibly a typo for “adapting”?} its conduct to account for Meta’s presence (e.g., a hypothetical internal email at Within expressly communicating fear of Meta’s imminent entry and taking actions in anticipation). Direct evidence, however, is distinguishable from evidence of a direct effect experienced within the relevant market (e.g., circumstantial evidence that Within reduced prices shortly after Meta’s hypothetical public announcement that it was looking into the VR Dedicated Fitness market). . . . Accordingly, the FTC must produce some evidence—direct or circumstantial—that Meta’s presence had a direct effect on the firms in the relevant market.

[39] Under this standard, the FTC’s evidence on this element is insufficient. The only evidence that suggests any kind of effect in the relevant market is that Within cited {Eds.: whatever Within cited is redacted from the opinion, but it seems to be something to do with Meta!}, as reasons not to reduce headcount at Within shortly before launching Supernatural. As noted above, Within and Supernatural had not even entered the relevant market at the time of this presentation. Consequently, this cannot be evidence of a direct effect within the VR dedicated fitness app market; rather, they are the preemptive considerations of a firm contemplating entry into the market. [. . .]

[40] In summary, the Court finds that the objective evidence does not support a reasonable probability that firms in the relevant market perceived Meta as a potential entrant. Even if it did, the Court finds that there is no direct or circumstantial evidence to suggest that Meta’s presence did in fact temper oligopolistic behavior or result in any other procompetitive benefits. Accordingly, the FTC has not demonstrated a likelihood of ultimate success as to its Section 7 claim arising from perceived potential competition.

* * *

The enforcement agencies paid particular attention to tech platform acquisitions in their 2023 Merger Guidelines. Some tech-specific concerns are visible in Guideline 6, which is aimed at mergers that entrench or extend a dominant position. And the new document dedicated a full Guideline—Guideline 9—to a specific discussion of platform acquisitions. This platform guideline combines some background-style discussion of platform businesses with some information about theories of harm that might apply in a platform case.

Much of the following material highlights ways in which a deal involving a dominant platform *can or might* raise competitive concerns. Do you read the language as noting an array of possibilities, or as suggesting that particular kinds of deals are *more likely* to be harmful or illegal if a dominant or platform business is involved?

On your reading of Guideline 6, what is the difference between valuable efficiency and harmful entrenchment? And, on your reading of Guideline 9, when is there a “conflict of interest” in a merger case, and how (if at all) might it be specific to platform cases? Do you read Guideline 9 as suggesting that self-preferencing should be a particular concern, or a ground of antitrust illegality, in platform mergers? Is this the same effect that we would call “foreclosure” in a traditional vertical merger analysis, or is it something different?

Merger Guidelines § 2.6

Guideline 6: Mergers Can Violate the Law When They Entrench or Extend a Dominant Position.

[1] The Agencies consider whether a merger may entrench or extend an already dominant position. The effect of such mergers “may be substantially to lessen competition” or “may be . . . to tend to create a monopoly” in violation of Section 7 of the Clayton Act. Indeed, the Supreme Court has explained that a merger involving an “already dominant[] firm may substantially reduce the competitive structure of the industry by raising entry barriers.” The Agencies also evaluate whether the merger may extend that dominant position into new markets. Mergers that entrench or extend a dominant position can also violate Section 2 of the Sherman Act. At the same time, the Agencies distinguish anticompetitive entrenchment from growth or development as a consequence of increased competitive capabilities or incentives. The Agencies therefore seek to prevent those mergers that would entrench or extend a dominant position through exclusionary conduct, weakening competitive constraints, or otherwise harming the competitive process. [. . .]

[2] . . . A merger may create or enhance barriers to entry or expansion by rivals that limit the capabilities or competitive incentives of other firms. Barriers to entry can entrench a dominant position even if the nature of future entry is uncertain, if the identities of future entrants are unknown, or if there is more than one mechanism through which the merged firm might create entry barriers. Some examples of ways in which a merger may raise barriers to entry or competition include:

- *Increasing Switching Costs.* The costs associated with changing suppliers (often referred to as switching costs) can be an important barrier to competition. A merger may increase switching costs if it makes it more difficult for customers to switch away from the dominant firm’s product or service, or when it gives the dominant firm control of something customers use to switch providers or of something that lowers the overall cost to customers of switching providers. For example, if a dominant firm merges with a complementary product that interoperates with the dominant firm’s competitors, it could reduce interoperability, harming competition for customers who value the complement.
- *Interfering With the Use of Competitive Alternatives.* A dominant position may be threatened by a service that customers use to work with multiple providers of similar or overlapping bundles of products and services. If a dominant firm acquires a service that supports the use of multiple providers, it could degrade its utility or availability or could modify the service to steer customers to its own products, entrenching its dominant position. For example, a closed messaging communication service might acquire a product that allowed users to send and receive messages over several competing services through a single user interface, which facilitates competition. The Agencies would examine whether the acquisition would entrench the messaging service’s market power by leading the merged firm to degrade the product or otherwise reduce its effectiveness as a cross-service tool, thus reducing competition.

- *Depriving Rivals of Scale Economies or Network Effects.* Scale economies and network effects can serve as a barrier to entry and competition. Depriving rivals of access to scale economies and network effects can therefore entrench a dominant position. If a merger enables a dominant firm to reduce would-be rivals' access to additional scale or customers by acquiring a product that affects access such as a customer acquisition channel, the merged firm can limit the ability of rivals to improve their own products and compete more effectively.³⁶ Limiting access by rivals to customers in the short run can lead to long run entrenchment of a dominant position and tend to create monopoly power.

For example, if two firms operate in a market in which network effects are significant but in which rivals voluntarily interconnect, their merger can create an entity with a large enough user base that it may have the incentive to end voluntary interconnection. Such a strategy can lessen competition and harm trading partners by creating or entrenching dominance in this market. This can be the case even if the merging firms did not appear to have a dominant position prior to the merger because their interoperability practices strengthened rivals.

Eliminating a Nascent Competitive Threat. A merger may involve a dominant firm acquiring a nascent competitive threat—namely, a firm that could grow into a significant rival, facilitate other rivals' growth, or otherwise lead to a reduction in its power. In some cases, the nascent threat may be a firm that provides a product or service similar to the acquiring firm that does not substantially constrain the acquiring firm at the time of the merger but has the potential to grow into a more significant rival in the future. In other cases, factors such as network effects, scale economies, or switching costs may make it extremely difficult for a new entrant to offer all of the product features or services at comparable quality and terms that an incumbent offers. The most likely successful threats in these situations can be firms that initially avoid directly entering the dominant firm's market, instead specializing in (a) serving a narrow customer segment, (b) offering services that only partially overlap with those of the incumbent, or (c) serving an overlapping customer segment with distinct products or services.

[3] Firms with niche or only partially overlapping products or customers can grow into longer-term threats to a dominant firm. Once established in its niche, a nascent threat may be able to add features or serve additional customer segments, growing into greater overlap of customer segments or features over time, thereby intensifying competition with the dominant firm. A nascent threat may also facilitate customers aggregating additional products and services from multiple providers that serve as a partial alternative to the incumbent's offering. Thus, the success and independence of the nascent threat may both provide for a direct threat of competition by the niche or nascent firm and may facilitate competition or encourage entry by other, potentially complementary providers that may provide a partial competitive constraint. In this way, the nascent threat supports what may be referred to as "ecosystem" competition. In this context, ecosystem competition refers to a situation where an incumbent firm that offers a wide array of products and services may be partially constrained by other combinations of products and services from one or more providers, even if the business model of those competing services is different.

[4] Nascent threats may be particularly likely to emerge during technological transitions. Technological transitions can render existing entry barriers less relevant, temporarily making incumbents susceptible to competitive threats. For example, technological transitions can create temporary opportunities for entrants to differentiate or expand their offerings based on their alignment with new technologies, enabling them to capture network effects that otherwise insulate incumbents from competition. A merger in this context may lessen competition by preventing or delaying any such beneficial shift or by shaping it so that the incumbent retains its dominant position. For example, a dominant firm might seek to acquire firms to help it reinforce or recreate entry barriers so that its dominance endures past the technological transition. Or it might seek to acquire nascent threats that might otherwise gain sufficient customers to overcome entry barriers. In evaluating the potential for entrenching dominance, the Agencies take particular care to preserve opportunities for more competitive markets to emerge during such technological shifts.

³⁶ The Agencies' focus here is on the artificial acquisition of network participants that occurs directly as a result of the merger, as opposed to future network growth that may occur through competition on the merits.

[5] Separate from and in addition to its Section 7 analysis, the Agencies will consider whether the merger violates Section 2 of the Sherman Act. For example, under Section 2 of the Sherman Act, a firm that may challenge a monopolist may be characterized as a “nascent threat” even if the impending threat is uncertain and may take several years to materialize. The Agencies assess whether the merger is reasonably capable of contributing significantly to the preservation of monopoly power in violation of Section 2, which turns on whether the acquired firm is a nascent competitive threat.

[6] The Agencies also examine the risk that a merger could enable the merged firm to extend a dominant position from one market into a related market, thereby substantially lessening competition or tending to create a monopoly in the related market. For example, the merger might lead the merged firm to leverage its position by tying, bundling, conditioning, or otherwise linking sales of two products. A merger may also raise barriers to entry or competition in the related market, or eliminate a nascent competitive threat, as described above. For example, prior to a merger, a related market may be characterized by scale economies but still experience moderate levels of competition. If the merged firm takes actions to induce customers of the dominant firm’s product to also buy the related product from the merged firm, the merged firm may be able to gain dominance in the related market, which may be supported by increased barriers to entry or competition that result from the merger.

[7] These concerns can arise notwithstanding that the acquiring firm already enjoys the benefits associated with its dominant position. The prospect of market power in the related market may strongly affect the merged firm’s incentives in a way that does not align with the interests of its trading partners, both in terms of strategies that create dominance for the related product and in the form of reduced incentives to invest in its products or provide attractive terms for them after dominance is attained. In some cases, the merger may also further entrench the firm’s original dominant position, for example if future competition requires the provision of both products.

Merger Guidelines § 2.9

Guideline 9: When a Merger Involves a Multi-Sided Platform, the Agencies Examine Competition Between Platforms, on a Platform, or to Displace a Platform.

[1] Platforms provide different products or services to two or more different groups or “sides” who may benefit from each other’s participation. Mergers involving platforms can threaten competition, even when a platform merges with a firm that is neither a direct competitor nor in a traditional vertical relationship with the platform. When evaluating a merger involving a platform, the Agencies apply Guidelines 1-6 while accounting for market realities associated with platform competition. Specifically, the Agencies consider competition *between* platforms, competition *on* a platform, and competition to *displace* the platform.

[2] Multi-sided platforms generally have several attributes in common, though they can also vary in important ways. Some of these attributes include:

- Platforms have multiple sides. On each side of a platform, platform participants provide or use distinct products and services. Participants can provide or use different types of products or services on each side.
- A platform operator provides the core services that enable the platform to connect participant groups across multiple sides. The platform operator controls other participants’ access to the platform and can influence how interactions among platform participants play out.
- Each side of a platform includes platform participants. Their participation might be as simple as using the platform to find other participants, or as involved as building platform services that enable other participants to connect in new ways and allow new participants to join the platform.
- Network effects occur when platform participants contribute to the value of the platform for other participants and the operator. The value for groups of participants on one side may depend on the number of participants either on the same side (direct network effects) or on the other side(s) (indirect network effects). Network effects can create a tendency toward concentration in platform industries. Indirect network effects can be asymmetric and heterogeneous; for example, one side of the market or segment of participants may place relatively greater value on the other side(s).

- A conflict of interest can arise when a platform operator is also a platform participant. The Agencies refer to a “conflict of interest” as the divergence that can arise between the operator’s incentives to operate the platform as a forum for competition and its incentive to operate as a competitor on the platform itself. As discussed below, a conflict of interest sometimes exacerbates competitive concerns from mergers.

[3] Consistent with the Clayton Act’s protection of competition “in any line of commerce,” the Agencies will seek to prohibit a merger that harms competition within a relevant market for any product or service offered on a platform to any group of participants—i.e., around one side of the platform.

[4] The Agencies protect competition between platforms by preventing the acquisition or exclusion of other platform operators that may substantially lessen competition or tend to create a monopoly. This scenario can arise from various types of mergers:

A. Mergers involving two platform operators eliminate the competition between them. In a market with a platform, entry or growth by smaller competing platforms can be particularly challenging because of network effects. A common strategy for smaller platforms is to specialize, providing distinctive features. Thus, dominant platforms can lessen competition and entrench their position by systematically acquiring firms competing with one or more sides of a multi-sided platform while they are in their infancy. The Agencies seek to stop these trends in their incipency.

B. A platform operator may acquire a platform participant, which can entrench the operator’s position by depriving rivals of participants and, in turn, depriving them of network effects. For example, acquiring a major seller on a platform may make it harder for rival platforms to recruit buyers. The long-run benefits to a platform operator of denying network effects to rival platforms create a powerful incentive to withhold or degrade those rivals’ access to platform participants that the operator acquires. The more powerful the platform operator, the greater the threat to competition presented by mergers that may weaken rival operators or increase barriers to entry and expansion.

C. Acquisitions of firms that provide services that facilitate participation on multiple platforms can deprive rivals of platform participants. Many services can facilitate such participation, such as tools that help shoppers compare prices across platforms, applications that help sellers manage listings on multiple platforms, or software that helps users switch among platforms.

D. Mergers that involve firms that provide other important inputs to platform services can enable the platform operator to deny rivals the benefits of those inputs. For example, acquiring data that helps facilitate matching, sorting, or prediction services may enable the platform to weaken rival platforms by denying them that data.

[5] The Agencies protect competition *on* a platform in any markets that interact with the platform. When a merger involves a platform operator and platform participants, the Agencies carefully examine whether the merger would create conflicts of interest that would harm competition. A platform operator that is also a platform participant may have a conflict of interest whereby it has an incentive to give its own products and services an advantage over other participants competing on the platform. Platform operators must often choose between making it easy for users to access their preferred products and directing those users to products that instead provide greater benefit to the platform operator. Merging with a firm that makes a product offered on the platform may change how the platform operator balances these competing interests. For example, the platform operator may find it is more profitable to give its own product greater prominence even if that product is inferior or is offered on worse terms after the merger—and even if some participants leave the platform as a result. This can harm competition in the product market for the advantaged product, where the harm to competition may be experienced both on the platform and in other channels.

[6] The Agencies protect competition to *displace* the platform or any of its services. For example, new technologies or services may create an important opportunity for firms to replace one or more services the incumbent platform operator provides, shifting some participants to partially or fully meet their needs in different ways or through different channels. Similarly, a non-platform service can lessen dependence on the platform by providing an alternative to one or more functions provided by the platform operators. When platform owners are dominant,

the Agencies seek to prevent even relatively small accretions of power from inhibiting the prospects for displacing the platform or for decreasing dependency on the platform.

[7] In addition, a platform operator that advantages its own products that compete *on* the platform can lessen competition *between* platforms and to *displace* the platform, as the operator may both advantage its own product or service, and also deprive rival platforms of access to it, limiting those rivals' network effects.

NOTES

- 1) Should agencies or courts treat “tech” mergers differently from “non-tech” mergers? In what ways?
- 2) Suppose that we decide that the courts are systematically getting tech mergers wrong in some respects. To what extent, and in what ways, can new Merger Guidelines influence the courts to change their minds? Are there any limits on their power to do so?
- 3) What effect, if any, should the fact of prior HSR review have on the analysis of a tech merger? Does the court's analysis in the Instagram and WhatsApp case above suggest that this fact should be completely irrelevant?
- 4) Suppose that Congress is considering a simple ban on acquisitions of *any* kind by the largest Big Tech companies, on the ground that it is too difficult to spot the individual deals that would or could harm consumers. Would you support or oppose that measure? What costs and benefits would you highlight for a legislator who was undecided and wanted to understand both sides of the issue?
- 5) How would you figure out whether or not tech acquisitions were more likely to be harmful than acquisitions in other fields?
- 6) Look back at the extract from Merger Guideline 6, including footnote 36. When is it a good thing, and when is it a bad thing, for a merger to contribute to network effects?
- 7) Consider the following statement: “The best merger policy is prophylactic and risk-averse, because businesses should develop innovation products and services organically rather than buying them up. As a result, we will do better overall if we err in favor of blocking too many deals rather than too few: especially when it comes to huge and important businesses like the Big Tech platforms.” Do you agree?
- 8) Consider the following statement: “It is just as socially harmful to block a beneficial merger as it is to allow a harmful one. The bigger the merging businesses and their impact on society, the more important it is to get this right. As a result, we will do better overall if we weight false positives and false negatives equally.” Do you agree?
- 9) Look back at the Hemphill and Wu extract. What are the advantages and disadvantages of focusing an antitrust case on the existence (or not) of an anticompetitive plan? Is that approach especially desirable or suitable for nascent-competitor cases?
- 10) Look back at the Sokol extract. When and how should agencies and courts consider the effects of merger enforcement on the incentives for businesses other than the merging parties to invest and innovate? In other words, should enforcers and adjudicators consider the broader “signaling effects” of their case-specific decisions?

4. App Stores: Tying and Surcharging

We live in an increasingly app-ified economy, with valuable products and services obtained through applications (“apps”) on our electronic devices.¹⁷⁹ In many cases, these apps may or must be bought by users through “app stores”: digital storefronts that are often owned and operated by the provider of the operating system, device, or platform. Apple's App Store and Google's Play Store are good examples. However, “third party” app stores do exist. Steam, for example, is an app store owned by Valve, a video game developer that does not make PCs or PC operating systems. And the Android ecosystem does include some third-party app stores, including stores operated by Amazon, Samsung, and Huawei.

The importance of app stores as a point of distribution to consumers and business users has fueled a series of antitrust and competition-policy concerns about their operation, many of which relate to themes we have already

¹⁷⁹ See generally, e.g., Laura Ceci, *Size of the app economy worldwide from 2016 to 2021*, STATISTA (Aug. 25, 2023); Anindya Ghose, TAP: UNLOCKING THE MOBILE ECONOMY (2018); Ben Goldsmith, THE SMARTPHONE APP ECONOMY AND APP ECOSYSTEMS (2014).

considered in this chapter. For example, some writers have raised concerns about self-preferencing by app store operators that also supply apps (*e.g.*, the iOS App Store, operated by Apple, offers Apple Maps as well as an array of competing mapping apps). Is an app store owner entitled to display its in-house offerings more prominently than those of rivals? And is paid app promotion OK—and if so must it be clearly disclosed to users?

A related but distinct worry is that the app-store owner might use its access to commercial data to give its own in-house competitors an advantage of some kind. Some writers and legislators have expressed concerns that the result would be a distortion of competition, and reduced incentives for third parties to innovate and invest in their own offerings.¹⁸⁰ Others suggest that app store owners may have limited incentives to make their own store a hostile environment for third parties, and emphasize the advantages of allowing app store owners to use accurate data to make better business decisions.¹⁸¹

Other commentators have focused on the power of an app store operator to keep certain apps out of the store altogether.¹⁸² Must an app-store owner carry rival offerings? May it decline to carry apps that do or might present security concerns? Apps that are low quality? Apps owned by an unknown developer? Apps for which the app store owner cannot be confident that users' personal data will be safe? Apps that express a message the store owner opposes? Is there a right—in antitrust or otherwise—to some kind of due process before an app is excluded from the store?

Still others have noted the possibility of algorithmic or personalized pricing for apps. In settings where there are few competing app stores, might we worry about the prospect of algorithmic collusion? If app store owners engage in personalized pricing, should we be concerned? This discussion implicates all the concerns and complexities we considered above.¹⁸³

But other concerns seem to be specific to the app-store environment. Some of the most prominent of these are concerns about the practice of *surcharging* app developers that sell apps in a store, and concerns about *tying* additional products or services, like payment handling services, to carriage in an app store.

Most people seem to agree that carriage in an app store is a very valuable form of distribution for app developers. After all, inclusion in the Apple App Store, Google Play Store, or a similar storefront makes the app available to countless millions of users. And most antitrust lawyers and economists agree that—like any other business that has created a valuable ecosystem and generated an attractive distribution platform for third parties—the app store owner is entitled in principle to charge some kind of a price for that distribution service. Antitrust generally protects the right of a business, even a monopolist, to charge for providing a valuable product or service, even if that price is higher or lower than others might prefer.

And many app stores do indeed charge a price for carriage. Often this takes the form of a commission: that is, a percentage of the price of the app. One reason one might do this is to avoid pricing the cheapest apps out of the store: charging a flat fee would make it unprofitable to distribute low-price or free apps on the store. (The *vast* majority of apps in the Apple App Store and the Google Play Store are free: in the simplest case, under a commission model those apps pay nothing for carriage.¹⁸⁴) Another reason to take a percentage is to charge a higher fee to those app developers that are charging the most for apps and may be receiving the greatest value from it: in other words, to price discriminate.¹⁸⁵ A third reason is to avoid distorting the developer's pricing

¹⁸⁰ See, *e.g.*, Kif Lewsing, *Why Apple's App Store is under fire*, CNBC (June 18, 2020) (“Software makers . . . worry that Apple could use data about what is trending on the App Store to create competing Apple apps or features.”).

¹⁸¹ See, *e.g.*, Testimony of Daniel Francis, U.S. Senate, Committee on the Judiciary, Subcommittee on Competition Policy, Antitrust, and Consumer Rights, Hearing on Reining in Dominant Digital Platforms: Restoring Competition to Digital Markets (March 2023) (supporting limited restrictions only, given the consumer value of accurate decision-making).

¹⁸² See, *e.g.*, Damien Geradin & Dimitrios Katsifis, *The Antitrust Case Against the Apple App Store*, TILEC Discussion Paper (Apr. 2020) 62–66.

¹⁸³ See *supra* § XIV.C.2.

¹⁸⁴ See Laura Ceci, *Distribution of free and paid apps in the Apple App Store and Google Play in December 2023*, STATISTA (Dec. 19, 2023).

¹⁸⁵ See, *e.g.*, Zhu Wang & Julian Wright, *Ad valorem platform fees, indirect taxes, and efficient price discrimination*, 48 RAND J. Econ. 467, 468 (2017) (arguing that “when a market involves many different goods that vary widely in their costs and values that may not be directly observable, then ad valorem fees and taxes represent an efficient form of price discrimination because the value of a transaction is plausibly proportional to the cost of the good traded”).

decision. A percentage commission means that the revenue-maximizing price for the app remains identical to whatever it would be if the app store provided free distribution. So for these and other reasons, the commission model is the most common approach to app-store pricing.

But the charging of a price for app-store carriage is controversial. For one thing, the app store owner's in-house apps generally do not pay a fee for carriage, so some third-party app developers have suggested that *any* commission places third party apps at an unfair—even “anticompetitive”—disadvantage compared to in-house apps.¹⁸⁶ (Of course, the third parties also did not incur the costs and risks of building the app store in the first place.) For another thing, some object that common commission rates—30% being a popular benchmark rate—is unfairly high, and that it undesirably suppresses the incentive of developers to create socially valuable apps. As a result, some advocates, scholars, and legislators have suggested limiting app store commissions.¹⁸⁷ Others object that price caps are no more desirable here than they are in other settings.¹⁸⁸

The tying concern arises from the fact that some app store owners require app developers to use the store owner for certain additional services, such as payment handling services for in-app transactions. Many app developers may find such requirements unwelcome: they might object to the fact that the app store owner may charge a commission for such transactions; they may simply prefer to use a different and perhaps better payment handling technology; and they might suggest that rival payment handling systems are being excluded or foreclosed in a way that we would associate with classic antitrust tying concerns, and which leave the developer facing a less competitive market for payment handling technologies.

We can imagine at least two reasons why app-store owners might aim to require the use of the store owner's own technology for payment handling. One reason is security. There are obvious risks to taking a permissive approach to payment-handling service providers: unscrupulous or low-quality service providers might put users' money and privacy at risk. As a result, an app store owner might want to protect users, as well as its own reputation, from the risks of unscreened third-party service providers. The app store might also prefer to avoid the costs and burdens of evaluating third-party payment providers to determine whether they should be trusted.

The other reason is profit, particularly if the app store is operating a commission-based pricing model. If an app store charged a percentage commission for selling the app in the app store, but allowed app developers to handle their own in-app payments, the result would be a strong incentive for app developers to set a zero price for the app in the store (thus generating a zero commission for the app store owner!) and simply charge a price for in-app “activation” without sharing that price with the app store owner. In other words: in order to avoid incentivizing the app developer to reframe an app's purchase price as an in-app activation price, an app store owner that has decided to charge a commission for carriage in the app store probably has to find some way to take the same commission on at least certain kinds of in-app purchases. And it might be easier and cheaper to do this by handling in-app purchases itself and deducting the commission at point of sale, rather than trusting each app developer to pay over the right commission accurately, promptly, and honestly.

Of course, there is plenty of reasonable disagreement about all of this. One might reasonably take the view that the benefits from running an efficient commission system could, at least in some cases, be outweighed by the harms from excluding rival payment systems from the market. Moreover, perhaps a certification-and-auditing system could be developed, without prohibitive cost, that would allow trustworthy third-party payment systems to compete alongside the in-house option. And one might favor some limits on the ability of an app store owner to take a commission on in-app purchases (for example, should a commission be payable to the app store owner when you order products, services, e-books, and so on through an app?).

¹⁸⁶ See, e.g., Daniel Ek, *Consumers and Innovators Win on a Level Playing Field*, SPOTIFY FOR THE RECORD BLOG (Mar. 13, 2019) (Spotify CEO stating: “Apple requires that Spotify and other digital services pay a 30% tax on purchases made through Apple's payment system, including upgrading from our Free to our Premium service. If we pay this tax, it would force us to artificially inflate the price of our Premium membership well above the price of Apple Music.”).

¹⁸⁷ See, e.g., Jack Nicas, *How Apple's 30% App Store Cut Became a Boon and a Headache*, N.Y. TIMES (Aug. 14, 2020, updated Nov. 18, 2020) (“[N]ow that the tech giants' smartphones have become the only way other businesses reach millions of people, those businesses are increasingly pleading: Do you really need a third of my sales?”).

¹⁸⁸ See, e.g., Ben Sperry, *Does Apple's “Discrimination” Against Rival Apps in the App Store Harm Consumers?* TRUTH ON THE MARKET (Oct. 16, 2019).

A related, and similarly controversial, practice seen on some app stores involves so-called “anti-steering” rules: that is, limitations on the ability of app developers to communicate with users about other distribution channels outside the app store. An app store owner might have an incentive to limit or prohibit such communications for reasons very much like those in the payment-system context. For example: the app store owner might fear that app developers will use the app store to get an initial consumer contact—maybe through a zero-priced interaction like a free version of the app—and then re-direct those consumers to buy the full app through another channel that does not compensate the app store owner. Conversely, though, it is easy to see why we might have some competitive concerns about rules imposed by an incumbent with market power that limit the extent to which businesses can communicate with their own customers about low-priced alternatives!

The most prominent example of app-store antitrust litigation in recent years is the two separate blockbuster cases that Epic Games—maker of hit game Fortnite—brought against Apple and Google. Epic lost its case against Apple following a bench trial (and then appealed unsuccessfully to the Ninth Circuit), but *won* a jury verdict against Google in a matter that is ongoing at the time of writing. The following extract is drawn from the Ninth Circuit’s decision in the *Apple* case. Note that the plaintiff invoked both federal antitrust law *and* California state unfair-competition law, leading to different results under the two systems. Epic targeted three of Apple’s practices: app store exclusivity; the prohibition of third party in-app payment systems; and an anti-steering rule that limited communications with users.

Epic Games, Inc. v. Apple, Inc.

67 F.4th 946 (9th Cir. 2023)

Judge Smith.

[1] Epic Games, Inc. sued Apple, Inc. pursuant to the Sherman Act, and California’s Unfair Competition Law (“UCL”). Epic contends that Apple acted unlawfully by restricting app distribution on iOS devices to Apple’s App Store, requiring in-app purchases on iOS devices to use Apple’s in-app payment [“IAP”] processor, and limiting the ability of app developers to communicate the availability of alternative payment options to iOS device users. [. . .]

[2] Apple creates its walled-garden ecosystem through both technical and contractual means. To distribute apps to iOS users, a developer must pay a flat \$99 fee and execute the Developer Program Licensing Agreement (“DPLA”). The DPLA is a contract of adhesion; out of the millions of registered iOS developers, only a handful have convinced Apple to modify its terms.

[3] By agreeing to the DPLA, developers unlock access to Apple’s vast consumer base—the over 1 billion users that make up about 15% of global smartphone users. They also receive tools that facilitate the development of iOS apps, including advanced application-programming interfaces, beta software, and an app-testing software. In essence, Apple uses the DPLA to license its IP to developers in exchange for a \$99 fee and an ongoing 30% commission on developers’ iOS revenue.

[4] The DPLA contains the three provisions that give rise to this lawsuit and were mentioned in the introduction. First, developers can distribute iOS apps only through the App Store (the distribution restriction). Epic Games, for example, cannot make the Epic Games Store available as an iOS app and then offer Fortnite for download through that app. Second, developers must use Apple’s IAP to process in-app payments (the IAP requirement). Both initial downloads (where an app is not free) and in-app payments are subject to a 30% commission. Third, developers cannot communicate out-of-app payment methods through certain mechanisms such as in-app links (the anti-steering provision). Apps and their metadata may not include buttons, external links, or other calls to action that direct customers to purchasing mechanisms other than IAP. Nor can developers use points of contact obtained from account registration within the app (like email or text) to encourage users to use a purchasing method other than IAP. [. . .]

Sherman Act Section 1: Unreasonable Restraint

[5] . . . Section 1 prohibits every contract, combination . . . , or conspiracy, in restraint of trade. . . . [T]he parties agree that the [Rule of Reason, not the *per se* rule,] applies here. [. .]

Rule of Reason Step One: Anticompetitive Effects

[6] The district court did not err when it found that Epic made the Rule of Reason’s required step-one showing. At step one, the plaintiff has the initial burden to prove that the challenged restraint has a substantial anticompetitive effect that harms consumers in the relevant market. [. .]

[7] Here, the district concluded that Epic produced both sufficient direct and indirect evidence to show that Apple’s distribution and IAP restrictions impose substantial anticompetitive effects. In terms of direct evidence, the court found that Apple has for years extracted a supracompetitive commission that was set almost by accident and without regard to its own costs and has produced extraordinarily high operating margins that have exceeded 75% for years. The court found that the economic factors driving other platforms’ rates do not apply equally to Apple, with nothing other than legal action seeming to motivate Apple to reconsider pricing and reduce rates. With respect to indirect evidence, the district court found that Apple has market power: Apple had a mobile-games market share of 52 to 57% for the three years in evidence, and network effects and information restrictions create barriers to entry. The court found that Apple wielded that market power to foreclose would-be competitors like Epic from offering app-distribution and payment-processing alternatives—reducing innovation and Apple’s own investment in the App Store in the process. [. .]

[8] . . . Apple attacks the supracompetitive-pricing finding [(i.e., direct evidence)] on factual grounds by asserting that Apple charges a substantially similar commission as its competitors. That assertion is true as far as headline rates go, but the district court reasonably based its supracompetitive-price finding on effective commission rates instead of headline rates. The district court found Apple’s reliance on headline rates to be “suspect” because, unlike the App Store, other platforms frequently negotiate down the rates they charge developers. The court noted that Amazon has a headline rate of 30% but an effective commission rate of 18%. And it credited testimony that game-console transaction platforms often negotiate special deals for large developers. While the district court’s finding that the Google Play Store (the App Store’s “main competitor”) charges a 30% rate seemingly undermines the characterization of Apple’s commission as supracompetitive, we cannot say that the district court clearly erred absent evidence about the Google Play Store’s effective commission—the metric that the district court at trial found to be the key to determining the competitiveness of a price in this market. [. .]

[9] [Nor are we] persuaded by Apple’s argument that the district court erred in concluding that Epic established indirect evidence of anticompetitive effects. Apple does not take issue with the district court’s finding of a 52 to 55% market share (other than noting it was the court’s own calculation); nor does Apple challenge the court’s barriers-to-entry finding. It instead argues that the finding that Apple wields its market power in an anticompetitive manner is speculative. But, supported by basic economic presumptions, the district court reasonably found that, without Apple’s restrictions, would-be competitors could offer iOS users alternatives that would differentiate themselves from the App Store on price as well as consumer-appeal features like searchability, security, privacy, and payment processing. Indeed, it found competition in the PC-gaming market to be a “vivid illustration”: Steam had long charged a 30% commission, but upon Epic’s entry into the market, it lowered its commission to 20%. Epic’s indirect-evidence showing was sufficient.

Step Two: Procompetitive Rationales [. .]

[10] . . . [T]he district court accepted two sets of [procompetitive] rationales as non-pretextual and legally cognizable. First, it found that Apple implemented the restrictions to improve device security and user privacy—thereby enhancing consumer appeal and differentiating iOS devices and the App Store from those products’ respective competitors. Second, the court partially accepted Apple’s argument that it implemented the restrictions to be compensated for its IP investment. While the court credited the IP-compensation rationale generally, it rejected the rationale with respect to the 30% commission rate specifically. . . .

[11] Epic argues that the district court may not credit Apple’s IP-compensation rationale while finding that the rationale was pretextual with respect to the 30% commission rate specifically. We have held that IP-compensation

is a cognizable procompetitive rationale, and we find no error in the district court’s partial crediting of that rationale here. [. . .]

[12] . . . Because the district court accepted only a general version of Apple’s IP-compensation rationale (that Apple was entitled to “some compensation”), Epic at step three needed only to fashion a less-restrictive alternative calibrated to achieving that general goal, instead of one achieving the level of compensation that Apple currently achieves through its 30% commission. There is no legal requirement—as Epic suggests—that district courts make pretext findings on an all-or-nothing basis. When district courts at step two partially credit a rationale, step three will necessarily take that partial finding into account.

[13] Epic and its amici next argue that Apple’s security and privacy rationales are social, not procompetitive, rationales and therefore fall outside the purview of antitrust law. We reject this argument. [. . .]

[14] . . . Epic’s argument characterizes Apple as asserting security and privacy as independent justifications in and of themselves. But, throughout the record, Apple makes clear that by improving security and privacy features, it is tapping into consumer demand and differentiating its products from those of its competitors—goals that are plainly procompetitive rationales. Consumer surveys in the record show that security and privacy is an important aspect of a device purchase for 50% to 62% of iPhone users and 76% to 89% of iPad users worldwide. Even Epic’s CEO testified that he purchased an iPhone over an Android smartphone in part because it offers better security and privacy. And the district court found that, because Apple creates a trusted app environment, users make greater use of their devices.

[15] With Apple’s restrictions in place, users are free to decide which kind of app-transaction platform to use. Users who value security and privacy can select (by purchasing an iPhone) Apple’s closed platform and pay a marginally higher price for apps. Users who place a premium on low prices can (by purchasing an Android device) select one of the several open app-transaction platforms, which provide marginally less security and privacy. Apple’s restrictions create a heterogenous market for app-transaction platforms which, as a result, increases interbrand competition—the primary goal of antitrust law. . . . If we were to accept Epic and its amici’s argument, then no defendant could cite competing on non-price features as a procompetitive rationale. [. . .]

Step Three: Substantially Less Restrictive Means

[16] The district court did not clearly err when it held that Epic failed to prove the existence of substantially less restrictive alternatives (“LRAs”) to achieve Apple’s procompetitive rationales. . . . To qualify as substantially less restrictive, an alternative means must be virtually as effective in serving the defendant’s procompetitive purposes without significantly increased cost. [. . .]

[17] Epic argues that Apple already has an LRA at its disposal for the distribution restriction: the notarization model that Apple uses for app distribution on its desktop and laptop operating system (macOS). The notarization model sits somewhere between iOS’s “walled garden” and the open-platform model that characterizes some app-transaction platforms. Unlike on iOS, the Mac Store (the Apple-run equivalent of the iOS App Store for Mac computers) is not the exclusive means for macOS users to download apps; instead, users can download apps from the Mac Store or anywhere else on the internet. Also unlike on iOS, a developer can distribute a macOS app to users without first submitting it to Apple. But, regardless of how the developer distributes that app, it will carry a warning that Apple has not scanned it for malware. The developer, however, can choose to submit the app to Apple. If the app passes Apple’s malware scan, then the developer can distribute the app to users—again, through the Mac Store or otherwise—without the warning that accompanies unscanned apps.

[18] The malware scanning that Apple performs in the notarization model is not the same as the full app review that it conducts on iOS apps. Importantly, the notarization model does not include human review—a contextual review that, as found by the district court, cannot currently be automated. As part of iOS human review, a reviewer confirms that an app corresponds to its marketing description to weed out “Trojan Horse” apps or “social engineering” attacks that trick users into downloading by posing as something they are not. The reviewer also checks that the app’s entitlements are reasonable for its purpose—rejecting, for example, a Tic-Tac-Toe game that asks for camera access and health data, while approving camera access for a social media app. On occasion, human review also detects novel, well-disguised malware attacks. Despite Epic carrying the burden at step three

of the Rule of Reason, it was not clear before the district court—and still is not entirely clear—how Epic proposes that the notarization model translates from macOS to iOS. In particular, it is unclear whether the proposed model would incorporate human review and what type (if any) of licensing scheme Apple could implement to complement the notarization model. Whatever the precise form of Epic’s proposed notarization model, the district court did not err in rejecting it. [. . .]

[19] Epic proposes access to competing payment processors as an LRA to Apple’s IAP requirement. Like the distribution requirement LRA, this LRA suffers from a failure of proof on how it would achieve Apple’s IP-compensation rationale. As the district court noted, in a world where Apple maintains its distribution restriction but payment processing is opened up, Apple would still be contractually entitled to its 30% commission on in-app purchasers. Apart from any argument by Epic, the district court presumed that Apple could utilize a contractual right to audit developers to ensure compliance with its commissions. But the court then rejected such audits as an LRA because they would seemingly impose both increased monetary and time costs.

Step Four: Balancing

[20] [. . .] Even though [the district court] did not expressly reference [balancing at step four of the Rule of Reason], it stated that it carefully considered the evidence in the record and determined, based on the rule of reason, that the distribution and IAP restrictions have procompetitive effects that offset their anticompetitive effects. This analysis satisfied the court’s obligation [to conduct balancing under the Rule of Reason.] [. . .]

California’s Unfair Competition Law

[21] We now turn to Apple’s . . . arguments concerning the UCL. The district court . . . concluded that Apple’s anti-steering provision violates the UCL’s [prohibition on unfair competition.] . . . We affirm. [. . .]

{Eds.: *The district court below had concluded that Apple’s anti-steering rules, described at paragraphs 1 and 4 of this extract, violated California’s Unfair Competition Law on the ground that it “threaten[ed] an incipient violation of an antitrust law” by preventing informed choice by users of the iOS platform, and on the ground that it “violate[d] the policy and spirit of [the antitrust] laws because anti-steering has the effect of preventing substitution among platforms for transactions.” Epic Games, Inc. v. Apple Inc., 559 F.Supp.3d 898, 1052–56 (N.D. Cal. 2021).}*

[22] Apple . . . argues that two principles from Sherman Act case law preclude UCL liability here. We find neither argument persuasive. First, Apple contends that the Supreme Court’s decision in *Amex*—finding in favor of American Express in a suit challenging its anti-steering provision—bars UCL liability stemming from Apple’s anti-steering provision. Apple does not explain how *Amex*’s fact-and market-specific application of the first prong of the Rule of Reason establishes a categorical rule approving anti-steering provisions, much less one that sweeps beyond the Sherman Act to reach the UCL. *Amex* was based on the plaintiff’s failure to establish direct evidence of anticompetitive effects through a reduction in output, supracompetitive pricing, or excessively high profit margins; it was not a blanket approval of anti-steering provisions.

[23] Second, Apple argues that the UCL mandates trial courts to define a relevant market and then conduct the balancing test within that market (similar to the Rule of Reason). . . . Apple does not cite any California authority for this proposition. Moreover, such a rule runs contrary to California courts’ repeated instruction that no inflexible rule can be laid down as to what conduct will constitute unfair competition. It also contradicts a California Supreme Court decision that conducted something akin to quick-look review (in which a precise market-definition is not needed) when confronted with significant restrictions on the free flow of price information. [. . .]

[24] There is a lively and important debate about the role played in our economy and democracy by online transaction platforms with market power. Our job as a federal Court of Appeals, however, is not to resolve that debate—nor could we even attempt to do so. Instead, in this decision, we faithfully applied existing precedent to the facts as the parties developed them below.

* * *

Concerns about app store competition—including the concerns identified above—have motivated some legislative proposals in recent years. The following extract is drawn from the proposed Open App Markets Act, proposed during the 117th Congress as a measure to improve competition in app stores. What do you think of it?

[Proposed] Open App Markets Act

S.2710 (117th Cong. 2d Sess.)

SEC. 2 DEFINITIONS

[. . .] **COVERED COMPANY.**—The term “covered company” means any person that owns or controls an app store for which users in the United States exceed 50,000,000.

SEC. 3. PROTECTING A COMPETITIVE APP MARKET.

(a) **EXCLUSIVITY AND TYING.**—A covered company shall not—

- (1) require developers to use or enable an in-app payment system owned or controlled by the covered company or any of its business partners as a condition of the distribution of an app on an app store or accessible [sic] on an operating system;
- (2) require as a term of distribution on an app store that pricing terms or conditions of sale be equal to or more favorable on its app store than the terms or conditions under another app store; or
- (3) take punitive action or otherwise impose less favorable terms and conditions against a developer for using or offering different pricing terms or conditions of sale through another in-app payment system or on another app store.

(b) **INTERFERENCE WITH LEGITIMATE BUSINESS COMMUNICATIONS.**—A covered company shall not impose restrictions on communications of developers with the users of an app of the developer through the app or direct outreach to a user concerning legitimate business offers, such as pricing terms and product or service offerings. Nothing in this subsection shall prohibit a covered company from providing a user the option to offer consent prior to the collection and sharing of the data of the user by an app.

(c) **NONPUBLIC BUSINESS INFORMATION.**—A covered company shall not use nonpublic business information derived from a third-party app for the purpose of competing with that app.

[. . .]

(e) **SELF-PREFERENCING IN SEARCH.**—

- (1) **IN GENERAL.**—A covered company shall not provide unequal treatment of apps in an app store through unreasonably preferencing or ranking the apps of the covered company or any of its business partners over those of other apps in organic search results.
- (2) **CONSIDERATIONS.**—Unreasonably preferencing—
 - (A) includes applying ranking schemes or algorithms that prioritize apps based on a criterion of ownership interest by the covered company or its business partners; and
 - (B) does not include clearly disclosed advertising.

[. . .]

SEC. 4. PROTECTING THE SECURITY AND PRIVACY OF USERS.

(a) **IN GENERAL.**—

- (1) **NO VIOLATION.**—Subject to section (b), a covered company shall not be in violation of section 3 for an action that is—

- (A) necessary to achieve user privacy, security, or digital safety;
- (B) taken to prevent spam or fraud;
- (C) necessary to prevent unlawful infringement of preexisting intellectual property; or
- (D) taken to prevent a violation of, or comply with, Federal or State law.

(2) **PRIVACY AND SECURITY PROTECTIONS.**—In paragraph (1), the term “necessary to achieve user privacy, security, or digital safety” includes—

- (A) allowing an end user to opt in, and providing information regarding the reasonable risks, prior to enabling installation of the third-party apps or app stores;
- (B) removing malicious or fraudulent apps or app stores from an end user device;
- (C) providing an end user with the technical means to verify the authenticity and origin of third-party apps or app stores; and
- (D) providing an end user with option to limit the collection sharing of the data of the user with third-party apps or app stores.

(b) **REQUIREMENTS.**—Subsection (a) shall only apply if the covered company establishes by a preponderance of the evidence that the action described in that subsection is—

- (1) applied on a demonstrably consistent basis to—
 - (A) apps of the covered company or its business partners; and
 - (B) other apps;
- (2) not used as a pretext to exclude, or impose unnecessary or discriminatory terms on, third-party apps, in-app payment systems, or app stores; and
- (3) narrowly tailored and could not be achieved through a less discriminatory and technically possible means.

NOTES

- 1) Should courts, agencies, or Congress allow an app store owner to collect an unlimited commission on app distribution and in-app sales for an unlimited period of time? To put it another way: should app store owners have more freedom, less freedom, or the same freedom to price that other businesses enjoy?
- 2) How do you rate the extract from the draft Open App Markets Act? What goals do you think it is trying to balance, and what changes would you make to improve it?
- 3) If there is no duty to carry third-party apps in the first place, does it follow that there is no antitrust problem with imposing particular conditions on their carriage?
- 4) Suppose that Business A decides to develop a platform—a device or operating system—primarily as a means of distributing its flagship app. To that end, it invests in building a high quality platform and sells it at cost, all as a major strategic investment in distributing its app widely. And suppose that Business B decides to develop a platform of the same kind—that is, a device or operating system—with no particular intention of distributing apps. Only later does Business B decide to make some money by developing some apps as a sideline. Should both businesses have the same latitude to discriminate against, or refuse to carry, rival apps on the platform’s app store? In other words, in shaping antitrust rules and other regulations, should we care whether or not the platform was created specifically to provide better distribution for the in-house app? Is that a good reason to give the platform more latitude to prefer its own apps?
- 5) Is it an antitrust problem for an app-store owner to unilaterally decide to remove a rival app from its app store purely because the owner thinks that app is better and doesn’t want the competition? What cases would bear on liability for that behavior?

- 6) Should an app store be able to enter into agreements with app developers about app pricing? What antitrust concerns, if any, might such a practice raise?
- 7) Consider the following statement. “Personal devices contain huge amounts of personal and sensitive data, and users make mistakes all the time when installing and using apps. As a result, the dangers of criminal, malicious, and other hostile apps vastly outweigh the gains from forced access or interoperability, so courts and Congress should be very deferential to (plausible) security concerns when invoked as a basis to limit or deny third-party access to app stores and devices.” Do you agree?
- 8) Which government actor is best placed to figure out whether particular kinds of app-store restrictions are in fact reasonably necessary: Congress, courts (judges? juries?), or enforcers?
- 9) Are there any circumstances under which antitrust doctrine might imply due-process-style obligations (*e.g.*, reasoned decision-making, a hearing, some kind of appeal or review) when an app store owner wants to remove apps or limit their distribution? Should Congress create such obligations?

5. Artificial Intelligence: Preemptive Competition Policy?

At the time of writing, no area of the tech frontier is generating as much attention and anxiety as artificial intelligence (“AI”). The current and expected future ability of machine learning technologies to help solve problems, generate new ideas, and perform functions of all kinds—from the mundane to the bewilderingly complicated—has become the hottest topic in many tech regulation policy spaces. And it is influencing competition policy discussion too!

As usual, opinion is divided on the right path for competition policy. Some have called for aggressive enforcement—and perhaps special regulation too—in the near future, to avoid the emergence (or improper maintenance) of monopoly power or anticompetitive practices.¹⁸⁹ Many of these writers emphasize the existence of monopoly power or significant market concentration at critical levels of the “AI stack.” Others suggest that the regular antitrust rule of the road is the best medicine in a developing industry, and that the presence of monopoly and concentration alone does not suggest that anything undesirable is going on or that special intervention is needed.¹⁹⁰

By way of background, the AI stack, in broad terms, is the set of layered technologies that makes AI possible. In most common formulations, the stack is described as follows:

- **Chips.** The first (“lowest”) level of the stack involves high-end processor chips. Many commentators emphasize the lack of existing rivalry at this level of the market, and note the dominance of NVIDIA (a high-end chipmaker) and ASML (a provider of photolithography technologies used in making chips). However, a number of large tech businesses have announced major efforts to enter or expand in this market.¹⁹¹
- **Cloud computing.** The second level of the stack involves cloud processing and storage capacity that can be used for handling the vast amounts of information needed to make AI technologies work. Commentators generally recognize that cloud markets are moderately concentrated, with a few leading suppliers and a robust fringe.

¹⁸⁹ See, *e.g.*, Cristina Caffara, *The Global AI Conundrum for Antitrust Agencies*, TECH POLICY PRESS (Feb. 7, 2024); FTC, *Generative AI Raises Competition Concerns*, FTC TECHNOLOGY BLOG (June 29, 2023); White House, Press Release, Readout of White House Meeting on Competition Policy and Artificial Intelligence (Jan. 20, 2024); AI NOW, 2023 LANDSCAPE: CONFRONTING TECH POWER (2023); Ganesh Sitaraman & Tejas N. Narechania, *It’s Time for the Government to Regulate AI. Here’s How*, POLITICO (Jan. 15, 2024).

¹⁹⁰ See, *e.g.*, Patrick Grady & Daniel Castro, *Tech Panics, Generative AI, and the Need for Regulatory Caution*, CENTER FOR DATA INNOVATION WHITE PAPER (May 2023); Satya Marar, *Artificial Intelligence and Antitrust Law: A Primer*, MERCATUS CENTER AT GEORGE MASON UNIVERSITY SPECIAL STUDY (February 2024).

¹⁹¹ See, *e.g.*, Keach Hagey, *Sam Altman Seeks Trillions of Dollars to Reshape Business of Chips and AI*, WALL ST. J. (Feb. 8, 2024); Jonathan Vanian, *Mark Zuckerberg indicates Meta is spending billions of dollars on Nvidia AI chips*, CNBC (Jan. 18, 2024); Cade Metz, Karen Weise & Mike Isaac, *Nvidia’s Big Tech Rivals Put Their Own A.I. Chips on the Table*, N.Y. TIMES (Jan. 29, 2024).

- **Foundation models.** The third level of the stack involves “foundation models”: the core AI models that serve as the “brains” supporting individual applications. The shape of competition in the supply of foundational models, or access to them, is changing rapidly.
- **Apps.** The fourth (“highest”) level of the stack contains user-facing applications that rely on the foundation models and use them to perform particular useful functions. This set of applications is changing rapidly, as businesses search for new ways to harness and use AI technologies.

Is it possible, today, to say anything useful and concrete about antitrust and competition policy in AI? Are there genuine signs of misconduct? And how strong is the case for special competition-policy intervention by Congress, antitrust enforcers, or others today?

Take a look at the following three extracts, taken respectively from: (1) a blog post from the FTC supporting an antitrust-based interventionist approach, (2) an academic article supporting the creation of regulatory duties separate and apart from antitrust; and (3) a white paper from the Mercatus Center supporting a cautious approach. Which do you find more persuasive?

FTC, Generative AI Raises Competition Concerns

FTC Competition Matters Blog (June 29, 2023)

[1] “Generative AI” is a category of AI that empowers machines to generate new content rather than simply analyze or manipulate existing data. By using models trained on vast amounts of data, generative AI can generate content—such as text, photos, audio, or video—that is sometimes indistinguishable from content crafted directly by humans. Large language models (LLMs), which power chatbots and other text-based AI tools, represent one common type of generative AI.

[2] Many generative AI models are developed using a multi-step process: a pre-training step, a fine-tuning step, and potential customization steps. These steps may all be performed by the same company, or each step may be performed by a different company. The pre-training step creates a base model with broad competency in a specific domain, such as language or images. For example, a pre-trained language model might take a partial sentence such as “the family brought their pet goat to the . . .” and generate potential “autocomplete” suggestions like “park,” “vet,” or “farm.” After pre-training, the model is fine-tuned for a specific application, such as responding to questions or generating images from prompts. In a chatbot interface, a user may ask: “What are some good places to bring your pet goat?” Finally, some types of generative AI can be further customized via methods specific to certain types of models, such as prompt engineering. Prompt engineering is used by many chatbot developers to add more constraints—directions to not respond to inappropriate or harmful questions—or to imitate behaviors.

[3] Generative AI may raise a variety of competition concerns. In particular, control over one or more of the key building blocks that generative AI relies on could affect competition in generative AI markets.

[4] The foundation of any generative AI model is the underlying data. Developing generative AI typically requires exceptionally large datasets, especially in the pre-training step. The data used in this step forms the foundation of the model in the chosen domain, such as language or images.

[5] The volume and quality of data required to pre-train a generative AI model from scratch may impact the ability of new players to enter the market. There are a few reasons why collecting a large and diverse corpus of data can be harder for new market entrants than for incumbents. First, more established companies may benefit from access to data collected from their users over many years—especially if the incumbents also own digital platforms that amass large amounts of data. This data may also be more detailed and robust. Second, established companies are more likely to have developed and honed proprietary data collection tools and technologies for acquiring or scraping data.

[6] This may be particularly true in specialized domains or domains where data is more highly regulated, such as healthcare or finance. Pre-training or fine-tuning a model with deep expertise in these types of areas may require

access to large amounts of data that is not widely available and would be difficult for a new player in the market to collect.

[7] Of course, simply having large amounts of data is not unlawful—though the Commission has brought many actions alleging that companies’ data collection, retention, or usages policies and practices were unreasonable, unfair, or deceptive. However, even with responsible data collection practices in place, companies’ control over data may also create barriers to entry or expansion that prevent fair competition from fully flourishing.

[8] Another essential input for generative AI is labor expertise. Developing a generative model requires a significant engineering and research workforce with particular—and relatively rare—skillsets, as well as a deep understanding of machine learning, natural language processing, and computer vision. It can be difficult to find, hire, and retain the talent required to develop generative AI.

[9] Additionally, the speed and velocity at which generative AI is evolving means that models may quickly become outdated or obsolete. The talent companies can acquire and maintain may play a key role in not only the path, but also the rate, of generative AI’s evolution.

[10] Firms hoping to compete in the generative AI space need expertise, not only on how to develop generative AI but also on how to deploy the fine-tuned AI products. Companies that can acquire both the engineering experience and professional talent necessary to build and package the final generative AI product or service will be better positioned to gain market share.

[11] Since requisite engineering talent is scarce, powerful companies may be incentivized to lock-in workers and thereby stifle competition from actual or would-be rivals. To ensure a competitive and innovative marketplace, it is critical that talented individuals with innovative ideas be permitted to move freely, and, crucially, not be hindered by non-competes.

[12] Access to computational resources is a third key input in generative AI markets. Generative AI systems typically require significant computational resources (“compute”). This is especially true at the pre-training step, when creating a new model from scratch. Compute allows generative AI companies to process data, train the model, and deploy the AI system. Compute generally requires dedicated hardware, such as computers with specialized chips like graphical processing units (GPUs) that can be expensive to operate and maintain. New entrants typically access compute by turning to cloud computing services, which provide high-performance compute resources on demand. However, cloud services can be expensive and are currently provided by only a handful of firms, raising the risk of anticompetitive practices.

[13] The fine-tuning step usually requires substantially less compute than pre-training steps, as fine-tuning techniques usually involve smaller training datasets. For example, the fine-tuning technique LoRa (Low-Rank Adaptation) can enable a developer to fine-tune a model to perform a specific task using consumer grade GPUs. However, fine-tuning must be performed on an existing pre-trained base model, meaning that companies wishing to create a fine-tuned model for a specific application must partner with a company that already owns an established base model, take on the substantial cost of developing their own, or turn to publicly available open-source base models.

[14] This high cost of entry to creating a pre-trained base model may lead to a market where the highest quality pre-trained models are controlled by a small number of incumbents. Several developments currently ongoing in generative AI research may affect this dynamic, such as the proliferation of open-source pre-trained models and models with a much smaller number of parameters, which are cheaper to train. The evolution of the relative quality of public base models compared to privately controlled models will likely be a key factor in determining the impact of computational resources as a barrier to entry in generative AI development.

[15] Additionally, some markets for specialized chips are—or could be, without appropriate competition policies and antitrust enforcement—highly concentrated. Last year a challenge by the FTC led to Nvidia abandoning its proposed \$40 billion acquisition of Arm. The FTC’s complaint alleged that the merger would have stifled competition in multiple processor markets, including chips for cloud service providers. Today, increasing demand for server chips may outpace supply in some instances. There are reports, for example, that the spike in demand

for server chips that can train AI has caused a shortage, prompting major cloud-server providers such as AWS, Microsoft, Google, and Oracle to “limit their availability for customers.” And firms in highly concentrated markets are more prone to engage in unfair methods of competitions or other antitrust law violations.

[16] The open-source ecosystem may play an important role in the development of generative AI. For example, last year, following major advances in closed-source image generation models, open-source image generation models became available to the open-source community. What followed was a proliferation of open-source models with similar capabilities. Rapidly, the capabilities of the open-source image generation models eclipsed those of the proprietary base models that inspired them. The open-source innovation explosion in image generation, coupled with new developments in optimizations, made it possible for nearly anyone to develop, iterate on, and deploy the models using smaller datasets and lower-cost consumer hardware. In this manner, the open-source ecosystem may help open up the playing field once the base models become available to the public, if it can reach parity with the quality of proprietary models. However, open-source AI models are also susceptible to misuse. For instance, while open-source AI image generation tools were released with built-in restrictions on the types of images that could be generated, malicious users removed these protections and utilized the models to create non-consensual intimate images.

[17] Experience has also shown how firms can use “open first, closed later” tactics in ways that undermine long-term competition. Firms that initially use open-source to draw business, establish steady streams of data, and accrue scale advantages can later close off their ecosystem to lock-in customers and lock-out competition.

[18] Products and services using generative AI capabilities may develop in both open-source and proprietary ecosystems. In a proprietary ecosystem, access to the essential building blocks of generative AI—and who controls that access—may play a major role in determining which firms sink or swim.

[19] Incumbents that control key inputs or adjacent markets, including the cloud computing market, may be able to use unfair methods of competition to entrench their current power or use that power to gain control over a new generative AI market.

[20] For example, market leaders could attempt to foreclose competition through bundling and tying. Bundling occurs when a company offers multiple products together as a single package. Tying occurs when a firm conditions the sale of one product on the purchase of a separate product. Incumbents may be able to link together new generative AI applications with existing core products to reduce the value of competitors’ standalone generative AI offerings, potentially distorting competition.

[21] Incumbents that offer a range of products and services as part of an ecosystem may also engage in exclusive dealing or discriminatory behavior, funneling users toward their own generative AI products instead of their competitors’ products. Further, incumbents that offer both compute services and generative AI products—through exclusive cloud partnerships, for instance—might use their power in the compute services sector to stifle competition in generative AI by giving discriminatory treatment to themselves and their partners over new entrants. A related scenario exists where an incumbent offers both their own products leveraging generative AI as well as offering APIs allowing other companies to leverage their generative AI capabilities. In such circumstances, there is a risk that incumbent firms will offer their APIs on terms which exist to protect their incumbent position.

[22] Incumbent firms could also use M&A activity in the generative AI space to consolidate market power in the hands of a few players. Large firms already active in generative AI—or that already control a critical input—may try to buy up critical applications and cut off rival access to core products. Market leaders may also try to buy up complementary applications and bundle them together. Additionally, incumbents may be tempted to simply buy up nascent rivals instead of trying to out-compete them by offering better products or services.

[23] Firms in generative AI markets could take advantage of network effects to maintain a dominant position or concentrate market power. A first mover could secure a significant advantage over its competitors because its models, by virtue of having interacted with a greater number of users over a longer period, are able to generate more engaging and useful content than rival products. Because positive feedback loops can improve the performance of generative AI models, generative AI products can get better the more people use them. At the same time, this can result in a concentrated market with less possibility for entrants to compete effectively. Absent

legal or policy intervention, network effects can supercharge a company’s ability and incentive to engage in unfair methods of competition.

[24] Another related effect is platform effects, where companies may become dependent on a particular platform for their generative AI needs. As with network effects, firms could leverage platform effects to consolidate their market power, especially if they take specific steps to lock in customers in an exclusionary or otherwise unlawful way. One specific area where platform effects may play a significant role is cloud services. Cloud providers may exploit generative AI companies’ need for compute by trying to lock in customers by, for example, charging exorbitant data egress fees.

[25] The FTC is no stranger to dealing with emerging technologies. Generative AI is still evolving rapidly, but it already has the potential to transform many markets. Through vigorous law enforcement, the FTC strives to support a vibrant marketplace where new businesses can compete, researchers are free to move to the jobs where they can best advance the state of the technology, and entrepreneurs can continue to innovate. As competition issues surrounding generative AI continue to develop, the Bureau of Competition, working closely with the Office of Technology, will use our full range of tools to identify and address unfair methods of competition.

Tejas Narechania & Ganesh Sitaraman, An Antimonopoly Approach to Governing Artificial Intelligence

43 Yale L. & Pol’y Rev. 95 (2024)

Regulatory tools from the law of networks, platforms, and utilities have long been applied to industries that feature network effects, and functional or actual monopoly or oligopoly characteristics. [Network, platform, and utility (“NPU”)] regulations . . . provide a legal framework that can help build NPUs at scale, ensure continuity of service, prevent monopoly and oligopoly abuses, avoid destructive competition, ensure widespread access, promote commercial development, and sustain democracy. These regulations operate primarily *ex ante*, that is, by structuring the market (often to favor greater downstream competition), identifying likely harms, and establishing rules to prevent those harms before they arise. . . . [S]elected NPU tools could be helpful to addressing the downsides of an AI oligopoly.

Structural Separations — Structural separations limit the lines of business in which a firm can engage. The central benefit of structural separations is that they prevent a business from self-preferencing or leveraging its power from one business-line into another. For example, under the Hepburn Act of 1906, railroads were prevented from carrying commodities from any company in which they also had a stake. The idea behind the rule was that railroads should offer equal services to all shippers, rather than preferencing their own vertically-integrated shipping interests. In addition to preventing conflicts of interest and leveraging of profits, structural separations also limit the concentration of economic power and promote a diverse business ecosystem of users of the platform. Perhaps most importantly, structural separations are more administrable than many other policies. If a company is involved in the prohibited business line, it violates the rule. This is a far clearer rule than one that requires monitoring specific behaviors. [. . .]

Nondiscrimination, Open Access, and Rate Regulation — One alternative to structural separation requirements are nondiscrimination and equal access rules, sometimes coupled with rate regulation. Nondiscrimination rules allow a firm to operate two or more vertically-linked business lines, but require the firm to treat downstream businesses neutrally—including its own vertically-integrated business lines. Nondiscrimination and equal access rules apply to both access and pricing. Most platforms have to be open to all comers who seek to use them, with limited exceptions. All users must also be treated similarly in terms of price. Historically, nondiscriminatory pricing rules required firms to file their prices, called “tariffs,” and make them publicly available. Transparency about prices and prohibitions on charging prices that diverged from the posted tariff ensured equal rates for customers. Equal pricing rules are an essential corollary to open access because firms could charge prohibitive prices as a workaround to evade nondiscriminatory access requirements. In some cases, regulators have also directly set the rates firms can charge. Rate setting is usually directed toward preventing NPU enterprises from lowering output and raising prices, while simultaneously ensuring a reasonable return on invested capital. [. . .]

Interoperability Rules — Interoperability rules lower barriers to entry and thus stimulate competition by allowing new competitors to share in existing investments and imposing sharing requirements on market participants. In the telecommunications context, for example, policymakers changed the dynamics of entry into local telephone markets not only through open access rules, but also through interconnection mandates: By requiring that each telephone provider interconnect with another, no one provider could wield its network effects as a sword, effectively consolidating control over the entire market. A customer could choose any provider, and still reap the benefits of a network that spanned the entire market. Rules that required a one provider to transfer a user's phone number to a competing provider (and thus required that the providers work together on an interoperable number portability system) also facilitated competition among providers by reducing switching costs for users. Those rules targeted a notable lock-in effect: It is quite cumbersome to let all your contacts know you have a new phone number.

Satya Marar, Artificial Intelligence and Antitrust Law: A Primer
Mercatus Center at George Mason University, Special Study (February 2024)

Horizontal Mergers

[1] [. . .] Since the 1960s, improvements in economic understanding have led most economists to question and criticize the presumption that a merger is anticompetitive and likely to harm consumers and competition if it establishes control over a certain share of the market. . . . Varying industry and market-specific conditions mean that there is no systematic causal relationship between market concentration and performance measures, such as prices and margins. . . . The superior efficiency of larger firms in markets characterized by innovation and differentiated products can also lead to their becoming concentrated without reducing consumer welfare. This holds especially true for high-tech innovation-intensive industries like AI, as economies of scale possessed by larger firms are essential for delivering cost-effective data compilation and model training and cloud computing. Smaller companies and developers benefit too, either by being acquired and seeing their innovations deployed at scale by larger companies, or by contracting with larger firms for services that would not be cost-effective if conducted in-house, or by licensing proprietary technology such as advanced, closed AI foundation models. Consequently, blocking high-tech acquisitions purely based on market concentration can significantly harm innovation and thus consumer welfare by precluding these procompetitive outcomes. [. . .]

[2] In the tech sector, the ability to produce and deploy products at a massive scale, rather than just possessing the resources necessary to invest in research and development, is a key advantage possessed by larger firms relative to smaller competitors. A 2020 survey of acquisitions by Google, Amazon, Facebook, and Microsoft canvassed the 175 firms that had been acquired by these tech giants between 2015 and 2017 and found that most of these transactions resulted in the acquired firm's technology, talent, IP, and functionality being integrated into the acquiring firm's ecosystem. This indicates that acquiring firms were using acquisition to supplement and to substitute for their in-house research and development. Only a single acquisition out of the 175 canvassed was identified as a possible killer acquisition. These differing factors attest to the need to closely examine the surrounding factors in each individual merger before assuming the applicability of novel theories of harm that are likely to manifest in alternative contexts. A false-positive blocking of a merger on the basis of the killer-acquisition theory could cause immense harm to consumer welfare and innovation by entirely preventing or delaying the deployment and development of new technologies using the scale necessary.

Vertical Mergers

[3] [. . .] There are situations in which a vertical merger or vertical integration could . . . raise anticompetitive concerns. For example, imagine a large firm with few rivals in an industry in which a key production asset at another level of the market is controlled by a single firm. The large firm could acquire that single firm, gaining exclusive control over its input and plausibly harming competition by raising the prices it charges to its rivals for that input. The likelihood of this depends, however, on market-specific conditions supporting the merged firm's ability and incentive to act. . . .

[4] In the AI context, certain inputs may exist in concentrated near-monopoly markets in which a downstream company, such as a foundation-model developer or finished hardware or computing company, could theoretically

raise its rivals' costs, harming competitors and consumers, by acquiring the upstream monopolist or oligopolist firm. For example, the ultraviolet lithography machine used to manufacture leading chips used by AI foundation models is patented by a single manufacturer, the Dutch firm ASML Holdings.

[5] Conversely, many examples of vertical integration are crucial for innovating and deploying AI foundation models. For example, cloud-computing firms can take advantage of economies of scale from their server capacity to subsidize computing costs for their own foundation models; they can then deploy these models on a greater scale and with greater access to their user base. Inputs from that user base can be used to fine-tune model algorithms by offering them to application developers who purchase cloud services. Google, Amazon, and Microsoft all provide cloud services to a range of application developers and foundation-model developers while developing their own models and application programming interfaces (APIs) in house. Similarly, social media companies like Facebook/Meta and search engines like Google can take advantage of their large user base of consumer data to refine and train better-quality foundation models in house; part of this process may include acquiring developers who hold promising technology. [. . .]

[Refusal to Deal]

[6] Although a firm is generally free to unilaterally refuse to do business with any other firm, refusal to deal constitutes illegal anticompetitive conduct if it serves the purpose of creating or maintaining a monopoly—that is, when a dominant firm's refusal to deal excludes rivals from competing effectively. Refusing to deal, or dealing in discriminatory terms with competitors in licensing or selling a technology or input that is deemed an “essential facility” or “bottleneck input,” could theoretically “raise rivals' costs,” thereby stymieing competition and causing higher prices to be passed on to consumers. However, declaring a technology to be an essential facility and thus mandating that it be shared with other firms would drastically reduce the commercial incentive to invest in developing such technologies in the first place, thereby undermining future innovation. It also ignores any potential for competitor technologies to emerge in the future, given technological innovation's unpredictable nature. Administering a “duty to deal,” including setting its terms and determining what a fair price or other terms might be for such involuntary dealings, is also outside the expertise and administrative capacity of the courts. It is thus exceedingly difficult for refusal-to-deal claims to succeed under US antitrust law.

[7] In the AI sector, there is currently a thriving market for both open-source foundation models and for closed-source models that can be licensed under commercial terms. There is also a thriving market for competing chip designs, with market leaders like the United States' NVIDIA likely to face competition from in-house designs from Amazon, Microsoft, and other firms. Although semiconductor chips are manufactured by many companies across a range of countries, predominantly in Asia, manufacturing facilities for cutting-edge chips remain a relatively concentrated market. The most advanced two-nanometer (nm) chip designs are expected to be produced by Taiwan's TSMC and the United States' Intel in 2024 and by South Korea's Samsung in 2025. Technological advances and a combination of public and private investment are likely to see the continued expansion of the manufacturing of these inputs. These features, combined with the evidently rapid evolution of the industry and the technology supplying it, make it unlikely that any particular chip will be deemed an “essential facility,” even though a shortage of chips across the market remains a pressing issue for AI innovation, deployment, and global supply chains. Netherlands-based firm ASML Holdings currently remains the only producer of cutting-edge UV lithography machines necessary for AI chip manufacturing. However, there is no indication that this firm is dealing with customers requiring AI chips on illegal anticompetitive discriminatory terms.

[Tying and Bundling]

[8] In the case of “platform software,” such as operating systems, courts have applied the rule-of-reason standard to tying and bundling arrangements. Since the utility of platform software (such as a computer or smartphone operating system) is providing a range of different applications and services in one place, it would be inappropriate to assume that the platform and each software component are separate products tied together, rather than a single offering that benefits consumers through convenience, a better user experience, and a reduction in time and resource expenditure relative to independently sourcing or distributing different services and applications. Integrating new functionalities into existing software is an in-demand and sought-after innovation for consumers, as consumers often buy into an entire “ecosystem” of services and applications rather than individual products.

Even when the two tied items are considered separate products, technologically and physically integrating them could improve the value of one or both individual products to users as well as to the producer of the complementary product. It is thus appropriate for [defendants] in such cases to have the opportunity to forward evidence of procompetitive efficiencies that could justify the arrangement.

[9] AI foundation models arguably serve an analogous function to platform software, with individual applications serving as complements and providing more benefits to consumers when the two are integrated in purchases. Similarly, cloud-computing services may be deemed as analogous to platform software. Individual applications or services offered as part of the cloud-computing service package constitute pro-innovation integrations that add value for consumers and thus increase rather than reduce competition. Whether these efficiency justifications are applicable and whether they outweigh the anticompetitive harms of the individual tying arrangement must be judged on a case-by-case basis. Evaluating future tying arrangements in AI through the rule-of-reason approach will allow for this.

The 2023 Executive Order on AI

On October 30, 2023, President Biden issued an “Executive Order on the Safe, Secure, and Trustworthy Development and Use of Artificial Intelligence.” The Executive Order instructed a wide array of federal government agencies and components to take steps to identify and analyze the risks and opportunities presented by emerging AI technologies. For example, the Secretary of Commerce was directed to “[e]stablish guidelines and best practices, with the aim of promoting consensus industry standards, for developing and deploying safe, secure, and trustworthy AI systems”; the Secretary of the Treasury was directed to “issue a public report on best practices for financial institutions to manage AI-specific cybersecurity risks”; the Secretary of Homeland Security was directed to “evaluate the potential for AI to be misused to enable the development or production of [chemical, biological, radioactive, and nuclear] threats, while also considering the benefits and application of AI to counter these threats”; and so on.

The Executive Order also included some provisions aimed at competition. Most pointedly, the FTC was “encouraged to consider, as it deems appropriate, whether to exercise the Commission’s existing authorities, including its rulemaking authority under the Federal Trade Commission Act, to ensure fair competition in the AI marketplace and to ensure that consumers and workers are protected from harms that may be enabled by the use of AI.” In addition, “[t]he head of each agency developing policies and regulations related to AI” was directed to “use their authorities, as appropriate and consistent with applicable law, to promote competition in AI and related technologies, as well as in other markets. Such actions include addressing risks arising from concentrated control of key inputs, taking steps to stop unlawful collusion and prevent dominant firms from disadvantaging competitors, and working to provide new opportunities for small businesses and entrepreneurs.”

On January 20, 2025, President Trump revoked his predecessor’s Executive Order. Three days later, he issued a new Executive Order entitled “Removing Barriers to American Leadership in Artificial Intelligence,” which among other things directed relevant officials to prepare an action to “sustain and enhance America’s global AI dominance in order to promote human flourishing, economic competitiveness, and national security.”

In light of the issues, concerns, and observations you have read: what should the federal government do, if anything, to protect AI competition?

NOTES

- 1) What are the most compelling reasons to treat AI differently from other technologies as a matter of antitrust doctrine or competition policy? What are the most compelling reasons not to do so?
- 2) Is there an antitrust market for “artificial intelligence”?
- 3) How would you calculate the market share of an AI foundation model?
- 4) Imagine that you were leading an enforcement agency and you wanted to maximize your chances of detecting antitrust wrongdoing relating to AI in a timely and efficient fashion. Concretely, what would you do?
- 5) Suppose we agree that AI technology is the most important innovation since the microchip. Does that have any implications for competition policy?

- 6) What could a “structural separation” regulatory regime look like in the AI sector? What effects do you think it would have?

D. Remedies and Institutions

Winning a “tech antitrust” case can be hard. But sometimes that’s just half the battle. In some case the harder puzzle is: what should the plaintiff get if it wins? Remedies in tech antitrust are the subject of a vigorous literature, much of it recent.¹⁹² Some categories of measures have attracted particular attention from scholars and policymakers. In this Section we will take a quick look at three such categories: interoperability, portability, and breakup. Our focus will be on the measures themselves: what they might entail, why they might be appealing, and what the challenges and concerns might be. Whether they are a good fit in a particular case depends on the specific theory of harm asserted by the plaintiff, the state of the market, and the extent to which the measure would likely to help to restore competition to the condition that it would be in but-for the unlawful conduct.¹⁹³ Finally, we will take a look at a more general institutional “remedy” for competition concerns in tech markets: the creation of a specialist agency to monitor competition in digital markets.

1. Interoperability and Portability

An interoperability remedy mandates some kind of interconnection or interaction between the defendant and third parties. Plenty of digital businesses interoperate voluntarily: for example, users of different email providers can send and receive emails to and from one another; customers of different cellphone service providers can make calls to one another and exchange text messages; and in some cases players of video games on one console or platform can play against those on another (“cross-platform play”). In other cases, this may not take place unless Congress, an agency, or a court requires it.

Successful interoperability usually requires some kind of standardization: an interoperating business often must, in some relevant sense, use a common protocol or set of reference points to figure out how to maintain technical compatibility. (This is a specific version of a broader point we encountered at the beginning of this chapter: participation in a common network often requires some common rules.¹⁹⁴) The nature of this standardization may vary considerably from one setting to the next: in some cases it may involve a detailed and complex set of rules covering many different variables; in other cases, it may be more straightforward. Of course, this has implications for the feasibility and attractiveness of interoperability itself: in some settings a meaningful interoperability remedy may be very hard to design and to monitor or enforce; in other settings, it may all be very manageable.

Interoperability can offer a mixed basket of beneficial and harmful effects. On the one hand, there can be real benefits. An interoperability mandate can allow users of each network to enjoy benefits from the participation of users on other networks, and thus unlock significant social value. This may tend to reduce the tendency of network effects to deter entry, by allowing even small rivals to compete and gain scale while actively benefiting from the large network size of an incumbent. (For example, a new entrant social network may be more appealing if its users can communicate and share content with users of the incumbent network!) Interoperability may also bring welfare benefits even for users of a dominant network, who may enjoy benefits from the participation of additional networks and their own users. Interoperability rules may also encourage third parties to design and develop

¹⁹² See, e.g., Herbert Hovenkamp, *Structural Antitrust Relief Against Digital Platforms*, 7 J. L. & Innovation 1 (2024); Daniel Rubinfeld, *Data portability and interoperability: An E.U.-U.S. comparison*, Eur. J. L. & Econ. (2023); Herbert Hovenkamp, *Antitrust Interoperability Remedies*, 123 Colum. L. Rev. Forum 1 (2023); Fiona M. Scott Morton, Gregory S. Crawford, Jacques Crémer, David Dinielli, Amelia Fletcher, Paul Heidhues, and Monika Schnitzer, *Equitable Interoperability: The “Supertool” of Digital Platform Governance*, 40 Yale J. on Reg. 1013 (2023); Marc Bourreau, Jan Krämer & Miriam Buiten, *Interoperability in Digital Markets*, CERRE (May 2022); Hiba Hafiz, *Rethinking Breakups*, 71 Duke L.J. 1491 (2022); John Kwoka & Tommaso Valletti, *Unscrambling the Eggs: Breaking Up Consummated Mergers and Dominant Firms*, 30 Indus. & Corp. Change 1286 (2021); Rory Van Loo, *In Defense of Breakups: Administering A “Radical” Remedy*, 105 Cornell L. Rev. 1955 (2020); Lina M. Khan, *The Separation of Platforms and Commerce*, 119 Colum. L. Rev. 973, 997–1000 (2019); Spencer Weber Waller, *Access and Information Remedies in High-Tech Antitrust*, 8 J. Comp. L. & Econ. 575 (2012).

¹⁹³ See *supra* § VIII.E. (merger remedies); § XI. G. (principles governing injunctive relief in other cases).

¹⁹⁴ See *supra* § XIV.B.1.

products and technologies that would otherwise be too risky, in light of the threat that a dominant network could simply cut them off.

On the other hand, interoperability has some drawbacks and risks. For one thing, it may limit the incentive of users to switch over to new entrants: an incumbent’s users may find it *less* appealing to switch over to an appealing new network if they can simply interoperate without switching! For another, it may discourage rivals from establishing new networks and disruptive technologies, by offering them the easier path of interoperating with an incumbent instead. For a third, the creation of close relationships between rivals—including insight into one another’s business models and technical standards—might tend to harm competition by facilitating express or tacit collusion. For a fourth, market participants (including incumbents and entrants) may be deterred from investing in innovations and improvements if the benefits from those investments will be shared to some extent with rivals through interoperability links. And, as with other standards drawn up with existing technologies (or interests!) in mind, the obligation to maintain interoperability may involve standardization that precludes or hinders valuable innovations.

We have so far been focusing on network-to-network interoperability: that is, connection between two networks that would otherwise be competing as substitutes for one another. But there are other forms of interoperability remedy too! Some of these involve interconnection between *complementary* products or technologies. In this broader sense we might think of an obligation to allow third-party peripherals with a particular device—or to carry third-party apps on a particular app store, or to make certain forms of access or data available to a complementary software product—as “interoperability” remedies as well. For a prominent recent proposal with ambition in this direction, look back at the excerpts from the proposed AICOA statute earlier in this chapter, including but not limited to its prohibitions on “materially restrict[ing], impeded[ing], or unreasonably delay[ing] the capacity of a [competing] business user to access or interoperate” with a covered platform, and “materially restrict[ing] or impeded[ing] a business user from accessing data generated on the covered platform by the activities of the business user, or through an interaction of a covered platform user with the products or services of the business user.”¹⁹⁵

The following extract makes the case for interoperability, in the expanded sense, as a “supertool” for digital competition policy.

**Fiona M. Scott Morton, Gregory S. Crawford, Jacques Crémer, David Dinielli,
Amelia Fletcher, Paul Heidhues, and Monika Schnitzer, *Equitable
Interoperability: The “Supertool” of Digital Platform Governance***

40 Yale J. on Reg. 1013 (2023)

[One] tool available to a regulator is equitable interoperability. We argue . . . that interoperability is both “light touch” and effective. It is “light touch” because it only defines an interoperable interface while allowing firms free choice about other aspects of their products and strategies. But such an interface significantly lowers entry barriers for rivals, allowing them to enter and compete in the market, and it therefore increases contestability. Interoperability, as applied to dominant platforms with network effects, substantially reduces barriers to entry by new competitors, converts proprietary network effects to market-wide network effects, and reduces gatekeeper power. These reduced barriers allow more competitors to enter an industry, increasing choice, competition, and innovation that benefits consumers. Interoperability can also be valuable for facilitating multihoming, with the benefits outlined above. Interoperability can shift competition from being for the market to being in the market. It is a regulatory governance tool that stimulates innovation and works in a broad variety of settings.

For maximum effectiveness, interoperability must be paired with a prohibition against discrimination. We call this requirement “equitable interoperability,” to reflect that the terms of such interconnection must give all businesses using the platform access to the market and to consumers that is qualitatively equivalent (in terms of scope, ease, cost, utility, and the like). In the case of direct network effects this requires no discrimination between the connecting entities served by the platform’s interface. In the case of indirect network effects, the prohibited discrimination is both among complementary businesses using the platform and between those businesses and any

¹⁹⁵ See *supra* § XIV.C.1.c).

vertically integrated service provided by the platform. Nondiscrimination ensures that nascent rivals or other competitive threats are not disadvantaged as they attempt to connect or compete in the market, or as a nascent threat to the platform itself. As is true with all competitive markets, final outcomes such as revenue or popularity with consumers will reflect competition and need not be the same.

A critical step in the regulatory process is identifying the bottleneck where an equitable interoperability mandate is necessary and effective. The regulator must first designate the core platform services that require interoperability using criteria such as size, the presence of network effects, the absence of multihoming, and entrenched market power. After a dominant digital platform has been identified, the next step is to determine the most effective location for the interface as well as its design and functionality. These tasks can be carried out in different ways. The staff of the regulator could do both. Another option, proposed in legislation in the United States, allows the regulator to establish and oversee a technical committee including industry participants that would carry out the work. If this approach is chosen, the project does not burden the regulator with a responsibility to engage in interface design: it can evolve flexibly with technological trends to meet the needs of the industry, all while protecting consumers from market power. [. . .]

Mandatory interoperability as applied to Facebook.com would require that users of Facebook could post as usual and have content flow to their friends, some of whom might have accounts on rival social networks. Those friends in turn could post and have the content flow to friends on Facebook. The technical requirements to make this interoperability effective would include establishing the APIs and standards for passing certain formats, for example, image, text, video, and calendar. In addition, there would need to be a standardized process for establishing friendship links, perhaps with an address protocol like the internet TCP/IP. A user on Facebook.com might receive a friend request from a user of network G. They could approve the friend request, being fully aware that the friend is located on network G. Once friends on the different platforms confirmed their desire to be linked, content posted by them would flow back and forth, in the standardized format, just as it does within a proprietary network. [. . .]

If Facebook.com were required to interoperate under either EU or U.S. law, the process would necessitate the design of APIs through which networks could exchange content. Just as a protocol is needed to exchange email, that same function must be designed for social networks. Designing a software interface is often straightforward because code is easily changed and modular, and a relevant interface may already exist within the dominant firm. The interface would define whatever is determined to be “standard functionality” (today, that might include text, images, video, and calendar) that is of most value to consumers and defines APIs that permit those elements to be exchanged by any participating network. For instance, a parent on Network G wanting to know whether a school with an account on Facebook.com is closed will benefit from receiving a simple notification via text that contains that information, even if the font or illustrations are special to Facebook, non-standard, and only visible to members of Facebook.

Posts would arrive in a user’s feed in an unchanged way (except that they would be labeled with the network of origin) so as not to disrupt the receiving platform’s business model. That is, if the receiving platform sorts and arranges messages according to the type of content, forecasted ad revenue, or time of day, the platform would continue to employ that algorithm without discrimination against posts that originate elsewhere. In the case of friends on other platforms, for example, Facebook.com would deliver users’ posts to their friends’ home networks, and the home network would deliver the post to the destination friend. An entering platform could offer differentiation through the business model (e.g., via a subscription rather than via ad support) or content moderation (e.g., less hate speech) or privacy considerations (e.g., more or less data exploitation). Not all services would be part of the “standard functionality” and included in the API. Users would have to belong to a social network to enjoy its non-standard, differentiated features. This type of innovation would more easily attract users to a new network when network effects are not a barrier. Users, as they do with their email, could move to the entrant while continuing to send (or receive) messages and posts to (or from) their friends on Facebook.com or any other participating platform.

Differentiation would also arise. A platform run by the National Rifle Association, for example, would likely have different content moderation policies than one run by the Sierra Club, which would again differ from one run by

the Walt Disney Company. Users could vote with their feet by choosing a home network that offered the speech environment and business model that best aligned with their needs. [. . .]

It is important to stress that self-regulation will not work in this setting. It may be tempting to allow the dominant firm to design the APIs and simply publish them for everyone else to use. But if the dominant firm is placed in charge, it has the incentive and ability to alter the interface every time a threatening competitor appears likely to obtain any significant market share. In that case, content flowing to or from competitors will not transmit properly, making consumers—who value reliable communication—reluctant to leave the dominant firm. To guard against this outcome, the regulator must have ultimate control. If the regulator empowers a technical committee, that allows the regulator to avoid controlling the pace of technological change or making design choices. The regulator instead can protect the interface from capture by the dominant firm, from bias against any set of entrants, and from changes that block or restrict entry.

The “equitable” part of equitable interoperability is a necessary component of the regulation. When a platform engages in content moderation, chooses the prominence of content, and limits access to its users, it would have to do so regardless of the home platform or origin of the content. For example, no compliant platform could discriminate against content simply because it originated on a rival platform. It may also be necessary to prohibit the monetization of users from other platforms, which might take the form of analyzing incoming messages from users’ friends and gathering information to later monetize them, sell ads, or combine with other data about those friends.⁵⁶ Such activity might be prohibited in order to give the home platform the revenue from its own users and to protect those users’ privacy. If so, social networks would see the content received by their own users just as they do now, and they would be able to monetize those users according to their terms of service, subject to privacy-based or other regulated data usage restrictions.

* * *

Portability is similar to, but distinct from, interoperability. A portability mandate requires a defendant to make users’ data and materials easily transferrable to rivals, in order to reduce the switching costs that could otherwise deter users from switching to preferred alternatives. For example, you might feel reluctant to switch to a different kind of smartphone even if you think it is a better device, simply because you have many personal photos, messages, contacts, music, movies, and other data and assets stored on your current smartphone, and it would be burdensome or impossible to move it all over to a new device. A portability mandate would require the provider of your current smartphone to make it easy for you to take that with you to a new device: and this in turn might make it rational for you to switch over.

Like interoperability, portability generally requires some kind of standardization, to ensure that the information can be read and processed by the defendant’s rival. As a result, a portability mandate can present similar challenges of design, enforcement, and monitoring to those presented by interoperability.

The following extract presents a perspective on portability, as well as a different take on interoperability from the excerpt immediately above.

Gus Hurwitz, Digital Duty to Deal, Data Portability, and Interoperability
Global Antitrust Institute Report on the Digital Economy (2023)

. . . The idea of data portability is that users of one service . . . should be able to take their data with them to another service. Interoperability is a closely related idea: dominant firms should engineer their platforms so that competing firms’ services can seamlessly work with those of dominant firms. The basic economic rationales for these ideas are, respectively, to reduce switching costs and to reduce the barriers to entry that network effects can create.

Data portability, for instance, might require a social media company to allow a user to download all of her posts and personal information and thus be able to import them into a competing service. Interoperability may, in a weak form, require a social media company to use standardized file formats . . . In a stronger form, it may require

that a social media company engineer (or re-engineer) their systems to use industry-defined APIs that would allow competitors' users to post directly to or receive posts directly from that firm's customers.

We can see other examples in the telecommunications sector . . . For instance, local number portability, which allows telephone customers to keep their phone numbers as they change service providers, has had dramatic procompetitive effects and was important to establishing competitive local carriers following adoption of the 1996 Telecommunications Act. [. . .]

Mandating interoperability runs into legal and practical issues. First, mandating interoperable platforms requires some of the very coordination between firms that antitrust laws normally seek to deter. . . . Indeed, interoperability among currently dominant online platforms could exacerbate rather than reduce their market power. For instance, if something like the data portability project among Facebook, Twitter, Google, and Apple were to be mandated in a format which is friendly to the incumbents but not to new entrants, then it could actually have an exclusionary effect.

Second, it is unclear how interoperability would be practically enforced. Courts are generally unable to oversee this process. An expert regulator may be better positioned than a generalist court, but it too would be highly dependent on the regulated platforms to design and implement any interoperability plan. [. . .]

Concerns about using a duty to deal as an antitrust remedy in digital markets fall into three categories: the direct costs of imposing such a duty, the effects on static competition, and the effects on dynamic competition. It is easy to imagine a world of interoperable networks, but it is more difficult to actually design such a world. The design challenges account for the direct costs of duties to deal. An antitrust duty to deal necessarily arises only where one of the parties is averse to a voluntary course of dealing. As a result, it falls to the antitrust authorities and courts to determine the terms of the duty to deal. This is easier said than done, especially in complex, rapidly changing markets.

As an example, consider . . . the history of AT&T and the telecommunications industry. . . . [T]he FCC spent nearly two decades trying to define the terms on which AT&T could deal with the computer industry—an effort ended by the antitrust suit breaking up AT&T, not by the FCC's efforts proving fruitful. Another example is to be found in the Telecommunications Act of 1996, at its core a statute that created a duty for incumbent telecommunications carriers to deal with competitive entrants into the market. Implementation of the Act led to over a decade of litigation that ended up in the Supreme Court multiple times. Arguably, the Telecommunications Act failed to achieve its primary goals: to the extent the communications industry has become more competitive over the past 25 years, it did so largely with thanks to unprecedented technological innovation on the part of cellular and cable communications companies.

The effort to impose duties to deal in the telecommunications industry is particularly telling because it is a heavily regulated industry comprising a relatively small number of firms and a dedicated, expert regulator. Indeed, for most of the 20th century the industry was based upon a simple, relatively static technology well understood by the FCC. Yet the FCC and the courts consistently struggled to implement duties to deal.

Given these failures, it is hard to imagine successfully implementing a duty to deal in digital markets, which are dynamic industries built upon rapidly changing technologies. Indeed, modern computer systems are often so complicated that the entirety of how they work is incomprehensible even to the engineers who build them—not to mention the widespread adoption of machine learning algorithms into many of the platforms that dominate the digital economy.

To take just one specific example of the potential unanticipated costs of implementing data portability or interoperability duties, consider their potential effects on data security and privacy. . . . The idea of data portability and interoperability mandates is to make it easier for users and firms to access the very information that those concerned about data security and privacy want to ensure is difficult to access. Making it easier for authorized third parties to access information, by definition, also makes it easier for unauthorized parties to do so.

In addition to these direct costs, imposing duties to deal in digital markets will affect how firms compete with one another in both static and dynamic terms. . . . [A] firm that avails itself of its dominant competitor's network will

need to maintain some level of compatibility with that network in order to maintain the benefits of the network effects that result from interoperability. The competitor, therefore, will have less ability to compete by offering new or improved core functionalities; instead, it will focus on repackaging or reselling the services already offered by the dominant firm.

More perniciously, reliance on an antitrust duty to deal opens up use of the courts and antitrust laws as a means by which non-competitive firms can attempt to “compete,” albeit by a fundamentally anticompetitive means, with more capable firms; the more duties to deal are imposed, the more frequently firms will seek to avail themselves of them. Because it is difficult to fully specify the terms of a duty to deal, imposing one as a remedy in any given case is an invitation for future lawsuits regarding compliance. . . .

Likewise, a data portability mandate would empower every competitor to make demands for access to any of a firm’s data arguably subject to that mandate—and those demands would be backed by a colorable threat of agency or judicial review. Similarly, with regard to an interoperability mandate, the threat of agency or judicial intervention effectively shifts the costs of designing systems for interoperability from the competitor, which wants the benefits of interoperability, to the incumbent firm, which must now facilitate it.

Do Interoperability and Portability Threaten Privacy?

Interoperability and portability can raise some tricky questions about privacy and data security. The core issue is that, in order for interoperability or portability to work effectively, certain kinds of information must be made available to users *outside* the network that a user has chosen to join. Making two social networks, or dating platforms, interoperable will probably require sharing information about who is using each network, as well as access to some personal information (profile, public photos, etc.). Making a social network account portable might require allowing a user to transfer a list of connections or friends over to a new network, even though those connections or friends may not have given their permission. Obviously, different kinds of network, and different forms of interoperability and portability, will present very different versions of this issue: some settings may not implicate privacy at all, while others may implicate very sharp versions of it.

In a December 2023 blog post, FTC staff affirmed the importance of both competition and digital privacy and security.¹⁹⁶ The post acknowledged that “certain safeguards for privacy and security can impede interoperability,” but expressed skepticism that the two were usually in tension. “[I]nteroperability can coexist with privacy and security—and even *enhance* them—in various contexts.” “Where dominant market participants use privacy and security as a justification to disallow interoperability and foreclose competition,” the post warned, “the FTC will scrutinize those claims carefully to determine whether they are well-founded and not pretextual, and whether the chosen approach is tailored to minimize anticompetitive impact.” This seems to be some (slightly backhanded) acknowledgement that privacy and security *can* constitute a procompetitive justification for practices that involve the denial of access to rivals, so long as the benefit is genuine and the relevant practice is appropriately tailored to the need.

Interoperability—At What Price?

Interoperability is a valuable service, and a business that provides it would normally be entitled to charge for providing it. When interoperability is imposed as an antitrust remedy, or as a pre-emptive policy measure (*e.g.*, by statute), should the interoperating platform be allowed to charge a fee for connection? On the one hand, of course, a fee will tend to limit the ability of other market participants to use and benefit from the connection, and a very high fee might render interoperability commercially impossible. On the other hand, businesses are generally entitled to charge for the services they provide, and requiring free sharing might significantly sap the owner’s incentive to invest in subsidizing others, and discourage others from undertaking similar investments. So: if we

¹⁹⁶ FTC Staff in the Office of Technology and Bureau of Competition, *Interoperability, Privacy, & Security*, FTC Technology Blog (Dec. 21, 2023).

choose interoperability as a remedy in a particular case, must a court (or other decisionmaker) also venture into the murky waters of setting a “fair and reasonable” price for connection? If so, how should they approach that enterprise?

NOTES

- 1) In what (merger or conduct) settings might an antitrust claim involve allegations that a defendant is denying some kind of interoperability or portability to rivals?
- 2) In what settings might an antitrust claim involve allegations that a defendant is *providing* some kind of interoperability or portability to rivals?
- 3) Would it be a good idea to impose a blanket “ex ante” obligation of interoperability and portability for all digital platforms? All big digital platforms, measured by user base? All platforms with monopoly power? None?
- 4) Can you think of particular markets or sectors in which interoperability and portability might be effective remedial choices? And how about those in which you suspect they would not be effective?
- 5) Under what circumstances do you think interoperability and/or portability would be a good choice as a remedy for a merger challenge? Are there any circumstances under which they might be preferable to divestiture of the acquired business, or a valuable *complement* to divestiture?
- 6) What practical challenges would be presented by the design and monitoring of an interoperability remedy? In what ways, if any, do these challenges differ from the ones associated with a “duty to deal” in monopolization law?
- 7) Concretely, what would or might an interoperability remedy look like in (a) social networking? (b) ridesharing? (c) internet search? How would different theories of harm lead to different kinds of interoperability remedy in these markets?

2. Breakup and Structural Separations

Some scholars and advocates favor antitrust’s iconic remedy, and in some sense its most dramatic one: breakup. This might involve the separation of the defendant by dividing up assets in a single market (“horizontal” separation) or by separating business units at different levels of the supply chain (“vertical” separation).

As you may remember, structural remedies are the default solution for unlawful mergers,¹⁹⁷ but are generally disfavored in conduct cases.¹⁹⁸ As the D.C. Circuit put it in the *Microsoft* decision, breakup is appropriate only to the extent that there is a “significant causal connection” between the targeted structural feature (in the court’s telling in that case, the defendant’s market power) and the unlawful conduct:

Mere existence of an exclusionary act does not itself justify full feasible relief against the monopolist to create maximum competition. Rather, structural relief, which is designed to eliminate the monopoly altogether[,] requires a clearer indication of a significant causal connection between the conduct and creation or maintenance of the market power. Absent such causation, the antitrust defendant’s unlawful behavior should be remedied by an injunction against continuation of that conduct.¹⁹⁹

Some commentators object to courts’ general reluctance to grant structural relief in conduct cases. They favor more liberal use of a breakup remedy: at least in certain tech markets.²⁰⁰ This view may be connected with an underlying sense that dramatic change is necessary, and with a prediction that the relevant markets may be able

¹⁹⁷ See *supra* § VIII.E.

¹⁹⁸ See *supra* § XI.G.1.

¹⁹⁹ *United States v. Microsoft Corp.*, 253 F.3d 34, 107 (D.C. Cir. 2001) (en banc) (quoting 3 Areeda & Hovenkamp, ANTITRUST LAW (1995) ¶ 650a, at 67).

²⁰⁰ See, e.g., Rory Van Loo, *In Defense of Breakups: Administering A “Radical” Remedy*, 105 Cornell L. Rev. 1955, 1961 (2020) (“Once breakups are understood as a normal part of business affairs, and as capable of being co-administered with the private sector, courts and enforcers can deploy them more readily as an antitrust remedy.”); John Kwoka & Tommaso Valletti, *Unscrambling the Eggs: Breaking Up Consummated Mergers and Dominant Firms*, 30 Indus. & Corp. Change 1286, 1287 (2021) (“[T]he policy tool of breaking up firms needs to be treated as a realistic—and at times necessary—option. . . . [A]s a result of their acquisitions and strategic growth into other businesses, the tech companies have become far larger, far more powerful, and far more harmful to competition than their core platforms. . . . [T]hese extensions of the core platforms can and need to be undone.”).

to support multiple competitors, even in the presence of network effects and scale economies. Of course, others disagree, urging caution and restraint in the imposition of this dramatic remedy.²⁰¹ Some such writers argue that horizontal separation is of little use if network effects will drive the market back to a single provider in short order; that vertical separation (perhaps combined with a “line of business” restriction to prevent the business from becoming integrated again) may destroy and preclude valuable benefits; and that breakups can be as costly and burdensome as behavioral relief. The following extracts present some perspectives on the nuclear option in antitrust’s arsenal.

Majority Staff Report and Recommendations, Investigation of Competition in Digital Markets

Subcommittee on Antitrust, Commercial, and Administrative Law of The Committee on the Judiciary of the U.S. House of Representatives

[1] In addition to controlling one or multiple key channels of distribution, the dominant [Big Tech] firms investigated by the Subcommittee are integrated across lines of business. When operating in adjacent markets, these platforms compete directly with companies that depend on them to access users, giving rise to a conflict of interest. . . . [T]he Subcommittee’s investigation uncovered several ways in which Amazon, Apple, Facebook, and Google use their dominance in one or more markets to advantage their other lines of business, reducing dynamism and innovation.

[2] First, the investigation revealed that the dominant platforms have misappropriated the data of third parties that rely on their platforms, effectively collecting information from customers only to weaponize it against them as rivals. For example, the investigation produced documents showing that Google used the Android operating system to closely track usage trends and growth patterns of third-party apps—near-perfect market intelligence that Google can use to gain an edge over those same apps. Facebook used its platform tools to identify and then acquire fast-growing third-party apps, thwarting competitive threats at key moments. A former Amazon employee told the Subcommittee that Amazon has used the data of third-party merchants to inform Amazon’s own private label strategy, identifying which third-party products were selling well and then introducing copycat versions. These and other examples detailed in this Report demonstrate a dangerous pattern of predatory conduct that, if left unchecked, risk further concentrating wealth and power.

[3] Some have suggested that there is little difference between the dominant platforms’ access to and use of this data and the way that brick-and-mortar retailers track popular products. The Subcommittee’s investigation, however, produced evidence that the platforms’ access to competitively significant market data is unique. Specifically, the dominant platforms collect real-time data which, given the scale of their user-base, is akin to near-perfect market intelligence. Whereas firms with a choice among business partners might seek to protect their proprietary data, the platforms’ market power lets them compel the collection of this data in the first place.

[4] Second, dominant platforms can exploit their integration by using their dominance in one market as leverage in negotiations in an unrelated line of business. For example, evidence produced during the investigation showed that Amazon has leveraged its dominance in online commerce as pressure during negotiations with firms in a separate line of business. Market participants that depend on Amazon’s retail platform are effectively forced to accept its demands—even in markets where Amazon would otherwise lack the power to set the terms of commerce.

[5] Third, dominant platforms have used their integration to tie products and services in ways that can lock in users and insulate the platform from competition. Google, for example, required that smartphone manufacturers seeking to use Android also pre-install and give default status to certain Google apps—enabling Google to maintain its search monopoly and crowd out opportunities for third-party developers.

²⁰¹ See, e.g., Noah Joshua Phillips, *We Need to Talk: Toward A Serious Conversation About Breakups* (remarks of Apr. 30, 2019) (“While the law contemplates [the breakup remedy]—and doing so sometimes is warranted—enforcement experience and economic research show us that the treatment may be worse than the disease and, in some cases, simply not doable.”); Ryan Bourne, *Big Is Not Always Bad: Why We Shouldn’t Rush to Break up the Tech Giants*, CATO INSTITUTE COMMENTARY (June 6, 2019).

[6] And fourth, these firms can use supra-competitive profits from the markets they dominate to subsidize their entry into other markets. Documents uncovered during the Subcommittee’s investigation indicate that the dominant platforms have relied on this strategy to capture markets, as startups and non-platform businesses tend to lack the resources and capacity to bleed billions of dollars over multiple years in order to drive out rivals. For dominant platforms, meanwhile, this strategy appears to be a race to capture ecosystems and control interlocking products that funnel data back to the platforms, further reinforcing their dominance.

[7] By using market power in one area to advantage a separate line of business, dominant firms undermine competition on the merits. By functioning as critical intermediaries that are also integrated across lines of business, the dominant platforms face a core conflict of interest. The surveillance data they collect through their intermediary role, meanwhile, lets them exploit that conflict with unrivaled precision. Their ability both to use their dominance in one market as negotiating leverage in another, and to subsidize entry to capture unrelated markets, have the effect of spreading concentration from one market into others, threatening greater and greater portions of the digital economy.

[8] To address this underlying conflict of interest, the Subcommittee recommends that Congress consider legislation that draws on two mainstay tools of the antimonopoly toolkit: structural separation and line of business restrictions. Structural separations prohibit a dominant intermediary from operating in markets that place the intermediary in competition with the firms dependent on its infrastructure. Line of business restrictions, meanwhile, generally limit the markets in which a dominant firm can engage.

[9] Congress has relied on both policy tools as part of a standard remedy for dominant intermediaries in other network industries, including railroads and telecommunications services. In the railroad industry, for example, a congressional investigation found that the expansion of common carrier railroads into the coal market undermined independent coal producers, whose wares the railroads would deprioritize in order to give themselves superior access to markets. In 1893, the Committee on Interstate and Foreign Commerce wrote that “[n]o competition can exist between two producers of a commodity when one of them has the power to prescribe both the price and output of the other.”

[10] Congress subsequently enacted a provision to prohibit railroads from transporting any goods that they had produced or in which they held an interest. Congress has legislated similar prohibitions in other markets. The Bank Holding Company Act of 1956 broadly prohibited bank holding companies from acquiring nonbanking companies. Vertically integrated television networks, meanwhile, were subject to “fin-syn” rules, which prohibited networks from entering production and syndication markets.

[11] Both structural separations and line of business restrictions seek to eliminate the conflict of interest faced by a dominant intermediary when it enters markets that place it in competition with dependent businesses. In certain cases, structural separations have also been used to prevent monopolistic firms from subsidizing entry into competitive markets and to promote media diversity.

[12] At a general level, there are two forms of structural separation: (1) ownership separations, which require divestiture and separate ownership of each business; and (2) functional separations, which permit a single corporate entity to engage in multiple lines of business but prescribe the particular organizational form it must take. Importantly, both forms of structural limits apply on a market-wide basis, while divestitures in antitrust enforcement generally apply to a single firm or merging party.

[13] A benefit of these proposals is their administrability. By setting rules for the underlying structure of the market—rather than policing anticompetitive conduct on an ad hoc basis—structural rules are easier to administer than conduct remedies, which can require close and continuous monitoring. The challenges of crafting and implementing structural solutions vary by market and market participants. In response to the Subcommittee’s requests for comments on potential reforms, some antitrust experts have cautioned that crafting separations can pose a major cost and challenge, especially in dynamic markets. Others have responded by identifying certain principles that can make identifying the fault lines easier. In the case of separations undoing vertical mergers, the fault lines designating the separate companies are likely to still be apparent, even in the new structure. In cases where a firm grew through internal expansion or when the constituent parts are no longer clearly distinguishable,

scholars have suggested identifying distinct business operations. Experts have also noted that business-initiated corporate restructuring and divestitures may in some cases also provide a guide to designing and implementing successful break-ups.

Herbert Hovenkamp, Structural Antitrust Relief Against Digital Platforms

J. L. & Innovation (2024)

As a starting principle for digital networks, breakup remedies are generally even more difficult than they are for traditional products, but sharing obligations are easier.

Most antitrust divestiture decrees have involved firms that made traditional “tactile” products in physical plants or other production facilities. Further, nearly all of the § 2 decrees that required divestiture used it to break off assets that had been acquired rather than internally developed—that is, they reversed previous acquisitions. Indeed, out of 95 monopolization cases that produced structural relief, only three involved immediate breakups of internally developed assets.

When considering remedies for an antitrust violation, digital markets pose some unique problems, although not every divestiture involving a digital platform is necessarily “digital” in this sense. For example, Amazon owns Whole Foods, which is a largely nondigital asset. Apple “manufactures” iPhones, mainly in China and India, but through firms designated as partners rather than subsidiaries. That is Apple does not own them but has supply agreements with them.

Nevertheless many of the assets controlled by large digital firms are digital themselves. This has a number of consequences. First, they are likely to be nonrivalrous and, as a result, more readily subject to sharing. For example, “breaking up” a patent by giving nonexclusive licenses to multiple recipients is inherently easier to manage than breaking up and sharing a physical production plant. The same thing is true of computer code. Second, digital assets are characterized by high fixed costs and low variable costs, making both scale economies and network effects significant. Any breakup that imposes loss of significant scale economies or positive network effects will have to be accompanied by large offsetting benefits somewhere else. By contrast, remedies that require sharing of digital, fixed cost assets can reduce total costs by distributing the fixed costs over more output. This mitigates in favor of remedies that require sharing of a digital asset, rather than breaking it into pieces.

In thinking about remedies, networks should be treated as assets, not as firms. Some firms, such as Alphabet (Google), own or control several networks, including Search, Android, Gmail, YouTube, and Chrome. Structural “breakups” of networks can be even more competitively harmful than breakups of single plants. First, they can deprive a firm of scale economies, just as breaking up a plant. But they can also reduce positive network effects by limiting the number of network participants. With a qualified exception for AT&T, discussed below, structural breakups under §2 of the Sherman Act have involved the spinning off of plants or other discrete assets rather than actually “breaking” them into multiple pieces.

In general, there should be a strong presumption against breaking into a network unless the decree also provides for effective interoperability, as it did in the AT&T case. Even then, interoperability decrees may have to be managed. In some cases that may require long-term or permanent oversight or even re-assignment to a regulatory agency, as also happened in the AT&T case. Other decisions have proven to be less problematic. For example, the decrees in [*United States v. Terminal R.R. Ass’n of St. Louis*, 224 U.S. 383 (1912),] and [*Associated Press v. United States*, 326 U.S. 1 (1945),] both required participants in a shared network to open it up on nondiscriminatory terms to outsiders. In both cases the decrees appear to have succeeded in their goal of facilitating competition without doing structural damage. [. . .]

One promising “breakup” remedy involving networks is the one contemplated in the FTC’s case against Facebook, seeking divestiture of Instagram. For many purposes Facebook holds Instagram as a separate network, with a separate set of users. As a result, the requested remedy is not a division of a single network, but rather separation of two networks that are currently owned by a single firm. To be sure, FB and Instagram accounts can be linked in certain ways, but common ownership is not a precondition to doing that. The reason a Facebook/Instagram breakup might work is that relatively few of Instagram’s features have been merged into the parent network. For

those that are, the court ordering that remedy will very likely have to consider some mandatory licensing, a form of interoperability, as part of the remedy.

By contrast, breaking *into* the FB network would involve segregating two groups of users, or perhaps peeling off one or more features and placing them into a different and exclusive network. For example, one could break up traditional Facebook by (1) segregating users by location, gender, or some other criterion; or (2) breaking off one or more features, such as video or digital photo posting. These would make FB smaller, but they would almost certainly not add any value. Rather they would likely destroy a great deal of it and might perhaps even ruin it as a platform if it could no longer compete effectively.

NOTES

- 1) In what kinds of conduct cases, if any, do you think courts should seriously consider imposing a breakup remedy? Look back at the *Google Search*, *Meta / Instagram / WhatsApp*, and *Apple* cases described above. For which of those cases would a breakup be a plausible remedy, and what would it look like?
- 2) Suppose that a court concluded that a long-consummated tech merger, involving a dominant business, was illegal. How should the court think about the choice between a difficult breakup remedy that might destroy the business, on the one hand, and an interoperability-portability remedy that would leave the monopoly intact, on the other? What factors or evidence should affect its choice?
- 3) Do you agree with the following statement? “Even when an individual breakup remedy might cause some social harm, it might still be welfare-maximizing overall because it will send a message to other potential wrongdoers that the penalty for illegality is severe. Conversely, if agencies and courts allow themselves to be talked down by the costs and harms of a breakup, businesses will know that they are likely to get away with antitrust violations.”
- 4) Suppose that you wanted to figure out whether, and to what extent, antitrust breakups over the last 50 years had served the public interest. How would you do that? Design an empirical study that would help answer this question.
- 5) Do you agree with the following statement? “Courts and agencies have no business trying to redesign markets or competitors. Outside of merger cases, breakups should be a thing of the past. Exclusively behavioral wrongdoing should have exclusively behavioral solutions.”
- 6) If you were going to break up one business in the hope of increasing social welfare, which would you break up, why, and how? Remember to specify any ancillary obligations needed to make your remedy work.
- 7) Do you agree with the following statement? “The complexity of breakups and other antitrust remedial tools is the most compelling reason to create specialized courts to handle antitrust cases.”
- 8) Do you agree with the following statement? “We can’t possibly know whether breakups are as harmful and risky as some writers suggest, because we just haven’t done them often enough. We should try a more aggressive breakup policy for a decade or so, and then we’ll have enough information to make an informed judgment.”

3. A New Digital Regulator?

As scholars, legislators, policy advocates, and citizens grapple with the rise of new technologies, some commenters and lawmakers have proposed the creation of a new digital regulator.²⁰² Some of these proposals have drawn on discontent with existing frameworks—including the slow pace and limited expertise of generalist antitrust enforcers and courts—to suggest that an expert body, staffed with subject-matter experts and equipped with special powers, would make a difference for the better. Others are skeptical that a new bureaucratic actor will add much except complexity and burden.

The following extracts exemplify these different views. The first summarizes one version of the case for a new agency; the second argues that a new institution is not the answer.

²⁰² See, e.g., Digital Platform Commission Act of 2022, S. 4201, 117th Cong. (2022).

Tom Wheeler, Phil Verveer & Gene Kimmelman, *New Digital Realities; New Oversight Solutions in the U.S.: The Case for a Digital Platform Agency and a New Approach to Regulatory Oversight*

HKS Shorenstein Center Discussion Paper (August 2020)

The creation of a new independent federal regulatory agency—the Digital Platform Agency (“DPA”)—would recognize the inherent limitations of trying to shoehorn digital realities into an agency created for the oversight of industrial activities. The existing regulatory agencies are populated by good and responsible individuals, but these institutions bring with them decades of operational and jurisprudential precedent that inhibits the ability to address the dynamics of the new digital marketplace. Congress must establish a new set of expectations for behavior in the digital marketplace and those expectations should be overseen by a new digital agency.

Common Law Principles: The challenge in the digital era is how to protect consumers and promote competition without micromanaging a fast-paced and dynamic process of innovation. The solution is to focus on managing an unwanted outcome of an activity rather than dictating how that activity should be performed. The demands of digital dynamism should be overseen with a new and more flexible regulatory approach. That approach can be found in the wisdom of common law concepts that have evolved since the Middle Ages. Congress should adopt these long-standing principles—particularly the duty of care and the duty to deal—in legislation establishing the DPA.

The duty of care establishes the expectation that the provider of goods or services has the responsibility to attempt to identify and mitigate the adverse consequences of that activity. The evolving concepts of negligence and tort—encompassing more activity over time—for instance, find their roots in the duty of care. Who is responsible for minimizing losses and who is responsible for compensating for them when they occur? [. . .]

The duty to deal establishes that the provider of an essential service has a duty to provide impartial access to that activity. As a consequence of the Black Death in some analyses and continuing thereafter, common law developments reflected economic circumstances in determining that commercial activities enjoying a “virtual monopoly” have special responsibilities. This meant that the operator of a ferry across a river had a duty to deal with all those who wanted to use his service, or the owner of a tavern had a duty to deal with hungry travelers. [. . .]

Light-Touch Practices: In the industrial era regulatory oversight was not only through the application of duty of care expectations, but also through top-down, bureaucratic, and rules-based policies that often relied on prior-approval mechanisms and the ability to prescribe technical and quality standards. While the duty of care’s responsibility to proactively identify and mitigate potential harms is as valid today as it ever was, its implementation through so-called “utility regulation,” which relied in part on prior approval mechanisms, is inappropriate for the application of fast-moving digital technology. In its place, a new agile regulatory model should be adopted. This new light-touch oversight would be built around government-industry cooperation in the development of mechanisms to efficiently pursue pro-competition and pro-consumer goals.

Non-Duplication: The DPA should not duplicate the activities of sector-specific federal agencies and the authority granted them by Congress. The Federal Trade Commission (FTC), for instance, would retain its traditional antitrust and deceptive practices enforcement responsibility. The authority of the DPA would fill the void created by encumbrances on the FTC’s authority. As Thomas McCraw explained in [Thomas McCraw, *PROPHETS OF REGULATION* (1984)], “the most important single consideration is the appropriateness of the regulatory strategy to the industry involved.” The “industry involved” with the DPA will be the consumer-facing digital activities of companies with significant strategic market status.

Protecting Competition: To protect competition, the new agency’s activities should embrace the common law duty to deal. For centuries, that duty has stipulated that dominant firms controlling essential assets or services should make them available on a non-discriminatory basis. The ability of dominant digital companies to exploit bottlenecks to competition and to control the pace and scope of innovation through their control of data assets is an invitation to monopolization and other abusive practices.

Supporting Antitrust Authorities: To support existing antitrust review the DPA should be designated as the expert agency in digital market activities. As such, the DPA’s expertise should become an intrinsic part of investigations, merger reviews, and enforcement of remedies of digital companies undertaken by the Department of Justice (DOJ) and Federal Trade Commission (FTC).

Not Burdening Small Companies: The DPA should exercise its authority in a targeted manner. It is frequently argued (especially by the big companies) that “regulation hurts small companies.” The activities of the DPA, thus, should pay principal attention to market-dominant companies with power, not only over markets, but also with the power to rewrite norms with practices that benefit themselves to the detriment of smaller companies.

Robert W. Crandall & Thomas W. Hazlett, Antitrust Reform in the Digital Era: A Skeptical Perspective

2 U. Chi. Bus. L. Rev. 293 (2023)

To some critics, trial-and-error adjustments to the inexorable progression in digital markets demand constant oversight. As a result, [a recent] Stigler Center report recommends the establishment of a new Digital Authority[.] [. .]

Calls for a new regulatory body derive in part from a concern that antitrust authorities and the courts have insufficient expertise to design and enforce rules for competition in the digital sector. But amassing such expertise is the mission of the existing antitrust agencies—the Justice Department and/or the Federal Trade Commission, in the case of the United States. The argument for the creation of a new Digital Authority appears to presume that each generation of technology requires its own regulatory agency. That experiment has been conducted. “When it was created in 1887, the Interstate Commerce Commission seemed essential to proper management of railroads,” wrote Peter Huber [in *LAW AND DISORDER IN CYBERSPACE: ABOLISH THE FCC AND LET COMMON LAW RULE THE TELECOSM* (1997)]. “But when it was abolished in early 1996, hardly anyone noticed. We never did create a Federal Computer Commission. The computer industry has nonetheless developed interconnection rules and open systems, set reasonable prices, and delivered more hardware and more service to more people faster than any other industry in history.”

Scant analysis has been undertaken to justify current proposals to upend the conventional wisdom that Huber conveys. Agency capture is still widely seen as problematic, and a particular threat when government creates an industry-specific regulator. In fact, the Stigler Report suggests placing the new Authority in the Federal Trade Commission to reduce influence exercised by digital incumbents. This follows the observation that the FTC, operating as an economy-wide regulator of business, is less prone to capture than industry-specific regulators. The search for walls to protect regulators concedes the need for defenses, but promotes an unproven methodology. Meanwhile, Lina Khan, perhaps the leading critic of the antitrust status quo, has been appointed Chair of the FTC. This has led to legal challenge by at least one of the digital giants, but so far seems to prove another point: the existing antitrust structure can accommodate strategic changes in the direction of policy and undertake hearings, studies and enforcement initiatives designed to modify antitrust jurisprudence.

The economic rents available for potential regulatory distribution are enormous. In mid-2022, Amazon, Apple, Facebook, and Google had a combined market capitalization of nearly \$7 trillion. By comparison, the monopoly owned by AT&T had a market capitalization of just \$47 billion (or \$270 billion in mid-2022 dollars) when it was sued by the DOJ in 1974. Given the potential rewards available, political coalitions will form to pressure any new Digital Authority Past experience with industry-specific regulators suggests that it is unlikely that the new regulatory authority would single-mindedly pursue the maximization of consumer welfare. Continuing the debate over U.S. antitrust policy and adjusting antitrust to address new challenges in our increasingly digital world would seem to be less of a risk than the establishment of a new regulator with wide-ranging authority over the digital economy.

NOTES

- 1) Suppose that Congress had decided to create a digital competition regulator but had not yet decided what powers and functions it would have, nor what kind of jurisdiction it should enjoy. What recommendations would you make?
- 2) Suppose that Congress had decided *not* to create a separate digital competition regulator, but instead to create and fund a separate unit at *either* the FTC *or* DOJ. Which would you recommend, and why?
- 3) Suppose that Congress had decided *not* to create a separate digital competition regulator, but instead to take the money that would have been spent in doing so, and use it to “help antitrust meet the demands of the new era.” How should that money be spent?
- 4) Rank the following from most appealing to least appealing responses to the digital competition concerns you have considered in this chapter, and explain your ranking:
 - a. existing institutions applying existing antitrust rules;
 - b. existing institutions applying special new antitrust rules for tech markets;
 - c. new, specialized institutions (enforcers, rulemakers, or courts) applying existing antitrust rules; or
 - d. new, specialized institutions (enforcers, rulemakers, or courts) applying special new antitrust rules for tech markets.
- 5) A common challenge with remedial design is that agencies and courts often lack important technical knowledge about the market and the defendant’s own business, while the entities with that knowledge—particularly, the defendant and its competitors—have strong incentives to present information in a particular light. How can agencies and courts gather reliable information so that they can design effective remedies? Would a special digital regulator be better placed?