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MONOPOLIZING AND THE SHERMAN ACT

Herbert Hovenkamp[*]

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Introduction

In one sentence § 2 of the Sherman Act condemns firms who "monopolize," "attempt to monopolize" or "combine or conspire" to monopolize -- all without explanation.[1] Section 1 of the Clayton Act,

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[*]James G. Dinan University Professor, Univ. of Pennsylvania Carey Law School and the Wharton School. Thanks to Erik Hovenkamp and Jon Jacobson for comments.

[1] 15 U.S.C. §2 (2018):

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passed a quarter century later, offered a few helpful definitions.[2] It defined "antitrust laws," "commerce," and "person" so as to include corporations. But the definition provision said nothing about the meaning of "monopolize." That is, it failed to define the term that was most important and ultimately became most controversial. No other federal statute has used so few words to condemn acts that are as eclectic, diverse, and unspecified as those covered by §2 of the Sherman Act.

As a result, criticisms that the antitrust statutes are out-of-date and not up to dealing with dominant digital firms today cannot be based on readings of the text.[3] The text of all of the antitrust statutes, including §2 of the Sherman Act, is broad enough to reach nearly every threat to competition that the dominant digital platforms pose. Rather, decades of narrow construction have led to most of the problems. One exception is situations in which conduct by a dominant firm threatens harm falling short of monopoly in a second market. Section 2's condemnation of "monopolizing" conduct cannot literally be construed to reach such behavior. A more networked economy entails that more practices link two or more different markets, and threats of competitive harm extend to situations where monopoly is not realistically threatened in a second market. Here, the United States would do better to adopt an "abuse of dominance" standard such as the one used in the EU and other jurisdictions.[4]

Early case law under §1 of the Sherman Act, which prohibited agreements in restraint of trade, relied heavily on common law precedents defining it as decreased output or occasionally as exclusion

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> Every person who shall monopolize, or attempt to monopolize, or combine or conspire with any other person or persons, to monopolize any part of the trade or commerce among the several States, or with foreign nations, shall be deemed guilty….

[2] 15 U.S.C. §12 (2018).

[3]E.g., David Streitfeld,*To Take Down Big Tech, They First Need to Reinvent the Law* NEW YORK TIMES (June 20, 2019), available at https://www.nytimes.com/2019/06/20/technology/tech-giants-antitrust-law.html; Tara Lachapelle, *100-Year-Old Antitrust Laws Are No Match for Big Tech*, BLOOMBER (Aug.45, 2020), available at https://www.yahoo.com/now/100-old-antitrust-laws-no-110005376.html.

[4]*See* discussion *infra*, text at notes __.

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of competitors.[5] Few such precedents existed, however, for the law of single-firm monopolization. At common law the term "monopoly" almost always referred to an exclusive grant or title from the government.[6] Aside from business torts and criminal law, there was no history of prohibiting purely unilateral conduct not authorized in a grant from the government.

With so little statutory guidance the courts have wrestled for more than 130 years with the question of what it means to "monopolize" – more specifically, what range of firms are subject to it, and what kinds of conduct does it condemn? Broad agreement has emerged about two things. First, the conduct addressed by §2 of the Sherman Act is fundamentally unilateral, even though it is often carried out by means of a contract. Second, the relevant actor must have some degree of dominance in its market. Beyond that, the range of things that can constitute monopolizing conduct is extremely broad and fluid, as is the range of approaches taken to evaluate it. To make matters worse, the antitrust statutes say almost nothing about remedies and never address what type of remedy is best for particular types of conduct. All of this has been left to federal judges.

Understandably, many of the earliest decisions looked to tort law, which was preoccupied with conduct but largely unconcerned

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[5]*See Book Review*, 28 HARV. L.REV. 642, 643 (1915) (defining common law restraint of trade as "restriction of output") (reviewing WILLIAM H. TAFT, THE ANTI-TRUST ACT AND THE SUPREME COURT (1914)); Donald Dewey, *The Common-Law Background of Antitrust Policy*, 41 VA. L. REV. 759, 778 (1955) (similar); Charles Grove Haines, *Efforts to define Unfair Competition*, 29 YALE L.J. 1 (1919) ("limitation of output"). *See also* Philip Marcus, *Antitrust Bugbears: Substitute Products-Oligopoly*, 105 UNIV. PA. L. REV. 185, 195 (1956) (agreement among rivals to restrict output was in restraint of trade); William Letwin, *The First Decade of the Sherman Act*, 68 YALE L.J. 900, 903 (1959) (same).

[6]*See* Thomas B. Nachbar, *Monopoly, Mercantilism, and the Politics of Regulation*, 91 VA. L. REV. 1313 (2005); Herbert Hovenkamp, *The Sherman Act and the Classical Theory of competition*, 74 IOWA L. REV. 1019, 1025 (1989). For some of the ambiguity at the time the Sherman Act was passed, *see* the discussion of the legislative history in Edward A. Adler, *Monopolizing at Common Law and Under Section Two of the Sherman Act*, 31 HARV. L. REV. 246 (1917).

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about the creation or maintenance of monopoly power.[7] They occasionally also found precedent in British statutes dating from the thirteenth century that applied mainly to agricultural products and that prevented people from buying up the produce in an area with the intention of aggregating it and then reselling at a higher price.[8] These statutes, which were mimicked by some states and municipalities in the United States as late as the early twentieth century,[9] contained no monopoly power requirement. Indeed, their focus was on a form of fringe criminal activity rather than the acts of dominant firms. For example, forestallers sometimes interrupted goods heading to market and, whether by force or by purchase, acquired them and kept them from being sold in competition.[10]

Closely related is the question of the boundary between the antitrust laws and non-antitrust forms of regulation. Keeping these distinct might seem obvious and critical to lawyers who are regularly involved in antitrust and other regulatory enterprises. The popular press, however, often blends antitrust and regulatory concerns with no apparent awareness of a boundary between them. Congress occasionally does the same thing.[11]

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[7] *See* discussion *infra*, text at notes __.

[8] See Wendell Herbruck, *Forestalling, Regrating and Engrossing*, 27 Mich. L. Rev. 365 (1929); 4 WILLIAM BLACKSTONE, COMMENTARIES ON THE LAW OF ENGLAND 149 (1769) ("the buying of corn, or other dead victual, in any market, and selling it again in the same market, or within four miles of the place"). *See also* Edward A. Adler, *Monopolizing at Common Law and Under Section Two of the Sherman Act*, 31 HARV. L. REV. 246 (1917).

[9] E.g., Dutton v. City of Knoxville, 121 Tenn. 25 (1908) (interpreting 1907 charter provision prohibiting forestalling of agricultural products); City of York v. Hatterer, 48 Pa. Super. 216 (Sup. Ct. Pa. 1911) (upholding and applying municipal ordinance to defendant, who had purchased onions in a city market with the intention of reselling them in her stand, which was also in the same market); City of Louisville v Roupe, 45 Ky. 591 (1846) (similar).

[10] Herbruck, *supra* note __ at 370 ("hindering a merchant on the way to the City by buying his goods.").

[11] E.g., Rachel *Sandler, Republicans Use Tech Antitrust Hearing To Rail Against "Anti-Conservative Bias*," FORBES, July 29, 2020, available at https://www.forbes.com/sites/rachelsandler/2020/07/29/republicans-use-tech-antitrust-hearing-to-rail-against-anti-conservative-bias/?sh=cf6605155aa7; Ashley Gold and Margaret Harding McGill, *New*

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The scope of antitrust law is both broader and narrower than the scope of statutory regulation. It is broader because it applies to all commerce except for a few markets that have an immunity, including express or implied federal immunities for some markets regulated by agencies,[12] or the "state action" immunity for state regulation.[13] Beyond that, all commercial activities are covered by the antitrust laws, provided that they are within federal jurisdiction under the Commerce Clause.

Antitrust is also broader in the sense that it reaches a wide range of practices that is unspecified except with the limitation that the conduct must either "monopolize" or "restrain trade." The Clayton Act added three more particularized provisions. These are §2 of the Clayton Act, amended by the Robinson-Patman Act, which prohibits certain types of price differences; §3, which specifically applies to exclusive dealing and tying; and §7, which applies to mergers.

Finally, however, antitrust law is also narrower in the sense that many of the things compelled by regulation do not violate the antitrust laws. For example, regulation might compel firms to charge particular prices; to design products in certain ways, such as automobiles with mandatory seat belts; to avoid discrimination on the basis of race, gender, or political or social views; or to stop pedaling misinformation. On their own, these practices never constitute antitrust violations.

This discussion is limited to monopolization under the antitrust laws. It examines §2's most problematic features concerning its analysis of unilateral anticompetitive conduct. It is not overly concerned with questions about market definition or how monopoly power is assessed, although these issues are often important in the evaluation of conduct and even more frequently relevant to selection of an appropriate remedy. It does offer several suggestions for

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Tech Antitrust Hurdle: GOP Divisions, AXIOS, June 3, 2021, available at https://www.axios.com/tech-antitrust-hurdle-republican-party-splits-c7324063-53ba-458e-b0e2-fbf2e475a8a8.html.

[12]On federal and state law antitrust immunities, *see* 1 & 1A PHILLIP E. AREEDA & HERBERT HOVENKAMP, ANTITRUST LAW, Ch. 2 (5th ed. 2020).

[13]Id, Ch. 2B-3.

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improving and unifying the antitrust law of unilateral exclusionary practices.

While the focus is not exclusively on the large digital platforms (Amazon, Apple, Facebook, and Google), these firms do pose a number of problems. *First*, to the extent they operate in networked markets the need for inter-firm cooperation is intensified. The current antitrust law of unilateral refusal to deal in particular is not well designed to deal with the competitive implications of widespread multi-firm networking.[14]

Second, to the extent the digital platforms have high fixed costs and deal in information, some of the tools we use to assess exclusionary practices work poorly. This is particularly problematic for "cost based" theories of exclusion, such as those that we apply in the law of predatory pricing. The high fixed cost problem is not universal however, and not even across the digital platforms. For example, Amazon deals heavily in ordinary tactile products that have fairly conventional cost structures. By contrast, Facebook's content is almost exclusively digital. A related feature of all of the platforms is that to one degree or another they are "two-sided," which typically means that customer engagement and revenue come from two different groups of transactions with different parties.[15]

Third, many of the injuries imposed by dominant platforms occur in complementary or vertically related markets in which monopoly is not seriously threatened. This poses particular problems for §2 of the Sherman Act, which requires a realistic threat of dominance in the particular market where the injury is claimed. For example, Apple's insistence that App sellers use its own store and pay Apple's commissions harms these sellers and consumers by denying them the benefit of a more competitive marketplace. However, Apple is not realistically threatening to create a monopoly in the market currently occupied by, say, Epic Games.[16] Other jurisdictions such as the European Union whose law defines the violation as "abuse of a

[14]*See* discussion *infra*, text at notes __.
[15]On antitrust policy in two-sided markets, *see* Erik Hovenkamp, *Platform Antitrust*, 44 J. CORP. L. 713 (2019).
[16]Epic Games, Inc. v. Apple, Inc., ___ F.Supp.3d ___, 2021 WL 4128925 (N.D.Cal. Sep. 10, 2021), app. docketed, 9th Cir., 12-30-2021.

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dominant position" either do not face this problem or else it is seriously attenuated.[17] Of all the reforms that antitrust law in the United States might take, switching to this "abuse" standard would be the most beneficial, provided that the concerns are managed properly. It can also lead to harmful overuse.[18]

Finally, the digital marketplace has been highly productive, with an economic growth rate about three or four times larger than that of the economy overall.[19] As a result, antitrust policy faces a problem that has confronted it in some form since its inception: how to control anticompetitive conduct without limiting innovation and technological progress unnecessarily.

None of these characteristics is limited to the four dominant digital platforms. Many other firms share some or all of them. Antitrust policy should apply to all similar situations as best it can. For example, eBay.com, Match.com, and Uber.com are all two sided digital platforms that have many of the same features as the larger platforms, to say nothing of Microsoft. If legislation is to be passed under the antitrust laws, it should apply equally to similarly situated firms and circumstances.

By contrast, regulation can be sector specific but then it is usually designated as such and typically incorporates some important distinctions, such as agency enforcement as well as lack of a private damage or equity actions.

The Expanding Domain of §2

Section 2 is the only substantive provision of the antitrust laws that addresses purely unilateral conduct. Section 1 requires a "contract, combination, or conspiracy" between two or more actors. The Robinson-Patman Act, which expanded §2 of the Clayton Act, is triggered by a "sale," which requires a distinct purchaser. The courts

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[17] *See* discussion *infra*, text at notes __.
[18] *See* discussion *infra*, text at notes __.
[19] See, e.g., Kevin Barefoot, et al, *Defining and Measuring the Digital Economy* (U.S. Dept. of Commerce, Bur. Econ. Analysis (2018), available at [Working Paper: Defining and Measuring the Digital Economy (bea.gov)] (estimating GDP growth in digital economy during 2006-2016 at 5.6%, against a general economic growth rate of 1.5%).

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have been clear that intra-firm transfers, such as between a parent corporation and a wholly owned subsidiary, do not qualify as sales.[20] Section 3 of the Clayton Act prevents sales "on the condition or understanding" of exclusive dealing or tying, which is triggered only by an agreement among multiple firms. Finally, §7, the merger statute, is triggered by one firm's acquisition of the stock or assets of a different firm.

While there is considerable overlap between the coverage of §2 and these other provisions, the overlap operates in only one direction. That is, multilateral conduct such as a tying agreements, other exclusionary contracts, or mergers can sometimes violate §2 of the Sherman Act, but the converse is not the case. A purely unilateral act cannot violate any antitrust provision other than §2.

While the explicit coverage of these other antitrust provisions is more focused than that of §2, historically the courts have applied the substantive law more aggressively. That is, §1 usually has lower liability standards than §2, often reaching conduct that does not threaten single firm monopoly. The expansive liability provisions of the Clayton Act were passed in large part because the courts were holding that the conduct that they addressed was not unlawful under the Sherman Act.[21] So by design, the Clayton Act is more aggressive but reaches a narrower and more explicit range of conduct. As some courts have noted, "proving an antitrust violation under §2 of the Sherman Act is more exacting than proving a §1 violation."[22] The other statutes all have less stringent market power requirements, and traditionally they have all been regarded as requiring less at the

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[20] *See* 14 HERBERT HOVENKAMP, ANTITRUST LAW ¶2311 (4th ed. 2019).

[21] The Clayton Act was substantially a respond to Standard Oil Co. v. United States, 221 U.S. 1, 79 (1911), whose adoption of a rule of reason frightened some people as a harbinger of weak enforcement; and Henry v. A.B. Dick Co., 224 U.S. 1 (1912) (which expressed a very tolerant attitude toward perceived anticompetitive abuses of patents and held that a tying arrangement was not reachable under the Sherman Act. *See* Paul H. LaRue, *Competitive Injury—Primary Line*, 53 ANTITRUST L.J. 863 (1985) (Congressional dissatistaction with *Standard Oil*); Herbert Hovenkamp, *Patent Exhaustion and Federalism: A Historical Note*, 102 VA. L. REV. ONLINE 25, 29-30 (2016) (Clayton Act as response to *Henry*).

[22] FTC v. Qualcomm, Inc., 969 F.3d 974 (9th Cir. 2020); Epic Games, Inc. v. Apple, Inc., ___ F.Supp.3d ___, 2021 WL 4128925 (N.D.Cal. Sep. 10, 2021).

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liability stage. The "restraint of trade" standard of §1 of the Sherman Act is triggered by conduct that threatens an anticompetitive reduction in input, whether measured by quantity, quality, or innovation. In fact, that standard can reach conduct that falls far short of threatening actual monopoly. In the case of per se offenses, there is no market power requirement at all.

Both §§3 and 7 of the Clayton Act were intended by Congress to apply more expansive standards to conduct than the Sherman Act did; otherwise they would have been superfluous. Both are triggered by conduct that "may substantially lessen competition," which has historically been interpreted to reach far less than a threat of monopoly. Indeed, at its most expansive point the Clayton Act provisions were interpreted to reach firms with market shares in the 4-5% range,[23] although that is no longer the case.

One startling phenomenon of the twenty-first century is the extent to which §2 of the Sherman Act has been expanding into territory previously occupied by these other antitrust statutes. For example, in 1998 the government brought claims under both §1 and §2 against Microsoft involving the tying of Windows and the Internet Explorer browser.[24] Although §3 of the Clayton Act covers tying, it applies only to "goods" or "commodities,"[25] very likely not covering these digital products. The Sherman Act §1 tying claim was eventually remanded for further analysis under the rule of reason and subsequently abandoned.[26] However, the court condemned the "commingling" of the Windows and browser code into a single program – a form of technological tie – under §2 of the Sherman Act.[27] A few years later the government brought an exclusive dealing case against dental services provider Dentsply, originally under §§1 & 2 of the Sherman Act as well as §3 of the Clayton Act. After the

[23]*E.g.*, Standard Oil of California v. United States, 337 U.S. 293 (1949) (condemning exclusive dealing under Clayton Act on small foreclosure shares); United States v. Von's Grocery Co., 384 U.S. 270 (1966) (condemning merger on small market shares).
[24] United States v. Microsoft Corp., 253 F.3d 34 (D.C. Cir. 2001). See Cmplt., ¶1, available at 1998 WL 35241886 (D.D.C. May 18, 1898).
[25]15 U.S.C. §14 (2018).
[26]*Microsoft*, 253 F.3d at 84.
[27]*Id*. at 66-67.

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government lost in district court it appealed only under §2 and won.[28] Thus it seems that this turn to §2 was driven in substantial part by court's unwillingness to accept theories that relied on agreement but to accept unilateral monopolization theories on the very same facts.

More recently, the government agencies' complaints against Facebook and Google involve a great deal of conduct that is given effect by means of agreements, but virtually all of it is challenged exclusively under the standards of §2.[29] Further, the FTC's Facebook complaint expressly challenges two mergers – with WhatsApp and Instagram –but does so under §2 of the Sherman Act.[30]

In a few situations the answer may be that the relevant conduct is actually unilateral. For example, Microsoft's "commingling" of the Windows and browser code was a design choice that Microsoft made, not a tying agreement between Microsoft and a buyer. A prominent feature of so-called "tech ties" is that they are formally unilateral acts. The customer is forced to take two products together, not because an agreement requires it but rather became the products are available only in a format that forces them to be purchased or used together.[31]

The other situations in which the Agencies have moved to §2

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[28]United States v. Dentspy Intern., Inc., 399 F.3d 181 (3d Cir. 2005). See the district court's opinion dismissing the complaint, 277 F.Supp.2d 387 (D.Del. 2003) (citing the availability of alternative dealers and relatively short contract terms).

[29]Complaint for Injunctive and Other Equitable Relief ¶ 64, FTC v. Facebook, Inc., 1:20-cv03590-JEB (D.D.C. Dec. 9, 2020); Complaint ¶ 45, United States v. Google LLC, No.1:20-cv-03010 (D.D.C. Oct. 20, 2020). The FTC does not enforce the Sherman Act directly, but its power to pursue "unfair method of competition," 15 U.S.C. §45 (2018), covers everything that the Sherman Act covers. See FTC v. Brown Shoe Co., 384 U.S. 316, 321-322 (1966).

[30]The now dismissed but currently appealed state AG's complaint challenges them under §7. *See* New York v. Facebook, Inc., 2021 WL 2643724, __ F.Supp.3d ___ (D.D.C. June 28, 2021), app. docketed, (D.C. Cir. July 29, 2021) (dismissing merger portion on grounds of laches).

[31]*E.g.*, Berkey Photo, Inc. v. Eastman Kodak Co., 603 F.2d 263 (2d Cir. 1979), cert. denied, 444 U.S. 1093 (1980) (camera and film compatible only with one another); Allied Orthopedic Appliances Inc. v. Tyco Health Care Grp. LP, 592 F.3d 991, 998 (9th Cir. 2010) (new medical patient function hospital monitor compatible only with the firm's sensors).

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are not so easily explained. *Dentsply,* which involved exclusive dealing, could only be imposed on the independent sellers who were involved by agreement, and the conduct appears to have been reachable under either §1 of the Sherman Act or §3 of the Clayton Act. Mergers by definition require transactions, and thus they are always within the domain of §1 of the Sherman Act as well as §7 of the Clayton Act.

Some contractual restraints are conceptually more problematic. To the extent they involve uneven bargaining power they can be viewed as reflecting the "unilateral" policy of the larger firm. But that has always been true in cases involving such practices as tying, where firms announce a policy that they will not sell or lease a tying product unless the buyer also takes a tied product. The actual sale or lease is what causes the violation, and that is always bilateral. For that reason both the agreement requirement of Sherman Act §1 or the parallel "condition or understanding" requirement of Clayton §3 are met.[32] In *Dentsply,* the court described the record as showing "incidents in which Dentsply required agreement by new as well as long-standing dealers not to handle competitors' teeth."[33] The Complaints in the Facebook and Google cases both involve numerous restrictive agreements involving the defendant and advertisers or some other types of suppliers.

So why the turn to §2? Two answers seem minimally plausible but ultimately not very satisfactory. The first is that, although §2 has more strenuous market power requirements it is less categorical about the types of conduct that it prohibits. That is clearly true in some situations. For example, the law of tying arrangements has compensated for a historically weak market power requirement by adding an overlay of technical requirements such as "separate products" and "conditioning."[34] Design issues, as noted above, have tended to blur the line between unilateral and multilateral conduct.

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[32] E.g., Northern Pac. Ry. Co. v. United States, 356 U.S 1 (1958) (preventual routing contractual provisions contained in deeds); Jefferson Parish Hosp. Dist. No. 2 v. Hyde, 466 U.S. 2 (1984) (exclusive contract between hospital and anesthesiologist challenged under Sherman Act as either tying or exclusive dealing).

[33] *Dentsply,* 399 F.3d at 190.

[34] *See* 10 PHILLIP E. AREEDA & HERBERT HOVENKAMP, ANTITRUST LAW, Ch. 17D (4th ed. 2018).

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The design itself is generally treated as a unilateral act. Eventually the redesigned product has to be sold, however, which certainly involves an agreement. Nevertheless, the courts consistently assume that §2 is the preferred vehicle for going after allegedly anticompetitive redesigns.[35] In any event, redesigns cover only a few of the situations involved in the turn to §2 as an enforcement vehicle.

The second reason that §2 may be preferred is that it is seen as better calculated to yield "structural" relief. Once again, this applies only to a subset of cases. Further, the statutory case for this argument is non-existent. Nothing in any of the substantive or remedial provisions of the antitrust laws even refer to structural relief. It also fails to explain the requested relief in cases such as *Dentsply*, where the government never requested a breakup to begin with, but only an injunction.[36] In *Microsoft* the government did request structural relief, but the D.C. Circuit rejected the request.[37] The Facebook complaint requests divestiture of Instagram and WhatApp, but that amounts to the undoing of mergers and that type of structural relief has always been available and even preferred in merger cases proceeding under §7 of the Clayton act.[38] In addition the government's Facebook complaint requests prohibitory injunctions and other unspecified relief, as does the Google complaint.

As a matter of statutory language, nothing in any of the substantive antitrust statutes ties any particular violation to any particular remedy.[39] Antitrust also has enforcement provisions which permit the government to "prevent and restrain" antitrust violations

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[35]*E.g.*, C.R. Bard, Inc. v. M3 Sys., Inc., 157 F.3d 1340 (Fed. Cir. 1998) (divided Federal Circuit affirms §2 liability for firm that redesigned a hypodermic biopsy gun so that it would not work with rival's generic needles).

[36]United States v. Dentsply Int'l, Inc., 399 F.3d 181, 184 (3d Cir. 2005) (granting government's request for injunctive relief).

[37]United States v. Microsoft Corp., 253 F.3d 34, 100-102 (D.C. Cir. 2001) (describing but rejecting proposed plan of divestiture).

[38]*See* FTC v. Facebook, Inc., ___ F. Supp.___, 2021 WL 2643627, *6-*7 (D.D.C. June 28, 2021) (describing request for divestiture including but not limited to Instagram and WhatsApp, but ultimately dismissing complaint).

[39]*See* Herbert Hovenkamp, *Antitrust Harm and Causation*, __ WASH. UNIV. L. REV. (2021) (in press), available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3771399.

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without distinguishing among the statutes.[40] In addition, private parties can obtain treble damages under one provision[41] and "injunctive relief" under another.[42] None of these provisions stipulates the precise nature of the relief beyond that, and none makes reference to breaking up firms except to the extent that preventing or restraining an antitrust violation might require the undoing of a merger.

Nevertheless, while the government's choice to rely on §2 is unstated, it may indicate its view that *if* a breakup is contemplated at the time a complaint is filed, any breakup other than the undoing of a merger should be based on §2 of the Sherman Act rather than §1. That case seems very weak.

In some of these cases there are good strategic reasons for at least including §1 of the Sherman Act in addition to §2. Here, the Facebook complaint is a mystery. A fundamental problem with the Facebook case is market definition – what exactly is a social networking site, and how do you evaluate it apart from its individual components? In its original Facebook complaint the FTC alleged a relevant market of "personal social networking services." The district court dismissed that complaint, finding several problems with determining what should be regarded as in the market, who were the competitors, how market shares should be measured, and the extent to which alternative measures of power might be available. The FTC responded with an amended complaint that considerably bolstered the relevant market allegations, but once again cited only §2 of the Sherman Act as the source of law, not §1.[43] One can readily predict a situation in which a court fails to find a market share significant enough to trigger §2, although it could be sufficient to invoke §1, where lower market shares on the order of 30% or 40% are typically found sufficient. Further, no legal rule prevents the FTC from pleading under both statutes. The strategy must be driven as a rhetorical matter by the FTC's wish to make the case that this is about single-firm dominance rather than anticompetitive agreements.

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[40] 15 U.S.C. §25 (2018).
[41] 15 U.S.C. §15 (2018).
[42] 15 U.S.C. §26 (2018).
[43]First Amended Compl., FTC v. Facebook, Inc., 1:20-cv03590-JEB (D.D.C. Aug. 19, 2021).

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Structural Prerequisites: Markets and Power

By its terms, §2 of the Sherman Act does not make it unlawful to be a monopoly. Rather it condemns the act of "monopolizing." Most of the pre-antitrust case law, which consisted of challenges to state-issued grants of exclusive rights, were directed against monopoly status as such.[44] The Patent Act cases do contain conduct challenges that accuse the patentee of unlawfully expanding its monopoly "beyond the scope" of the patent.[45] Given the language in the statute, the lack of good precedent, and the absence of government grants of exclusive rights as the source of monopoly, the earliest courts considering the monopolization offense quite naturally turned to conduct. For example, Judge Rose's 1916 opinion in the *American Case*[46] reads more like a tort case. It is a litany of the defendant's conduct, from anticompetitive acquisitions,[47] including "killer" acquisitions in which the acquired assets were shut down,[48] exclusive

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[44]*E.g.*, Butchers' Union Slaughter-House & Live-Stock Landing Co. v. Crescent City Live-Stock Landing & Slaughter-House co., 83 U.S. 36 (1872) ("Slaughter-House Cases" -- upholding monopoly provision in grant of right to slaughter animals); McRee v. Wilminton & Raleigh R.R. Co., 47 N.C. 186 (1855) (provision in toll bridge charter giving it a six mile exclusive right to operate did not serve to prevent construction of a competing railroad); Omaha Horse Ry. Co. v. Cable Tramway Co. of Omaha, 30 F. 324 (C.C.D.Neb. 1887) (exclusive grant to plaintiff to operate a horse drawn railroad in Omaha to be strictly construed and thus was not violated by newly authorized cable car railroad); City of Memphis v. Memphis Water Co., 52 Tenn. 495 (1871) (grant of exclusive right to operate a water works did not violate state constitutional provision forbidding "monopolies and perpetuities").

[45]*See, e.g.*, Motion Picture patents Co. v. Universal Film Mfg. Co., 243 U.S. 502, 517 (1917) (tying of patented projector to unpatented film was attempt to expand power "wholly without the scope of the patent monopoly"); Mercoid Corp. v. Mid-Continent Inv. Co., 320 U.S. 661, 668 (1944) (bundling of unpatented devices in a combination patent was an attempt to control the supply "beyond the scope of the patentee's monopoly"). *See* Herbert Hovenkamp, *Antitrust and the Design of Production*, 103 CORN. L. REV. 1155, 1181 (2018).

[46]United States v. American Can Co., 230 F. 859 (D. Md. 1916), *appeal dismissed*, 256 U.S. 706 (1921).

[47]*Id*. at 870-873.

[48] *Id*. at 877 (noting that two-third of the acquired plants were shut down within two years of their purchase, and many were never operated at all.

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contracts,[49] threats of predatory pricing, and overly broad noncompetition covenants.[50] The question whether American Can was actually a structural monopoly was addressed almost as an afterthought, with the judge observing only that the company made about half of the country's cans.[51] He never considered important issues of market scope, such as whether cans competed with bottles, which were also widely used for preserving foods.[52]

The cumbersome opinion in the Supreme Court's 1911 decision in Standard Oil Co. v. United States[53] did no better. The Court rehearsed a litany of bad practices, including rebates and preferences negotiated with railroads who shipped Standard's products, control of pipelines, predatory price cutting, business espionage, and the payment of rebates on oil.[54] Many of these allegations, including those of predatory pricing, have been subsequently examined and some have been disputed.[55]

Gradually concerns about structural requirements became more prominent. The opinion in United States v. United States Steel (1920) was more concerned with market structure, refusing to condemn the company's formation by merger, mainly because the defendant's market share had declined to around 40%.[56] As a result, although the defendant may once have been a monopoly, it was no

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[49] *Id*. at 875.
[50] *Id*. at 871.
[51] *Id*. at 892.
[52] *Cf*. United States v. Continental Can Co., 378 U.S. 441 (1964) (noting intense competition between cans and bottles and placing them within the same relevant market).
[53] Standard Oil Co. v. United States, 221 U.S. 1 (1911).
[54] *Id*. at 42-43.
[55] *See* John S. McGee, *Predatory Price Cutting; The Standard Oil (N.J.) Case*, 1 J.L. & Econ. 137 (1958). *But see* James A. Dalton & Louis Esposito, *Predatory Price Cutting and Standard Oil: A Re-Examination of the Trial Record*, 22 Res. L. & Econ. 155 (2007) (re-examining the trial record and finding numerous instances of predation, in conflict with McGee's conclusions); *accord* Christopher R. Leslie, *Revisiting the Revisionist History of Standard Oil*, 85 S. Cal. L. Rev. 573 (2012). *See also* Ron Chernow, Titan: The Life of John D. Rockefeller, Sr. 113–17, 144–47, 202–25, 251–58, and *passim* (1998).
[56] *United States v. United States Steel Corp.*, 251 U.S. 417 (1920).

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more.[57] The Court noted that vertical integration from ore to finished product appeared to be efficient, although it did not dispute the lower court's conclusion that the amount was excessive.[58] Then, in United States v. International Harvester[59] it refused to condemn a declining dominant firm for alleged practices that it was no long committing, nor for the merger of five firms into one that had been covered by a previous (1918) consent decree.[60] Decisions such as *United States Steel* and *International Harvester* paved the way for a structural revolution that began to take form in the 1930s.

Structuralism and the Failed Effort to Kill it

Monopolization law's heavy reliance on conduct eventually gave way to approaches that placed greater emphasis on market structure, at one point coming close to making conduct irrelevant. One important source of the shift was that competition policy was increasingly capturing the attention of a new generation of marginalist economists in both Europe and the United States. A variety of economic studies during the 1910s and 1920s focused on specific industries or specific firms, considering how their particular attributes threatened competition.[61] For example, the fixed-cost controversy,

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[57] *Id*. at 452-453.

[58] *Id*. at 458-459.

[59] 274 U.S. 693 (1927).

[60] *Id*. at 695.

[61] *See* Herbert Hovenkamp, *The Antitrust Movement and the Rise of Industrial Organization*, 68 TEX. L. REV. 105, 113-114 (1989). Among the most important were Berglund, *The United States Steel Corporation and Industrial Stabilization*, 38 Q.J. ECON. 607, 608-09 (1923) (making case for challenging consolidation in steel industry); Abraham Berglund, *The United States Steel Corporation Price Stabilization*, 38 Q.J. Econ. 1, 2-7 (1923) (criticizing United States Steel's pricing policy as anticompetitive); Arthur H. Cole, *A Neglected Chapter in the History of Combinations: The American Wool Manufacture*, 37 Q.J. ECON. 436, 472-74 (1923) (tracing history of wool producers' combination); Rose R. Hess, The Paper Industry in Its Relation to Conservation and the Tariff, 25 Q.J. ECON. 650, 656-60 (1911) (following the growth of trusts in the paper industry from 1898-1908); Edward S. Meade, *The Price Policy of the United States Steel Corporation*, 22 Q.J. ECON. 452, 465 (1908) (indicating the yearly demands and the impact upon the growth of the steel industry through 1908); Richard Roe, *The United Shoe Machinery Company* (pts. 1 & 2), 21 J. POL. ECON. 938, 938-43 (1913) (development of the USM monopoly from 1860-1911), 22 J. POL. ECON., 43,

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which was a dominant feature of industrial economics prior to the mid-thirties, rose out of the idea that in industries with very high fixed costs competition would not be sustainable. Firms would compete aggressively until prices were just high enough to cover their variable costs, but without leaving enough to pay fixed costs. This "ruinous competition" defense has frequently been asserted in antitrust cases and consistently rejected.[62]

The Harvard University economics department, the nation's most influential, promoted this movement heavily with its "case study" approach that guided the research agendas of numerous graduate students. A principal purpose of these Harvard-published industry studies was to stress how individual markets or firms had distinct features that required particularized analysis.[63] Accelerating this trend was renewed interest in the theory of oligopoly and a little later

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43 (1914) (discussing specific business strategies at United Shoe); William s. Stevens, *The Powder Trust, 1872-1912*, 26 Q.J.ECON. 444, 444-69 (1912) (following the growth of the E.I. duPont de Nemours trust from 1872-1902).

[62]HERBERT HOVENKAMP, ENTERPRISE AND AMERICAN LAW, 1836-1937 at 308-322 (1991). E.g., United States v. Trans-Missouri Freight Assn., 166 U.S. 290, 368-369 (1897) (rejecting ruinous competition defense); United States v. Socony-Vacuum Oil Co., 310 U.S. 150, 221-222 (1940) (ruinous competition not a defense to a price fixing conspiracy); Arizona v. Maricopa Cty. Med. Soc., 457 U.S. 332, 346 (1982) (quoting and relying of *Socony Vacuum*); United States v. Apple, Inc., 791 F.3d 290, 332 (2d Cir. 2015) (similar).

[63]See, e.g., MELVIN T. COPELAND, THE COTTON MANUFACTURING INDUSTRY OF THE UNITED STATES 154-71 (Harv. Econ. Stud. No. 8, 1912); ARTHUR STONE DEWING CORPORATE PROMOTIONS AND REORGANIZATIONS 16-48 (leather industry), 49-71 (starch industry), 72-111 (glucose industry), 203-26 (salt industry), 305-411 (cotton industry), 412-63 (asphalt industry), 510-17 (glue industry), 464-509 (shipbuilding industry), 249-68 (bicycle industry) (Harv. Econ. Stud. No. 10, 1914); WILLIAM H. PRICE, THE ENGLISH PATENTS OF MONOPOLY 49-61 (mineral companies), 62-66 (impact of inventions), 67-81 (class manufacturers), 82-101 (aluminum industry), 102-06 (cloth finishing business), 107-11 (iron industry), 112-18 (salt industry), 119-28 (soap industry) (Harv. Econ. Stud. No. 1, 1906). Perhaps the best known study was ELIOT JONES, THE ANTHRACITE COAL COMBINATION IN THE UNITED STATES 40-58 (combinations occurring between 1893 and 1898), 59-99 (combinations after 1898) (Harv. Econ. Stud. No. 11, 1914). Others are collected in Hovenkamp, *Antitrust Movement*, *supra* note __at 113-114.

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Harvard Professor Edward Chamberlin's theory of product differentiation and monopolistic competition.[64] These forced ever closer scrutiny of relevant differences among markets or firms.

The result was an eclectic mixture of economic theories and technical accounts emphasizing differences among industries -- not a single model to describe competitive conditions across the economic landscape. Head-to-head competition focusing on price and little else appeared to occur in some markets, such as commodities. Oligopoly, with its higher price-cost margins, was a defining characteristic of others, depending mainly on the number of firms. Monopolistic competition – or competition by differentiating one's product – became an increasingly important mechanism for describing the performance of markets for manufactured goods where product differentiation was possible.

In 1940 Columbia University economist John Maurice Clark wrote what would become one of the most important pieces in the development of antitrust economics, "Toward a Concept of Workable Competition."[65] He developed a classification system of markets based on structure and the degrees of product differentiation. His categories included "Pure competition," which required "standard" products and pure price-determined rivalry. A second category was "Imperfect pure competition," which incorporated fixed costs and scale economies and thus led to deviations from marginal cost pricing as well as differences among various markets. Third was "Modified, intermediate or hybrid competition," which was characterized by standard products but considerable differentiation in prices and other terms of sale. Clark's final class was markets with "unstandardized or quality products," which accounted for significant amounts of product differentiation.[66]

This classification system differs from something that an industrial economist might produce today, but the important contribution was Clark's observations parallel to those in the Harvard

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[64]EDWARD CHAMBERLIN, THE THEORY OF MONOPOLISTIC COMPETITION (1933).
[65]John Maurice Clark, *Toward a Concept of Workable Competition*, 30 AM. ECON. REV. 241 (1940).
[66]*Id*. at 244-245.

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School that markets seem to differ from one another in ways that antitrust policy should find relevant. That is, the structure of a market is important. That idea became a guiding principle of the structural antitrust policy advocated by the Harvard School in the 1950s and after.[67] It guided the thinking of dominant figures in the 1950s industrial organization literature who argued that industrial economics is best focused on the study of individual markets.[68] For example Harvard trained economist Joe S. Bain's pioneering studies of entry barriers in the 1950s and 1960s took issue with the almost universal assumption made by classical and early neoclassical economists that entry by new competitors would occur any time price rose above cost.[69]

One important attribute of structure-focused analysis is the view that structure determines the profitability and thus the significance of certain types of conduct. Harvard industrial economist Edward S. Mason, a strong proponents of structuralism in the 1930s and 1940s, was well known for a possibly apocryphal story about a debate he had in 1939 in which he argued that the economic performance of the American rubber tire industry could be explained entirely by its structure.[70] As a result, conduct was simply not worth discussing. The extreme point in this effort to classify markets on the basis of structure was the structure-conduct-performance (SCP)

[67]Most influentially in EDWARD S. MASON, ECONOMIC CONCENTRATION AND THE MONOPOLY PROBLEM (1957); Edward S. Mason, *Monopoly in Law and Economics* 47 YALE L.J. 34 (1937); Edward S. Mason, *The Current Status of the Monopoly Problem in the United States*, 62 HARV. L. REV. 1265 (1949).

[68]JOE S. BAIN, INDUSTRIAL ORGANIZATION (1959); JOE S. BAIN, BARRIERS TO NEW COMPETITION: THEIR CHARACTERS AND CONSEQUENCES IN MANUFACTURING INDUSTRIES (1956). *See* Richard Schmalensee, *Do Markets Differ Much?*, 75 AM. ECON. REV. 341 (1985) (offering a qualified defense).

[69]*See* note __, *supra*; and Joe S. Bain, *Economies of Scale, Concentration and the Condition of Entry in Twenty Manufacturing Industries*, 44 AM. ECON. REV. 15 (1954).

[70]Recounted in Joe S. Bain, *Structure Versus Conduct as Indicators of Market Performance*, 18 ANTITRUST L. & ECON. REV. 17, 19 (1986). See also Mason, *Economic Concentration*, supra note __; and Mason, *Monopoly in Law and Economics*, *supra*.

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paradigm.[71] "Performance" refers to the extent to which a market comes close to achieving optimal competition, with low output and higher price-cost margins indicating poor performance. Under the most extreme version of the SCP paradigm as Mason and other Harvard structuralists advocated, structure dictates conduct and conduct dictates performance. As a result, conduct drops out as a variable of interest, and we can move directly from structure to performance.

The result for a time was a massive shift in antitrust analysis of unilateral conduct away from business behavior and toward market structure and the measure of firm dominance. The extreme position was that a dominant firm monopolizes unlawfully "whenever he does business," as Judge Wyzanski put it in 1953.[72] Judge Hand had come close to that position in the 1945 *Aluminum* case, suggesting that a monopolist monopolizes when it sells at a monopoly price, and that such conduct was inherent in the definition of a monopolist.[73] It also led to very influential work by Carl Kaysen and Donald F. Turner arguing that oligopoly and poor performance are virtrually inherent in structurally concentrated industries. As a result, antitrust policy should seek to have these industries broken up.[74]

Structuralism ultimately led to a protracted argument over "no fault" monopolization, or the idea that certain monopolies should be broken up by the antitrust laws without any finding of anticompetitive conduct. That idea captured even the first edition of the generally centrist *Antitrust Law* treatise. Areeda and Turner, its authors, would have limited the breakup power to suits by the government, and then

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[71]For a brief history, *see* Herbert Hovenkamp, *United States Competition Policy in Crisis: 1890-1955*, 94 MINN. L. REV. 311, 350-353 (2009). On its demise, *see* Herbert Hovenkamp, *Introduction to the Neal Report and the Crisis in Antitrust*, 5 COMPETITION POL'Y INT'L 219, 219-22 (2009).

[72]United States v. United Shoe Machinery Corp., 110 F. Supp. 295, 342 (D. Mass. 1953).

[73]United States v. Aluminum Co. of Am., 148 F2d 416, 427-428 (2d Cir. 1945).

[74]CARL KAYSEN & DONALD F. TURNER, ANTITRUST POLICY: AN ECONOMIC AND LEGAL ANAYSIS (1959); Donald F. Turner, *The Definition of Agreement Under the Sherman Act: Conscious Parallelism and Refusals to Deal*, 75 HARV. L. REV. 655 (1962).

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only if the monopoly had persisted for at least five years.[75] No provision for no fault monopolization was ever enacted,[76] and today it is clear that §2's monopolization offense requires a showing of both substantial market power and anticompetitive conduct.

This structuralist view became a principal target of the Chicago School, whose proponents argued that markets really do not differ all that much at all, and perfect competition models provide the best explanation for all of them.[77] Stigler in particular, aided later by Milton Friedman,[78] championed the view that perfect competition, collusion, and monopoly described all of the relevant states of the economic world and that in the vast majority of cases the problem of entry barriers is no more important than the classical economists had assumed.[79]

This Chicago-dominated reversion to perfect competition models had a robust life in industrial economics prior to the mid-1980s, and considerable success in some American law schools after that. In the main, however, it faltered under an empirical revolution in industrial economists that has served to restore theories of oligopoly and imperfect competition to dominance at least as strong as it was in the 1940s and 1950s.[80] In antitrust, the Chicago School succeeded

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[75]3 PHILLIP AREEDA & DONALD F. TURNER, ANTITRUST LAW ¶¶618-623 (1978). I have preserved this section from the original edition largely intact, although with some brief commentary. *See* 3 PHILLIP E. AREEDA & HERBERT HOVENKAMP, ANTITRUST LAW ¶¶630-638 (5th ed. 2022) (in press).

[76]On some of the efforts, *see* William E. Kovacic, *Failed Expectations: The Troubled Past and Uncertain Future of the Sherman Act as a Tool for Deconcentration*, 74 IOWA L. REV. 1105 (1989).

[77]Frank H. Easterbrook, *Workable Antitrust Policy*, 84 MICH. L. REV. 1696 (1986); Richard A. Posner, *The Chicago School of Antitrust Analysis*, 127 UNIV. PA. L. REV. 925, 931 (1979) (criticizing structuralism as "…derived from observation, unsystematic and often superficial, of business behavior")

[78]*See* Herbert Hovenkamp, *Antitrust Error Costs*, __ UNIV. PA. J. L. & BUS. (2022) (forthcoming), available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3853282.

[79]*See* GEORGE J. STIGLER, THE ORGANIZATION OF INDUSTRY (1968); Hovenkamp, *Error Costs*, *supra* note __.

[80]*E.g.*, Timothy Bresnahan and Richard Schmalensee, *The Empirical Renaissance in Industrial Economics*, 33 J. INDUS. ECON. 371 (1987).

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mainly in taking the edge off several fantastic and unjustified theories that had migrated into antitrust policy, particularly in the 1950s and 1960s.[81] Its more pointed contributions faltered. For example, George Stigler's theory of entry barriers, which would have narrowed considerably the scope of perceived barriers to entry, was never widely adopted by antitrust policy makers or tribunals.[82] Harold Demsetz' influential view that bidding for natural monopoly markets could displace regulation never took hold as a substitute for regulation, although it did make policy makers more aware of the possibilities of potential competition.[83] The Chicago School view that vertical restraints such as resale price maintenance could be fully explained by free rider concerns ended up describing only a small subset of the total.[84] Bork's view that only mergers to near monopoly should be challenged[85] never took hold, and even the merger guidelines at their most neoliberal point permitted pursuit of mergers that created post-merger market shares of around 30%.[86]

The two government antitrust policy documents that came closest to expressing Chicago School neoliberal views were the 1982 Merger Guidelines, and the controversial 2007 statement on monopolistic practices, which the FTC had refused to sign and was withdrawn only two years later. The merger guidelines issued in 1982 spoke of the problem of horizontal mergers as concerned with "monopolists and groups of colluding firms."[87] They acknowledged no theory of oligopoly other than recognition that in markets with a small

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[81]Herbert Hovenkamp & Fiona Scott-Morton, *Framing the Chicago School of Antitrust Analysis*, 168 UNIV. PA. L. REV. 1843 (2020).
[82]*See* Hovenkamp, *Error Costs*, *supra* note __.
[83]*Id*., discussing Harold Demsetz, *Why Regulate Utilities?*, 11 J.L. & ECON. 55 (1968).
[84]*See* HERBERT HOVENKAMP, FEDERAL ANTITRUST POLICY: THE LAW OF COMPETITION AND ITS PRACTICE §11.3 (6th ed. 2020) (discussing Lester G. Telser, *Why Should Manufacturers Want Fair Trade*, 3 J. L. & ECON. 86 (1960).
[85]ROBERT H. BORK, THE ANTITRUST PARADOX: A POLICY AT WAR WITH ITSELF 198-221 (1978).
[86]*See* discussion *infra*, text at notes __.
[87] *E.g*. United States Dept. of Justice, 1982 Merger Guidelines, § IV, 1.1 (1982), available at https://www.justice.gov/archives/atr/1982-merger-guidelines. This set of Guidelines was issued by the Justice Department alone, without the co-sponsorship of the FTC.

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number of firms they might be able to "coordinate, explicitly or implicitly, their actions in order to approximate the performance of a monopolist."[88] While that did acknowledge that the coordination might be "implicit" rather than by express agreement, it also indicated that the result would be to approximate the performance of a monopolist. That is, there was no recognition of oligopoly strategies in which firms attain equilibria at price levels below the monopoly level and varying with the number of firms in the market. As in the Stigler model, this theory of oligopoly was really nothing more than collusion by another name.[89]

Further, in the 1982 Guidelines product differentiation was regarded as a mitigating factor that served mainly to undermine attempts at collusion. Price fixing is relatively simple in undifferentiated markets, the Guidelines asserted, because the "cartel need establish only a single price."[90] By contrast, under differentiation the cartel may have to come with a more "complex schedule of prices corresponding to gradations in actual or perceived quality attributes.…"[91] As a result, the 1982 Guidelines concluded, " when the relevant product is very heterogeneous or sold subject to complex configuration options or customized production, the Department is less likely to challenge the merger."[92] By contrast, the 1992 Horizontal Merger Guidelines, which were issued jointly by the Justice Department and the FTC, abandoned the practice of treating product differentiation as a mitigating factor. Further, they initially raised the idea that has now become prominent in merger analysis that under product differentiation a firm might be able to use a merger to "unilaterally" raise its price above pre-merger levels, depending on the relative closeness of the merging firms' products to one another.[93] Unilateral effects theory has effectively turned product differentiation into an aggravating factor in those markets where it applies.

The section 2 Report was published in 2007 under the title "Competition and Monopoly: Single-Firm Conduct Under Section 2

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[88] *Id*. § I.
[89]*See* Hovenkamp, *Antitrust Error Costs*, *supra* note __.
[90]1982 Merger Guidelines, *supra* note __, III. C. 1.1.
[91] *Ibid*.
[92]*Ibid*.
[93]*Id*. at 2.211.

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of the Sherman Act."[94] It was much more concerned with errors of over-enforcement than with actually identifying exclusionary practices.[95] The exceedingly short life of the Section 2 Statement indicates that by the time it was produced its ideas had lost most of their support outside of purely political circles.

Notwithstanding the Chicago School, market structure has remained as an essential component in the analysis of monopoly under the antitrust laws. For example, a unilateral refusal to deal with a competitor would never be an antitrust violation in a competitive market, but it might be in a market with a dominant firm. The lawfulness of exclusionary pricing practices depends heavily on the structure of the market in which the conduct occurs. In addition, analysis of mergers has retained its structural focus right up to the present day.[96] Even the 1982 Guidelines never reached the extreme Chicago School prohibitions. For example, they would have authorized the challenge of a merger creating a 30% firm – far, far short of Bork's recommendations articulated only four years earlier.[97]

Today it is clear that the monopolization offense consists of two interdependent parts, each of which must be established.[98] First, the structural component requires proof of a market that is sufficiently prone to monopolization. This is a question of the number of firms in a well-defined market subject to entry barriers, but particularly the relative size (market share) of the largest firm, and the comparative size of others. Secondly, however, anticompetitive conduct is

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[94] Available in the Justice Department's digital archieves. https://www.justice.gov/atr/competition-and-monopoly-single-firm-conduct-under-section-2-sherman-act-chapter-1.

[95] *Id*, Part G.

[96] Herbert Hovenkamp & Carl Shapiro, *Horizontal Mergers, market Structure, and Burdens of Proof*, 127 YALE L.J. 1996 (2018).

[97] Under the 1982 Guidelines the government would be "likely to challenge" a merger if the post-merger HHI exceeded 1800 and the increase brought about by the merger exceeded 100 points. To illustrate, assume a pre-merger market of six firms with shares of 25, 20, 20, 20, 10, and 5. Suppose that the 25% firm merged with the 5% firm. The post-merger HHI would be 2200 and the increase brought about by the merger would be 250, well above the threshold for "likely" challenge.

[98] *See* HERBERT HOVENKAMP, FEDERAL ANTITRUST POLICY, supra note __, §§6.1 – 6.3.

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essential. Third, the two elements of the monopolization defense are interdependent in that certain types of conduct acquire greater or lesser significance depending on a defendant's degree of dominance and the extent to which the market is conducive to durable monopoly.

Market Structure and Attempts

The monopolization offense implies two separate structural requirements. First, the market in question must be one that is capable of being monopolized. Second, the firm whose conduct is being examined must hold sufficient market power to be convicted of the offense. Further §2 of the Sherman Act recognizes two distinct offenses, monopolization and attempt.[99] Nothing in the statute distinguishes the two offenses substantively, but in 1905 Justice Holmes offered a formula that has proven to be durable. Under that formulation, which comes from the common law of attempted crimes, an attempt requires 1) specific intent to create a monopoly; 2) at least one instance of anticompetitive conduct; and 3) a "dangerous probability" that the conduct, if permitted to run its course, would succeed.[100]

Beginning with the sensible premise that the result of an attempt must be something less than the completed offense, the court have sometimes lost sight of what "attempt" really means as an actionable offense. It should not turn business torts into monopolization offenses. Rather, as with common law attempts generally, there must be a realistic likelihood of success, even though the conduct in the particular case either failed or was intercepted before it had completed its mission.

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[99] 15 U.S.C. §2 (2018) ("who shall monopolize, or attempt to monopolize…"). That statute also recognizes a third offense of conspiracy to monopolize, but it has been rendered largely irrelevant to the extent that anything that could be a conspiracy to monopolize would also be a conspiracy to restrain trade under the more aggressive case law governing §1 of the Sherman Act.

[100] Swift & Co. v. United States, 196 U.S. 375, 396 (1905). Holmes explicitly found the source of his formulation in the common law, citing one of his own earlier decisions from when he was Chief Justice of the Supreme Judicial Court of Massachusetts. Com. V. Peaslee, 177 Mass. 267 (1901) (attempted arson).

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Noteworthy here is the fact that both monopolization and the attempt offense have the same remedy when the plaintiff is a competitor. For consumers the remedies differ to the extent that an unsuccessful attempt to create a monopoly will not result in a monopoly overcharge, and thus there will not be purchaser actions based on monopoly prices. For competitors injured by some form of market exclusion, however, it makes no difference whether the conduct has been labeled unlawful monopolization or unlawful attempt: the private plaintiff can recover all damages, trebled, that are attributable to the antitrust violation. For example, if predatory pricing is found to have ruined the plaintiff's competing business the damages will be the same whether or not the predation succeeded in creating a monopoly. Success takes the form of recoupment, which injures consumers but actually benefits surviving competitors.

One good example of overreaching under the law of attempt is Tops Markets, Inc. vs. Quality Markets, Inc.,[101] where the defendant was accused of monopolization in the market for retail grocery sites by buying up suitable sites in the geographic area. The court dismissed the monopolization claim after observing that defendant Quality did not have the power because new entrants could "readily enter the … market at any number of available sites and compete successfully for supermarket sales."[102] Then, however, the court went on to sustain a claim of attempt to monopolize, based on the purchase of a site that the plaintiff was negotiating to buy. The court explained that "a lesser degree of market power may establish an attempted monopolization claim" than a claim for completed monopolization.[103] In this case the plaintiff's injury was caused by the fact that the defendant bought a parcel of land out from under the plaintiff, who was planning to build

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[101] 142 F.23d 90 (2d Cir. 1998).
[102] *Id*. at 99. The court elaborated:

> On this record we can draw no reasonable inference other than that Quality lacks monopoly power. Despite its high market share, no other evidence—such as barriers to entry, the elasticity of demand, or the nature of defendant's conduct—supports the conclusion that Quality can control prices or exclude competition and in fact, Wegmans' quick garnishment of such high market share dispositively refutes such a conclusion.

Ibid.
[103] *Id*. at 100.

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a store there in competition with the defendant. There certainly may have been a breach of contract or perhaps tortious interference, but given the court's observations about new entry monopoly was never in the cards. However, the plaintiff's damages would be based on the lost business opportunity contemplated by the sale, and that would not depend on whether the antitrust offense was monopolization or attempt.

The logical disconnect in the *Tops* case was that in dismissing the complaint the court had already concluded that the market in question was not capable of being monopolized. If the conduct could not possibly have succeeded in creating a monopoly, then the attempt offense could not occur either. The *Tops* story is the equivalent of the person who points a banana at someone and says "bang, you're dead." That conduct could not possibly be a murder, but it could not be an attempt either, no matter what the defendant's state of mind.

The grandparent of the Second Circuit's approach was the Ninth Circuit's decision in Lessig v. Tidewater Oil Co,[104] which had held that that the attempt to monopolize offense could be satisfied by a showing of *either* specific intent to create a monopoly, or a dangerous probability that the conduct, if permitted to run its course, would have done so. Tidewater Oil Company, which owned several gasoline stations, was not a dominant firm and the conduct being challenged was exclusive dealing, or a requirement that its leased gasoline station operators purchase all of their gasoline needs from itself,[105] somewhat looser allegations of resale price maintenance,[106] and a tying requirement that the stations purchase their tires, batteries, and automotive accessories from Tidewater.[107] While there was no realistic probability that a firm of Tidewater's size could use any of these practices to monopolize a market, the court held that such a showing was unnecessary. Rather, "specific intent itself is the only evidence of dangerous probability that the statute requires."[108]

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[104] 327 F.2d 459 (9th Cir. 1964).
[105] *Id* at 467.
[106] *Ibid*.
[107] *Ibid*.
[108] *Id*. at 474.

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The Supreme Court's unanimous decision in Spectrum Sports, Inc. v. McQuillan[109] overruled the *Lessig* line of cases, turning the focus back to the "dangerous probability" requirement itself and requiring proof of a relevant market to establish a "realistic probability that the defendants could achieve monopoly power in that market."[110]

The *Spectrum* holding is quite defensible for conduct occurring within a single market, as was true in that case. It does leave behind one distressing situation, however, and that is when a monopolist whose position is clearly established by the criteria that the *Spectrum* decision approves uses that position to injure rivals in a related market.

The Case for Abuse of Dominance – Multiple Markets and Networks

One common feature of dominant digital platforms is that a firm may have significant power in its overall platform, but not in the individual segments in which it operates. Amazon is a prominent example. While it dominates as a platform, it nevertheless has only modest positions in most of the individual products that it sells, save eBooks. Facebook is also a dominant social networking site, but not in the individual markets for posted videos, photos, messaging, and the like. Google may be a dominant network. It also has a dominant position in general consumer search,[111] and a substantial position in its office suite of product, but not in email client Gmail, Waymo, or many of the other products that it sells. Whatever dominance Apple may enjoy for the iPhone does not extend to the markets for most of the individual apps that it sells on the iPhone platform. To what extent should these firms be held accountable for competitive injuries in these individual markets even when there is not a realistic prospect of monopoly in them?

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[109] 506 U.S. 447 (1993)
[110] *Id*. at 459.
[111] See https://www.statista.com/statistics/216573/worldwide-market-share-of-search-engines/ (showing Google Search with an 85% market share as of September, 2021).

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Relatedly, should it matter whether the injury results from "exclusion" of a rival product or "extraction" of higher returns? To monopolize, as most courts interpret it, means to exclude actual or potential rivals.[112] By contrast, an abuse of a dominant position can be something that results in higher prices. When properly interpreted, both harm consumers.

This subsection briefly makes a case for modifying §2 of the Sherman Act to include abuse of dominance as an offense, but with some limitations.

Abuse of Dominance Under U.S. Law

In United States v. Griffith[113] the defendant owned a chain of movie theaters in several towns in Texas, Oklahoma, and New Mexico. In some towns it held a dominant position while other towns were more competitive. Griffith acquired its position by building modern well-equipped theaters, in contrast to the converted storerooms that were often used by individual operators.[114] The industry practice for multi-theatre chains was that one agent for the company would travel to New York to negotiate exhibition contracts for the entire chain.[115] That practice alone seems unexceptional and quite efficient. The problem is that Griffith's group of theaters was large, and included both the monopoly towns where Griffith dominated, as well as the competitive towns. By negotiating for all of the towns together, Griffith was able to obtain more favorable terms than its smaller rivals who operated only in the competitive towns.

The assumption of the government's antitrust challenge was that monopoly was not threatened in the competitive towns, but that the defendant obtained a competitive advantage in them because it was

[112] On the definition of monopolizing conduct, see 3 PHILLIP E. AREEDA & HERBERT HOVENKAMP, ANTITRUST LAW ¶651 (5th ed. 2022) (in press).
[113] 334 U.S. 100 (1948).
[114] The district court's opinion recounts the facts. United States v. Griffith Amusement Co., 68 F. Supp. 180, 182 (W. D. Ok. 1946).
[115] 334 U.S. at 186.

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able to consolidate its bargaining over all of the towns in which it operated theaters. No attempt was made to distinguish undesirable leveraging in the sense of "forcing" the licensors to accept lower prices in the competitive towns because of the defendant's market power, from the simple fact that economies of scale could inhere in bargaining over a larger group of theaters at a time. Indeed, the complaint focused almost entirely on the injury suffered by competitors who were unable to obtain the same terms that the defendant did.[116]

Justice Douglas' opinion for the Court concluded that it is "not always necessary to find a specific intent to restrain trade or to build a monopoly in order to find that the anti-trust laws have been violated." Rather, [i]t is sufficient that a restraint of trade or monopoly results as the consequence of a defendant's conduct or business arrangements."[117] Then, he concluded, "the use of monopoly power, however lawfully acquired, to foreclose competition, to gain a competitive advantage, or to destroy a competitor, is unlawful."[118]

The most controversial part of Justice Douglas' statement was its conclusion that the use of monopoly power to gain a "competitive advantage" is an act of unlawful monopolization. Dicta in the Second Circuit's *Berkey Photo* decision thirty years later put a finer point on it:

> [T]he use of monopoly power attained in one market to gain a competitive advantage in another is a violation of §2, *even if there has not been an attempt to monopolize the second market*. It is the use of economic power that creates the liability.[119]

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[116] *Id*. at 103-104.
[117] *Id*. at 105.
[118] *Id*. at 107. The harm that Justice Douglas identified was that

> The consequence of such a use of monopoly power is that films are licensed on a non-competitive basis in what would otherwise be competitive situations. That is the effect whether one exhibitor makes the bargain with the distributor or whether two or more exhibitors lump together their buying power, as appellees did here. It is in either case a misuse of monopoly power under the Sherman Act.

Id. at 108.
[119] Berkey Photo, Inc. v. Eastman Kodak Co., 603 F.2d 263, 276 (2d Cir. 1979), *cert. denied*, 444 U.S. 1093 (1980) (emphasis added).

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Stated this way the monopoly leveraging theory pushes the law of §2 beyond acts of "monopolization," or attempting to create or preserve a monopoly. The harm is the use of a monopoly position to harm a rival, even if monopoly in the rival's market is not in prospect. The theory applies to defendants who operate in multiple markets, which can refer either to those serving different geographic or product markets, or else firms that are vertically integrated and serve both an upstream and a downstream market.[120] More importantly, it can also apply to networks, which involve not only the aggregation of multiple markets but also a high degree of interdependence among them.

In 1993 the Supreme Court appeared to rule out claims of nonmonopolistic leveraging. Section 2 "makes the conduct of a single firm unlawful only when it actually monopolizes or dangerously threatens to do so."[121] The Court continued, that those concerns were "not met by inquiring only whether the defendant has engaged in "unfair" or "predatory" tactics.[122] While that statement seems very strong, not all of the lower courts interpreted it that way.[123] In any event, in a footnote in its *Trinko* decision the Supreme Court clearly laid the *Griffith* doctrine to rest. Speaking of the lower court's opinion it said:

> The Court of Appeals also thought that respondent's complaint might state a claim under a "monopoly leveraging" theory (a theory barely discussed by respondent…). We disagree. *To the extent the Court of Appeals dispensed with a requirement that there be a "dangerous probability of success" in monopolizing a second market, it erred*.[124]

[120] For example, the Court relied on leveraging theory to condemn vertical integration in the motion picture industry. United States v. Paramount Pictures, 334 U.S. 131, 173-175 (1948) ("Likewise bearing on the question whether monopoly power is created by the vertical integration, is … the leverage on the market which the particular vertical integration creates or makes possible.").

[121] Spectrum Sports, Inc. v. McQuillan, 506 U.S. 447, 448 (1993).

[122] *Ibid*.

[123] E.g. Zschaler v. Claneil Enters., Inc., 958 F. Supp. 929 (D. Vt. 1997) (accepting monopoly leveraging theory for summary judgment purposes; noting Second Circuit law).

[124] Verizon Commc'ns, Inc. v. Law Offices of Curtis V. Trinko, LLP, 540 U.S. 398, 415 n. 4 (2004) (emphasis added).

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This issue and its resolution could prove decisive in antitrust litigation against large digital platforms, all of whom operate in multiple markets. Many of the harms discussed in the *Griffith* line of cases involve conduct that threatens harm to rivals or perhaps higher prices, but they do not realistically threaten to create a monopoly in the rival's market. For example, Amazon neither has nor realistically threatens to have a monopoly in most of the products that it sells, with the exception of ebooks, and even there control by the publishers makes monopoly unlikely. Epic Games was a monopolization case, but the court declined to find Apple liable, mainly on market power grounds.[125] Once again, however, Epic competed in a downstream market – electronic games – where Apple did not even have a position and is unlikely to threaten dominance. Nevertheless, Apple's practice of requiring makers of games or other apps to sell exclusively only through its own store and requiring payment of a high commission very likely did result in higher prices.[126]

These are fundamentally problems in vertical integration. While the secondary markets are more competitive, rivals also require access to a marketplace on which they can sell their products.[127] Whether the platform is a monopolist in the platform itself is a question of fact. In any event, in many situations there is no realistic threat of monopoly in the secondary market.

Claims of linking dominant markets with nondominant secondary products are common when the challenged practice is covered by an agreement. This is common in the law of tying arrangements,[128] although it is also relevant to vertical mergers.[129] What those two practices have in common is that the owner of the

[125]Epic Games, Inc. v. Apple, Inc., __ F.Supp.3d __, 2021 WL 4128925 (N.D.Cal. Sep. 10, 2021).

[126] At this writing the EU is pursuing the claim, and the Dutch antitrust authority has concluded that Apple's policy constitutes an abuse of a dominant position with respect to dating sites. See https://www.acm.nl/en/publications/acm-obliges-apple-adjust-unreasonable-conditions-its-app-store.

[127]Erik Hovenkamp, *The Antitrust Duty to Deal in the Age of Big Tech*, __ YALE L.J. (2022) (forthcoming), available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3889774.

[128]*See* HOVENKAMP, FEDERAL ANTITRUST POLICY, *supra* note __, Ch. 10.

[129]*Id.*, §9.4.

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dominant marketplace forces people to take its own secondary product. In fact, the law of unlawful tying requires "conditioning," or coercion, in the sense that buyers are forced to take the second product as a condition of obtaining the first.[130] By the same token, the law of vertical mergers usually presumes that the vertically related firm will deal exclusively in the vertically related product.[131]

The easier cases are when a contractual constraint "ties" the platform and the secondary product together. That does not cover the situation where the platform merely offers the secondary product, making no real effort to force sales through its own platform. For example, Amazon sells Duracell batteries together with batteries made by other manufacturers and its own AmazonBasics brand. However, a customer is free to purchase Duracell batteries from numerous competing outlets, both online and traditional, and no one is required to purchase AmazonBasics as an alternative to a name brand battery. The "forcing" must come from some other source – perhaps a lower price for the AmazonBasics alternative, or perhaps more favorable display on Amazon's website. If unilateral, neither of these practices violates United States antitrust law. By contrast, the "forcing" claim with respect to Apple's Appstore, as in the *Epic Games* decision,[132] has more traction: one who wants to purchase a game for an iPhone is effectively forced to use the Appstore for the purchase.

The European Union's position on non-monopolistic effects in secondary markets is more aggressive than the U.S. position. Article 102 of the Treaty on the Functioning of the European Union prohibits an "abuse … of a dominant position"[133] within a member state or "as it may affect trade between member states." That language imposes a broader conduct standard than does §2 of the Sherman Act and may reach situations where a firm is dominant in one market but is found to have abused its power in a second market but without threatening

[130] On the conditioning requirement in tying law, see 10 PHILLIP E. AREEDA & HERBERT HOVENKAMP, ANTITRUST LAW ¶1752 (4th ed. 2019).
[131] *See* 4A *Id*. at ¶¶1003-1004.
[132] Epic Games, Inc. v. Apple, Inc., ___ F.Supp.3d ___, 2021 WL 4128925 (N.D.Cal. Sep. 10, 2021), app. docketed, 9th Cir., 12-30-2021.
[133] Treaty on the Functioning of the European Union, art. 102, cl. 1, Mar. 30, 2010, 2010 O.J. (C 83) 47.

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monopoly.[134] This can be decisive in digital platform markets when a firm has a degree of dominance there but then refuses to deal, discriminates against, or otherwise disfavors sellers in a secondary market. While there is not a realistic threat of monopoly in the secondary market, prices may be higher.[135] Notably, however, even the EU's approach would not permit pursuing a dominant firm simply because it sold in a more competitive secondary market. The language requires an "abuse" of a dominant position. Defining "abuse" is the hard part.

Fidelity to the text very likely would not permit "abuse of a dominant position" to be read into §2 of the Sherman Act – although, as noted above, there is clear although now overruled Supreme Court precedent for it.[136] Unless monopoly either exists in the secondary market or there is a dangerous probability that it will exist, the conduct appears not to fall within the literal language of §2.

Why Abuse of Dominance?

The abuse of dominance standard is in many ways better suited to networks and other information technology markets than is the monopolization standard – provided that the "abuse" requirement is taken seriously. The underlying premise that drives §2 analysis in cases involving practices such as refusal to deal is that each firm must stand on its own bottom. While the Supreme Court's *Trinko* decision declining to expand refusal to deal law arose in a networked industry, in fact its network analysis was thin to non-existent. Rather, it was

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[134] *See* James Keyte, *Why the Atlantic Divide on Monopoly/Dominance Law is so Difficult to Bridge*, 33 ANTITRUST 113, 117 (Fall, 2018) in the EU, "leveraging has settled in as a standard theory of exclusion and harm"); and see, e.g., S*ealink*, Commission Decision (94/19/EEC), Dec. 21, 1993, 1994 O.J. (L 15); and Google and Alphabet v. Commission ("Google Shopping"), General Court of the European Union , 10 Nov. 2021 (press release). For the full text of the Commission's decision, see CASE AT.39740, Google Search (Shopping), 39740_14996_3.pdf (europa.eu).

[135]Paul Lugard & Lee Roach, *The Era of "Big Data" and EU/U.S. Divergence for Refusals to Deal*, 31 ANTITRUST 58 (Spg. 2017).

[136] *See* discussion *supra*, text at notes __.

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quite correctly driven by the fact that in this case a regulatory agency had already been given that obligation in the 1996 Telecommunications Act, and it had actually already disciplined the defendant for violating its interconnection obligations.[137] The most relevant holding in *Trinko* is that the antitrust laws should not be used to graft a private remedy in favor of a plaintiff, including treble damages, upon a regulatory statute that did not include its own private action provision.

Networks have higher expectations about interfirm cooperation. Indeed, the alternative to networks completely controlled by a single firm is networks that require collaboration among competitors, sometimes quite extensive. One of the more troubling threats to competition within networks is dominant firms. In general, nonominant firms in network industries have a strong incentive to participate in the network. By contrast, dominant firms have an incentive to keep control to themselves so that they do not have to share any revenue.[138] This is basically the *Qualcomm* story, in which Qualcomm made FRAND obligations to participate in the network by making its patents available to all participants on a fair, reasonable, and nondiscriminatory basis. Once it had acquired a dominant position in a particular technology, however, it refused to honor those obligations in order to limit competition for sales to Apple, a large purchaser of the types of chips that Qualcomm was making. For that reason, the Ninth Circuit's decision against the FTC was an important opportunity lost.[139] The facts of *Qualcomm* clearly established both market exclusion and competitive harm, including higher prices.[140]

Amending §2 to cover abuses of dominant positions is a superior alternative to the various proposals pending before Congress to legislate sharing or abuse standards.[141] First, the proposed

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[137]Verizon Comm's, Inc. v. Law Offices of Curtis V. Trinko, LLP, 540 U.S. 398, 413 (2004) (noting that FCC had imposed a "substantial fine' and begun monitoring Verizon's interconnection practices).
[138]Michael L. Katz & Carl Shapiro, *Network Externalities, Competition, and Compatibility*, 75 AM. ECON. REV. 424, 425 (1985).
[139]FTC v. Qualcomm, Inc., 969 F.3d 974 (9th Cir. 2020).
[140]For analysis, *see* Herbert Hovenkamp, *FRAND and Antitrust*, 105 CORNELL L. REV. 1683, 1685-1688 (2020).
[141]*See* John D. McKinnon, *Effort to Bar Tech Companies From "Self-Preferencing" Gains Transaction*, Wall St. J. (Oct. 15, 2021), available at

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provisions are too narrow in that they apply to the major digital platforms but leave out many other firms who could be engaged in the same conduct. Second, they can impose seriously counterproductive outcomes, particularly when nothing realistically constituting anticompetitive abuse is present. Depending on the text that emerges, which is unknown at this writing, this could effectively become a species of public utility regulation or, worse yet, special interest legislation favoring small business over consumers, labor and others who benefit from more competitive markets.

Abuses of the "Abuse" Standard

"Abuse of dominance" language would give courts a chance to develop legal rules that are better designed to control nonmonopolistic but anticompetitive abuses by dominant plaforms. They could increase competition in some market situations, particularly network industries that require competitor collaboration over multiple products or that involve dominant distribution platforms.

The danger of an overly aggressive abuse of dominance standard is that it can limit harmless and even beneficial behavior. That is, "abuse" must be properly limited to competitive harm, and antitrust should not incorporate the law of business torts by giving it another name.[142] For example, Amazon is not "abusing" a dominant position if it selects two or three among dozens of rivals' products for inclusion on its website, even as it excludes others. For example, if Amazon decides to sell its own kitchen cutting board must it also carry the cutting boards of the other 181 firms that sell cutting boards?[143] Nor is it an abuse for it to sell its own products, such as AmazonBasics AAA batteries, at a lower price than rivals such as Duracell or Eveready are offering. And it should not be an abuse for a firm to take advantage of efficiencies that occur when its offers products in combination, or at a lower price when combined with others.

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https://www.wsj.com/articles/effort-to-bar-tech-companies-from-self-preferencing-gains-traction-11634202000

[142]*See* discussion *infra* text at notes __.

[143]See Herbert Hovenkamp, *Congress' Antitrust War on China and American Consumers* (Promarket, June 25, 2021), at https://promarket.org/2021/06/25/congress-antitrust-china-consumers-merger/.

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Other situations where an abuse standard could improve competition are where the abuse of a dominant position consists in extraction rather than exclusion. Section 2 of the Sherman Act, unlike §1, is triggered by "exclusionary" conduct, not merely by conduct that results in higher prices. A good illustration of the difference is the *Rambus* litigation. The D.C. Circuit rejected the Federal Trade Commission's claim that Rambus violated §2 by participating in standard setting organizations while surreptitiously developing patents to cover the very technology for which it was approving standards.[144] After the standard was adopted, it sprang these patents on the firms that had implemented it.[145] Even though this conduct may have resulted in higher prices, the appellate court held, it was merely deceptive, not exclusionary.[146] "But an otherwise lawful monopolist's use of deception simply to obtain higher prices normally has no particular tendency to exclude rivals and thus to diminish competition."[147] The "abuse" standard would have seen the issue differently – not whether the conduct threatened additional monopoly but rather whether it threatened competitive harm at all, and in this case it clearly did.

New York legislation that appears close to passage at this writing[148] creates serious risks of these problems. New York's current antitrust law, the Donnelley Act, does not contain a monopolization provision at all.[149] As a result the state may be overdue for legislation against unilateral conduct by dominant firms. The proposed bill incorporates both language that emulates §2 of the Sherman Act and an abuse of dominance provision.[150] It also creates a presumption that

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[144] Rambus, Inc. v. FTC, 522 F.3d 456 (D. C. Cir. 2008).
[145] Id. at 460-461.
[146] *Id*. at 464.
[147] Id. at 465.
[148] Twenty-First Century Antitrust Act (S.-8700-A), reported at https://www.nysenate.gov/legislation/bills/2021/s933#:~:text=(A)%20IT%20SHALL%20BE%20UNLAWFUL,A%20DOMINANT%20POSITION%20IN%20THE (Jan. 6, 2021).
[149] N.Y. Gen. Bus. L. §340 (1999).
[150] S-8700-A (amending §340 by adding, in part):

> 2. (a) It shall be unlawful for any person or persons to monopolize or monopsonize, or attempt to monopolize or monopsonize, or combine or conspire with any other person or persons to

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a market seller's share of 40% is a dominant position,[151] as well as permitting market power to be addressed by direct evidence.[152] It then defines abuse of dominance as including, but not limited to:

> conduct that tends to foreclose or limit the ability or incentive of one or more actual or potential competitors to compete, such as leveraging a dominant position in one market to limit competition in a separate market, or refusing to deal with another person with the effect of unnecessarily excluding or handicapping actual or potential competitors. In labor markets, abuse may include, but is not limited to, imposing contracts by which any person is restrained from engaging in a lawful profession, trade, or business of any kind, or restricting the freedom of workers and independent contractors to disclose wage and benefit information.

Finally, the bill provides that "evidence of pro-competitive effects shall not be a defense to abuse of dominance and shall not offset or cure competitive harm."

Much depends, of course, on what the courts end up doing with this legislation, and the New York Attorney General is authorized to issue guidelines for its enforcement.[153] Nevertheless, the current language re-creates most of the risks that illustrate what went wrong with monopoly leveraging theory under the Sherman Act. The explicit rejection of evidence of procompetitive effects raises the possibility that this statute cold force serious economic harm onto the New York economy as well as other states that could be affected. The proposed

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> monopolize or monopsonize any business, trade or commerce or the furnishing of any service in this state.
> (b) It shall be unlawful for any person or persons with a dominant position in the conduct of any business, trade or commerce, in any labor market, or in the furnishing of any service in this state to abuse that dominant position.

[151] The statute lowers the threshold to 30% for buyers.
[152] Id., §§(b) (1), (2)
[153] Id., §(c)(iii).

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legislation is seriously concerned about employer restraints in labor markets, but oblivious of the harm to labor caused by reduced productivity and output, and that harm could be far larger.

The series of older American antitrust decisions that have accepted non-monopolistic abuse as a theory of harm were often excessive because they equated "abuse" with almost any kind of harm to a competitor. *Griffith* itself is an example. Using a single buying or selling agent to represent a firm's multiple outlets is hardly a suspicious or undesirable practice. It saves distribution costs for the same reason that any activity subject to economies of scale may be beneficial as a firm produces more. In the process, it may also harm smaller rivals who are dealing in smaller quantities or fewer markets. The problem with the *Griffith* decision is that it did not explore these alternatives, but just assumed that a negotiator who bargained for a number of outlets was obtaining an anticompetitive advantage over single-theater firms who could not match that scale. Inadequately restrained, an overly aggressive rule can serve to condemn competitively beneficial practices.

The "leveraging" statement in *Berkey Photo* presents a similar threat, although in that case the court declined to condemn the conduct. After stating its acceptance of a leverage theory that court explained that an "integrated business" does not violate the Sherman Act merely because one department "benefits from association with a division possessing a monopoly in its own market."[154] That court explained:

> So long as we allow a firm to compete in several fields, we must expect it to seek the competitive advantages of its broad-based activity, more efficient production, greater ability to develop complementary products, reduced transaction costs, and so forth. These are gains that accrue to any integrated firm, regardless of its market share, and they cannot by themselves be considered uses of monopoly power.

The principal *Berkey Photo* leveraging claim had been made in

[154]Berkey Photo, Inc. v. Eastman Kodak Co., 603 F.2d 263, 276 (2d Cir. 1979), cert. denied, 444 U.S. 1093 (1980).

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reference to Kodak's introduction of a new camera/film format that displaced its previous Brownie line of cameras but that also made operations more costly for the independent but competitively structured photofinishing market. In order to develop the new film, photofinishers required more specialized equipment, but the evidence suggested that rivals could obtain this. As a result, there was never any serious probability that Kodak's new film format was going to create a monopoly in photofinishing. At best, it made life more difficult for independent photofinishers.[155]

Kodak's introduction of its new camera was a clear technical advance that consumers embraced, in no small part because it employed a film cartridge that was easier to use and more resistant to user error. But the technological advance in question occurred because it involved interrelated developments in two markets for complements – cameras and film – both of which Kodak dominated. Berkey, which made cameras and provided film developing services ("photofinishing"),[156] claimed that processing film for the new Instamatic required proprietary information about the film developing process as well as some specialized equipment.[157] It theory of harm was that Kodak provided this information in advance to photofinishers that it owned, namely Kodak's own "Color Print and Processing" division (CP&P), but not to independent photofinishers such as Berkey. As a result, Berkey had to play catch-up in the photofinishing market until it got its own equipment and technical knowledge up to speed.

That claim directly countered Kodak's objection, supported by the Court of Appeals, that a dominant firm innovating a new product or process has no duty to predisclose it to rivals beyond the disclosure requirements contained in the patent laws.[158] Berkey's claim would have placed antitrust law in a head on collision with patent law, which requires a form of disclosure that must be placed in the patent application.[159] Further, trade secret law provides protection only for protected nondisclosure. In any event, quite aside from the concern

[155]*Id* at 291-292.
[156]602 F.2d at 267.
[157]The facts are recounted at 457 F.Supp. 404, 417-420 (S.D.N.Y. 1978).
[158] *Berkey*, 603 F.2d at 281.
[159] 35 U.S.C. §112(a) (2018).

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whether predisclosure might benefit a smaller competitor – we can assume that it would – it is hardly clear that it would further either competition or innovation in the longer run.

In situations involving distribution, which is what *Griffith* involved, harm to the competitor can be fully explained by economies of scale or scope or also transaction cost savings. As a result, nonmonopoly explanations are typically present. Even a multistore operator with a small market share may be able to obtain a lower price or better terms by negotiating for the business of numerous stores at once. In that case the competitive advantage has nothing to do with dominance but only with transactional economies or economies of scale.

By contrast the litigation in Alaska Airlines, Inc v. United Airlines, Inc.,[160] stated a more promising abuse of dominance claim. It also occurred on a network. The defendant controlled a computerized airline reservation system (CRS) and licensed other airlines to use it for scheduling but discriminated against smaller airlines such as the plaintiffs. The defendant, a dominant legacy carrier, appeared to be using control of the reservation system to discriminate against smaller carriers. In this case, if the CRS had been jointly operated as a competitive network the refusal to share would have been reachable under §1 of the Sherman Act as concerted action – much like the claim in the *Terminal Railroad* case. There, a consortium of transportation companies controlled bridges and loading terminals strategically located on and across the Mississippi River and were thus able to limit rail traffic across the river.[161] In that case the Supreme Court ordered the association to offer nondiscriminatory access to outsiders. In *Alaska Airlines* the Ninth Circuit distinguished *Terminal Railroad*, pointing out that under the CRS system in this case a single firm controlled the system and the other airlines were merely licensees.[162]

That answer is a good description of the differences in property rights, but it does not set our minds at ease that the defendant's conduct was competitively harmless. *Alaska Airlines* exposes an important difficulty in the antitrust treatment of networks. Some are operated

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[160] 948 F.2d 536 (9th Cir. 1991).

[161] United States v. Terminal R.R. Ass'n, 224 U.S. 383 (2912).

[162] *Alaska Airlines*, 948 F.2d at 542 (noting that *Terminal Railroad* involved concerted conduct while the present case did not).

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collaboratively by multiple parties and their anticompetitive actions toward outsiders can be addressed under §1 of the Sherman Act. If a network is operated by a single firm and other participating firms are merely licensees or authorized users, then §1 may not apply. Section 2 does not offer comparable relief even though the competition issue is the same.

One clear historical example of this is the telephone system, which migrated from a dominated network controlled by a single firm to ownership by thousands of individual participants. For example, the essential facility claim that MCI successfully brought against AT&T for refusal to interconnect with MCI's wireless services was almost entirely under §2 of the Sherman Act.[163] The Seventh Circuit's decision that a denial of interconnection was unlawful under the essential facility doctrine may not have survived the Supreme Court's *Trinko* decision,[164] particularly given the fact that interconnection is now mandated by statute. However, the network itself is operated by multiple firms and many of its actions are challengeable under §1.[165]

So on the one hand accepting an abuse of dominance theory might lead to significant competitive improvement in networked markets. On the other, it could easily threaten anticompetitive overuse if not kept within proper boundaries. One promising approach would be to use the important limitations that the Clayton Act places on the conduct that it governs. The three liability-creating provisions in the Clayton Act are §§2, 3, & 7, which reach a form of price discrimination,[166] tying and exclusive dealing,[167] and mergers.[168] In all three the reach of liability is limited by language requiring conduct

[163]MCI Communications Corp. v. American Tel. and Tel. Co., 708 F.2d 1081 (7th Cir 1983). The antitrust claim also included some allegations of conspiracy in restraint of trade, but these §1 claims were eliminated on a directed verdict. Id. at 1092-1093.
[164] Verizon Comm's, Inc. v. Law Offices of Curtis V. Trinko, LLP, 540 U.S. 398 (2004). See discussion supra, text at notes __.
[165] For example, the Supreme Court's decision in Bell Atlantic v. Twombly, 550 U.S. 544 (2007) dismissed the antitrust complaint for inadequate proof of agreement, but the Court clearly assumed that a proven agreement could be challenged under §1 of the Sherman Act.
[166] 15 U.S.C. §13 (2018).
[167] 15 U.S.C. §14 (2018).
[168] 15 U.S.C. §18 (2018).

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whose effect "may be substantially to lessen competition, or tend to create a monopoly." That language still requires a showing of competitive harm but reaches a broader range of behavior than current §2 standing alone.

Problematic Exclusionary Practices

The following discussion does not cover the full range of exclusionary practices that have been challenged as Sherman Act §2 violations.[169] Rather, it focuses on particular practices that are in need of rethinking, particularly for digital or networked markets. Part of the problem is the lingering effects of many years of Chicago School rigidity that continues to stifle progress in §2 jurisprudence. Much of existing §2 doctrine was developed in the context of free-standing dominant firms where the need for collaboration or interoperability was minimal. As firms are more networked and interactive, exclusionary behavior can be more threatening to competition. We should begin with the premise that even highly networked markets can be made to work competitively and antitrust has an important role in facilitating that outcome.

The existing language of the antitrust laws should not interfere with this result. Their highly general language embraces all anticompetitive practices with the only qualification that they be part of "commerce." So existing law should readily accommodate changes in technology. One irony is that the very reluctance of the judiciary to be more flexible in interpretation will yield statutory changes that are likely to be much more rigid and overreaching. But that could be the situation we are facing.

The discussion is organized under these headings: 1) Vertical Integration, Refusal to deal and Self-preferencing; 2) Mergers as Exclusionary Practices; 3) Anticompetitive Product Design and Restraints on Innovation; 4) Strategic, exclusionary Pricing; and 5) Anticompetitive Intellectual Property Practices. Nothing about this division of topics is compelled or even suggested by the language of

[169] For that *see* volumes 3, 3A, & 3B PHILLIP E. AREEDA & HERBERT HOVENKAMP, ANTITRUST LAW (5th ed. 2022) (in press); or, for briefer treatment, HERBERT, FEDERAL ANTITRUST POLICY, *supra* note __, Chs. 6,7 & 8 (6th ed. 2020).

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the statute. Further, many §2 complaints allege a mixture of these practices as well as others.

Vertical Integration: Refusal to Deal and "Self-Preferencing"

The antitrust doctrine of unilateral refusal to deal[170] is almost always a response to some form of vertical integration. Typically, the defendant is a firm that operates in two markets, although in some cases the two levels may be complementary products rather than vertically related. In any event, the dominant firm has monopoly power in one market, such as the incumbent phone network.[171] It refuses to sell a vertically related or complementary product, or else fails to share its dominant asset for purposes of distribution into the secondary market.

In Otter Tail Power Co. v. United States[172] the defendant was a large utility that generated its own electricity. The injured rivals in whose behalf the government sued were small, mainly municipal utilities that lacked their own generation capacity. They provided electricity to their own customers by purchasing it at wholesale and then having it transported, or "wheeled" to their own territories. Otter Tail refused to wheel power to small utilities adjacent to its own system, at least partly in a bid to force them to sell out to Otter Tail. The government's complaint did not request that the small utilities share Otter Tail's generation facilities directly but rather that Otter Tail be required to wheel power to them so that they could resell it to their own customers.[173] That is, the refusal occurred in the downstream distribution market rather than Otter Tail's primary market for generation.

In the Court's next big refusal to deal case, Aspen Skiing Co. v. Aspen Highlands Skiing Corp.,[174] the plaintiff owned a single skiing

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[170] By contrast, collaborative refusals to deal, or "boycotts," are addressed more aggressively under §1 of the Sherman Act.

[171] *E.g.*, Verizon Comm's, Inc. v. Law Offices of Curtis V. Trinko, LLP, 540 U.S. 398 (2004). *See* discussion *supra*, text at notes __.

[172] 410 U.S. 366 (1973).

[173] *Id*. at 368-369. The injunction also prevented Otter Tail from entering into any contract that forbad sharing power with adjacent utilities.

[174] 472 U.S. 585 (1985).

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mountain and had been participating in a joint marketing venture with the defendant, who owned three. Under the "All Aspen" ticket that they sold, skiers could use lifts and slopes on any of the four mountains. The dispute arose when the defendant reneged on the venture agreement without a good business justification. The plaintiff was not requesting to operate on the defendant's three mountains, nor to share any of its facilities. Under the venture operation each firm operated these things separately. Rather, the plaintiff requested continuation of the joint marketing arrangement[175] as well as treble damages for loss of business.[176]

Antitrust challenges to refusals to deal in secondary markets often get blurred into the antitrust law of tying or exclusive dealing although often they do not meet all of the technical requirements of those doctrines.[177] For example, so called tech ties, in which a defendant unites two products by technological design, may not satisfy the requirements for tying but they can then be attacked under §2.[178] Some contractual ties can operate the same way when the defendant refuses to sell a good unless the purchaser also takes a different good.

A good illustration of this blurring of legal doctrine is Eastman Kodak Co. v. Image Tech. Services, Inc,[179] in which the defendant, a nondominant manufacturer of high-speed photocopiers, refused to sell repair parts except through its own contract maintenance personnel. The plaintiffs were independent service organizations (ISOs) unable to obtain the parts they needed to repair Kodak machines. The complaint included claims under both §1 of the Sherman Act for tying of parts and service, and §2 for the simple refusal to sell the parts to

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[175] *See Id*. a 598 n.23.

[176] *Id*. at 598

[177]*See* Erik Hovenkamp, *The Antitrust Duty to Deal in the Age of Big Tech*, __ YALE L.J. (2022) (forthcoming) available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3889774. See also Michael D. Whinston, *Tying, Foreclosure, and Exclusion*, 80 AM. ECON. REV. 837 (1990); Jay Pil Choi & Christodoulos Stefanadis, *Tying, Investment, and the Dynamic Leverage Theory*, 32 RAND J. ECON. 52 (2001); Dennis Carlton & Michael Waldman, *The Strategic Use of Tying to Preserve and Create Market Power in Evolving Industries*, 33 RAND J. ECON. 194 (2002).

[178]*See* discussion *supra*, text at notes __.

[179]504 U,S. 451 (1992).

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independents repair technicians. The Supreme Court denied summary judgment in an opinion addressed almost exclusively to the tying claim. The case was remanded and in the subsequent litigation the plaintiff withdrew the tying claim.[180] While the reason was not stated, it was very likely because of doubts about whether the challenged conduct was appropriately multilateral rather than unilateral. Notwithstanding that withdrawal, the plaintiff prevailed at trial on the unilateral refusal to deal claim, relying on the same damages study that was in the record for the tying claim. The Ninth Circuit affirmed, approving jury instructions that had been taken from the *Aspen Skiing* case.[181] Once again, however, the plaintiffs were not requesting that Kodak shares it production facilities for the photocopiers themselves; rather they wanted access to parts so that they could compete in the downstream markets for servicing.

Since the Supreme Court's 2004 decision in Verizon Communications, Inc. v. Trinko, LLP,[182] the federal judiciary has been highly restrictive of §2 claims challenging refusals to deal. Verizon was an incumbent local exchange telephone carriers ("ILEC") which controlled the backbone of the phone system in its territory. The 1996 Telecommunications Act required Verizon to interconnect seamlessly with smaller firms that wanted to operate a subset of services (CLEC's, or "competitive local exchange carriers"), but that Act did not authorize private enforcement, and certainly not for antitrust's treble damages. Deficiencies in the quality of interconnection provoked the dispute, in which the plaintiff in essence requested the court to make the interconnection obligation enforceable under the antitrust laws.

Although *Trinko* arose entirely within the context of an elaborate communications network operated by numerous rival firms, the Court's analysis of the dealing claims paid virtually no attention to that fact. Indeed, the principal reference to the network in Justice Scalia's opinion was to make the point that if sharing is legally obligatory, as it was under the 1996 Telecommunications Act, then *Aspen Skiing*'s approach did not apply. In *Aspen* the Court had held that unjustified termination of a *voluntary* dealing agreement could be

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[180] Image Tech. Services v. Eastman Kodak Co., 125 F.3d 1195, 1201 (9th Cir. 1997).
[181] *Id.* at 1209.
[182] 540 U.S. 398 (2004).

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used as evidence to support an unlawful refusal to deal claim.[183] That was not the case in *Trinko,* where the dealing obligation was statutorily imposed.

Trinko thus has little to say about voluntarily created networks, such as the FRAND system. There, one of the most significant threats to network competition results from reliance and path dependence. In order to maintain competition in a FRAND network the firms must agree to make their technology available to one another without discrimination as between rivals and non-rivals. As long as the network can be made to confirm to those requirements competition can be robust. In today's economy networks can create enormous value, and collaboratively operated networks can produce more value than dominated ones.

The FRAND commitment is a form of incomplete contract, and they are enforced in the first instance by contract law. Enforcing contracts is not antitrust' purpose, but neither is the existence of a contract a defense if conduct falls within antitrust's reach. From its inception the Sherman Act has been enforced against practices that were also covered by a contract. Indeed, United States v. Trans-Missouri, the Supreme Court's first antitrust decision on the merits was an antitrust challenge to an elaborate and written contract.[184]

The concerns of antitrust are both narrower and broader than contract law. They are narrower to the extent that only a few FRAND disputes raise antitrust issues. But when a practice threatens competition on the network, then antitrust has an important role. This is something that the Ninth Circuit together with the Justice Department lost sight of in the *Qualcomm* litigation.[185]

One important role of antitrust in FRAND networks as well as others is to guarantee competition in the presence of path dependence and *ex post* opportunism – essentially the facts of the *Qualcomm* litigation.[186] Patent owners contemplating participation on a network make obligations to license out their patents on fair, reasonable, and

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[183]*See* discussion *supra*, text at notes __.
[184]United States v. Trans-Missouri Freight Ass'n., 166 U.S. 290 (1897).
[185]FTC v. Qualcomm, Inc., 969 F.3d 974 (9th Cir. 2020). See discussion supra, text at notes __.
[186] *See* Hovenkamp, *FRAND and Antitrust*, supra note __.

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nondiscriminatory terms, receiving the same promises in return. The immediate result is an immense increase in value because the network itself is so critical. Further, the FRAND system can be expected to generate significant path dependence in subsequent development. Individual firms design their products and processes in reliance on the fact that they have access to the technology that they need, provided that technology is part of the network's FRAND portfolio. Voluntary inclusion in FRAND is thus a special case of bidding for monopoly status: one way to avoid excessive regulation for monopoly technology is to facilitate bidding for participation, with the winning bidders promising to deliver on competitive terms.[187]

Having made this commitment and after development has proceeded the network becomes much more valuable. Now things change. Individual participants have an incentive to renege on their commitments. They may wish to license selectively to noncompetitors only, to avoid licensing at all in order to bolster their own positions, or to insist on higher royalties than the FRAND system contemplates. Any one of these things could be a breach of contract, but if reduces output and results in higher prices it becomes an antitrust problem as well.

"Sacrifice"

The *Aspen* refusal to deal rule has been needlessly limited by a "sacrifice" test that permits a finding of illegality only when the dominant firm's termination of an earlier deal involves a sacrifice of short-term gains in prospect of long run profits. Neither the success nor the anticompetitive effects of refusals to deal need require a "sacrifice" of short-run profits. The fact of costly commitments and subsequent extraction can produce gains to the dominant firm immediately just as it is harming competition.

In *Aspen* itself the Court noted that the jury was entitled to find such a sacrifice, although it did not make illegality hinge on that fact. Further, whether there was an actual sacrifice is doubtful. The plaintiff's market position declined immediately after the refusal and the defendant's market position increased.[188] Indeed, that is what one would expect in many such cases: by terminating the joint venture or

[187] *See* Demsetz, *supra* note __.
[188] *See* Hovenkamp, *FRAND and Antitrust, supra* note __ at 1714.

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other enterprise the plaintiff's harm would be almost immediate. To be sure, the defendant lost revenue to the extent that the terminated venture had benefitted its own business, but it would make it up from its larger share. That is exactly what happened in *Aspen* itself. The "all-Aspen" ticket that the defendant terminated had been mildly popular, so ending it reduced revenue from sales of that combination. Offsetting this, however, the defendant's market share increased significantly. That is, the refusal worked just like exclusive dealing: to the extent it raises prices it reduces overall market revenues, but at the same time it increases the defendant's share of those revenues. The refusal is profitable immediately if the gains from the higher share offset the losses from the reduced size of the overall market. Indeed, such refusals are more likely to occur as the gains are more immediate and certain. So the "sacrifice" test is looking for the wrong thing.

The "sacrifice" test is particularly harmful in cases that involve reliance and path dependence. This is a particular problem in dynamic markets. For this reason the Ninth Circuit lost an important opportunity to prevent Qualcomm from undermining the FRAND patent licensing program.

Refusal to Deal, "Self-Preferencing," and Copying

One remaining refusal to deal question concerns conduct where there is neither an existing statutory duty to deal, as in *Trinko*, or a previous joint dealing agreement that the defendant repudiated, as in *Aspen*. For example, should a firm such as Facebook or Amazon have a duty to share platform access or information with rivals that wish either to interconnect with it or make sales there?

"Self-preferencing" deals with concerns that fall into antitrust refusal to deal law, although it can also reach anticompetitive agreements. Indeed, a fair amount of current antitrust law addresses forms of self-preferencing. For example, the law of tying and exclusive dealing limits the ability of manufacturers to insist that dealers limit sales to the manufacturer's own brands.[189] Other practices

[189] *E.g.*, Krehl v. Baskin-Robbins Ice Cream Co., 664 F.2d 1348 (9th Cir. 1982) (rejecting claim that franchisor's requirement that franchisees sell its ice cream exclusively was unlawful tying); Roy B. Taylor Sales, Inc. v.

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that are sometimes termed "quasi" exclusive dealing include discounts conditioned on dealers taking a minimum share of their needs from that supplier, or if a dealer agrees to purchase a seller's entire bundle of products.[190] So-called "tech ties," or technological ties, generate self-preferencing by making the manufacturer's secondary good compatible only with its own primary devices. For example, Keurig, a maker of coffee brewing machines, unsuccessfully attempted to reengineer its popular pod-style coffee maker so that it was compatible only with Keurig's own proprietary coffee pods. These had previously been sold competitively by numerous firms. Not only did the experiment fail in the market, it also embroiled Keurig in antitrust litigation which is ongoing at this writing.[191] In addition, antitrust policy limits the use of most-favored-nation agreements (MFNs), which require a firm's suppliers to charge higher prices to competing firms.[192] Finally, the Robinson-Patman Act, prohibits some situations

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Hollymatic Corp., 28 F.3d 1379 (5th Cir. 1994), cert. denied, 513 U.S. 1103 (1995) (similar); Blanton Enterp. V. Burger King Corp., 680 F.Supp.753 (D.S.C. 1988) (similar requirement treated as exclusive dealing).

[190]LePage's Inc. v. 3M, 324 F.3d 141 (3d Cir. 2003) (upholding jury verdict that defendant unlawfully offered discounts conditioned on purchase of a bundle of its products).

[191]*In re* Keurig Green Mountain Single-Serve Coffee Antitrust Litigation, 383 F.Supp.3d 187 (S.D.N.Y. 2019). *See also In re* Keurig Green Mountain Single-Serve Coffee Antitrust Litig., 2021 (WL 1393336 (S.D.N.Y. Apr. 13, 2021) (granting Illinois and Florida right to intervene in behalf of indirect purchasers).

[192]*See* Jonathan B. Baker & Fiona Scott Morton, *Antitrust Enforcement Against Platform MFNs*, 127 YALE L.J. 2176, 2181-86 (2018). Amazon has formerly used them but subsequently eliminated at least some of them. See Makena Kelly, *Amazon Silently Ends Controversial Pricing Agreements With Sellers*, THE VERGE (Mar. 11, 2019), available at https://www.theverge.com/2019/3/11/18260700/amazon-anti-competitive-pricing-agreements-3rd-party-sellers-end. *But see* Compl., Dist. Of Columbia v. Amazon.Com, Inc., Civ. Ct. No. ____ (D.D.C. May 25, 2021) (complaining about remaining MFNs). The complaint, ¶30, references an Amazon "Fair Pricing Policy" as requiring the Amazon's third party sellers to set a price on Amazon's platform that is equal to or lower than the price it sets on any competing platform. See https://sellercentral.amazon.com/gp/help/external/G5TUVJKZHUVMN77V (last visited Oct 31, 2021).

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when a firm sells to competing dealers at different prices.[193]

So antitrust law already has a toolbox for dealing with anticompetitive self-preferencing. Legislation under consideration at this writing would go further. Depending on what emerges, proposed legislation could address situations where a firm:

- Charges lower prices on its website for its own products than third parties do for their competing products;

- Give its own products an advantaged position in a product search or in a tool such as Amazon's "buy box," which gives alternative results for a particular product search.[194]

- Simply sells its own products in competition with third-party products; or selects some but not all of the third party makers of a particular product.

- Reverse engineers and copies products that it is selling for a third party, perhaps by relying on confidential information provided to Amazon by the third party.[195]

Depending on what emerges, some of these provisions could conflict with long established policies developed under the antitrust law. For example, the law of exclusive dealing has traditionally favored "multi-branding," or sellers who sell multiple brands from the same dealer or store.[196] Major retailers from Wal-Mart to Macy's have always dealt in multiple brands, frequently displayed side-by-side in the same store. Amazon in particular is an anti-exclusive dealing platform; it generally carries numerous brands of the same product, including rivals' brands in addition to its own. This forces individual suppliers to set competitive prices and maximizes consumer choice

[193] 15 U.S.C. §13 (2018). *See* discussion *infra*, text at notes __.

[194] *See* Erik Hovenkamp, *Refusal to Deal*, *supra* note __.

[195] *See Investigation of Competition in Digital markets*, Subcommittee on Antitrust, Commercial and Administrative Law of the Committee on the Judiciary (2020), available at competition_in_digital_markets.pdf (house.gov)

[196] *E.g.*, Standard Oil Co. v. United States, 337 U.S. 293 (1949) (condemning defendant's imposition of exclusive branding on its gasoline stations); United States v. Dentsply Int'l, Inc., 399 F.3d 181, 184 (3d Cir. 2005) (condemning defendant's rules that required dealers to sell its product exclusively).

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within that store. By contrast, strong self-preferencing legislation may force a firm such as Amazon to single brand – that is, to make a choice between selling its own goods or the competing goods of rivals on its website, but not both. In effect, depending on the legislation that is passed it could exclude products by making it more difficult for either Amazon itself or else for other firms to sell them in competition on the same site.

As explained above, an "abuse of dominance" standard could address these issues more effectively than these specific statutory proposals, without causing unnecessary overreaching.[197] Such a standard must be interpreted to as to identify abuses that harm competition in a meaningful way. First, it would apply to all dominant platforms, with dominance measured by established antitrust criteria. That would certainly reach more firms than Amazon, Apple, Google, and Facebook. Second, the "abuse" requirement would enable judges to identify abuse in the particular situation before it and avoid problems of under-coverage or over-deterrence.

The reverse engineering or copying problem sounds more in intellectual property than antitrust, including the law of utility and design patents, copyright, and trademark. The IP laws permit – indeed, even encourage -- firms to copy and compete freely in public domain goods or technology.[198] Exclusive IP rights incentivize innovation, while copying incentives dissemination. Technological progress requires both, and we rely on IP law to determine the appropriate boundary between them. So in the first instance this issue seems best handled as a matter of intellectual property policy.

The real bite of any Congressional self-preferencing provision must be some set of products that do not have relevant intellectual property protection and where we think copying by a firm such as Amazon is unjust for some other reason. Assuming that monopoly is

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[197] *See* discussion *supra*, text at notes __.

[198]*E.g.*, Bonito Boats, Inc. v. Thunder Craft Boats, Inc., 489 U.S. 141 (1989) (limitations in Patent Act intended to protect competition in the public domain); see also *id*. at 160-161 (noting extent to which IP law encourages reverse engineering); Pfaff v. Wells Electr., Inc., 525 U.S. 55 65 (1898) ("the patent laws … seek both to protect the public's right to retain knowledge already in the public domain and the inventor's right to control whether and when he may patent his invention").

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not threatened in the secondary market, the antitrust legality of copying a public domain product might still be examined under an abuse of dominance standard. However, a court would have to tread carefully in order to avoid conflict with the IP laws.[199]

Limiting a firm's power to copy things that are in the public domain requires a justification. Important organizations such as Creative Commons,[200] the Open Source Initiative,[201] and the Center for the Study of the Public Domain[202] are only a few of those dedicated to the proposition that a great deal of the dissemination of valuable things comes from the existence of a robust public domain. This impulse shows up powerfully, for example, in our treatment of patent pharmaceutical drugs, where we have a strong policy, enacted in the Hatch-Waxman Act,[203] of encouraging copying of drugs whose patents have expired.[204] In sum, we should not jump too nimbly from the well established premise that copying of things in the public domain should be encouraged, to the conclusion that it becomes bad if one of the dominant platforms does it.

Another danger of thoughtless self-preferencing rules is that they will harm the very interests they are intended to protect. A case in point is Standard Oil Co. v. United States ("Standard Stations"). The Supreme Court condemned Standard Oil's policy requiring its retail services stations to sell its own gasoline exclusively.[205] The practice that the Court condemned, sometimes described as "single branding,"[206] forbad a franchised gasoline station holding itself out as

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[199] *See*, *e.g*., TrafFix Devices, Inc. v. Marketing Displays, Inc., 532 U.S. 23 (2001) (protecting a particular functional design feature in the guise of trade dress would hinder competition).
[200]https://creativecommons.org/.
[201]https://opensource.org/
[202]https://web.law.duke.edu/cspd/.
[203]Pub. L. No. 98-417, 98 Stat. 1585 (1984) (codified at 21 U.S.C. §§ 355, 360cc; 35 U.S.C. §§ 156, 271).
[204] E.g., FTC v. Actavis, 570 U.S. 136 (2013) (limiting power of pharmaceutical patentees to use pay-for-delay settlements to restrain third party development of generic drugs).
[205] Standard Oil Co. of California v. United States ,337 U.S. 293 (1949).
[206]Particularly in EU law. *See* e.g., Frank Wijckmans, *de Minimis Treatment of Exclusive Purchase (Single Branding) Obligations*, 6 J. EUR. COMP. L. & PRACTICE 413 (2015).

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a Standard station from selling a second brand of gasoline. Justice Douglas wrote a strong dissent – a fact that is nothing less than shocking, given that Douglas was one of the most pro-enforcement Justices in the history of antitrust. In fact, Justice Douglas began his dissent reciting numerous ways in which he believed the antitrust laws were underenforced – "the teeth have largely been drawn from the Act"[207] and the "lessons Brandeis taught on the curse of bigness have largely been forgotten in high places."[208]

So why the dissent from an opinion that condemned a vertical restraint? It was based on his prescient prediction that eliminating exclusive dealing "sets the stage for Standard and other oil companies to build service-station empires of their own."[209] Not being able to impose exclusive dealing on independent stations selling its gasoline, the oil companies would "build service station empires of their own" through "the outright acquisitions of them" by Standard's subsidiary corporations.[210] Prohibited from organizing distribution in ways that maximized its output a firm such as Amazon might just as easily comply with a statute by not dealing with third parties at all, thus removing them from the platform. This outcome would not benefit anyone.

Exclusionary Mergers

For twenty-five years the Sherman Act was the country's only federal merger statute.[211] Coverage was expanded in 1914 by §7 of the Clayton Act. The government's loss in the United States Steel merger case, brought prior to the Clayton Act's passage, indicates the Sherman

[207] *Id*. at 317 (Douglas, j., dissenting)
[208] *Id*. at 318.
[209] *Id*. at 320.
[210] *Ibid*.
[211] *E.g.*, Northern Securities Co. v. United States, 193 U.S. 197 (1904) (condemning railroad merger to monopoly under Sections 1 & 2 of the Sherman Act); United States v. Southern Pac. Co., 259 U.S. 214 (1922) (same; not applying Clayton Act because the suit had been brought on Feb. 11, 1914, eight months prior to Clayton Act's enactment on Oct. 15, 1914). Both the decisions in Standard Oil Co. v. United States, 221 U.S. 1 (1911); and United States v. American Tobacco Co., 221 U.S. 106 (1911)

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Act's shortcomings.[212] The Court concluded that the merger did not create a monopoly and was thus not unlawful. That was so notwithstanding that the challenge had been brought under both §1 and §2 of the Sherman Act, and only §2 requires creation of monopoly.[213] While the explanation is unclear, the best one seems to be that the industry was expanding rapidly, and the acquisitions were found not to have reduced output at all.[214]

Section 7 of the Clayton Act sought to remedy that by condemning acquisitions where the "effect may be substantially to lessen competition" as an alternative to tending "to create a monopoly."[215] Two features of original §7 limited its usefulness. First was its language addressing the lessening of competition "between" the merging firms, which largely limited its reach to horizontal mergers. Only mergers of competitors or potential competitors reduce competition between the merging partners.[216] Second, original §7 applied only to stock acquisitions, and firms wishing to merge found it easy to avoid §7 by engaging in acquisitions of assets – a mere transactional formality.[217] Since its 1950s amendments, the merger

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[212] *See* United States v. United States Steel Corp., 223 F.55, 178 (D.N.J. 1915) (action had been brought Oct. 26, 1911), aff'd 251 U.S. 417, 44 (1920) (noting that "the corporation did not achieve monopoly").

[213] *See* 223 F.55 at 58. Justice Day's dissent from the Supreme Court's affirmance protested that the acquisitions did in fact restrain trade, even though they may have been unsuccessful in creating a monopoly. 251 U.S. at 458.

[214] *See* 223 F. at 67.

[215] 15 U.S.C. §26 (2018).

[216] As originally enacted, §7 provided:

> That no corporation engaged in commerce shall acquire, directly or indirectly, the whole or any part of the stock or other share capital of another corporation engaged also in commerce, where the effect of such acquisition may be to substantially lessen competition between the corporation whose stock is so acquired and the corporation making the acquisition, or to restrain such commerce in any section or community, or tend to create a monopoly in any line of commerce.

38 Stat. 730, 731. (statute of October 15, 1914, c. 323).

[217] *See, e.g.*, FTC v. Western Meat Co., 272 U.S. 554 (1926) (§7 did not apply to asset acquisitions).

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statute has been interpreted much more aggressively, and today we tend to think of the Sherman Act as an inferior vehicle.

That is not clear from the statutory language. Section 1 of the Sherman Act reaches "combinations" in restraint of trade, and that was how early merger cases used it.[218] Further, the most generally understood meaning of "restraint of trade" at common law was practices that threatened anticompetitive output reductions.[219] Literally, a merger that threatened an anticompetitive output decrease and corresponding increase in price would have satisfied that definition, and those are largely the criteria we use to evaluate mergers today. It would not matter what the underlying theory of the merger was, whether collusion-facilitating, unilateral effects, or merger to monopoly. All would be covered. In this case, as in so many others, the meaning of the Sherman Act evolved so as to reflect the case law rather than the literal language of the statutes. Here, the insistence in early decisions such as *United States Steel* that the Sherman Act reaches only mergers to monopoly was a departure. In any event, in the relatively few cases that continue to apply the Sherman Act today, the courts treat the reach of the two statutes as the same.[220]

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[218]See *Northern Securities*, 193 U.S. 327 ("This combination is, within the meaning of the act, a 'trust;' but if not, it is a *combination in restraint of interstate and international commerce;* and that is enough to bring it under the condemnation of the act.").

[219]*See* Hovenkamp, *Antitrust Harm and Causation*, *supra* note __.

[220]United States v. Rockford Memorial Corp., 898 F.2d 1278 (7th Cir. 1990), *cert. denied*, 498 U.S. 920 (1990) (although merger may not have been covered by §7 for jurisdictional reasons, mergers are condemned by the Clayton and Sherman Acts under the same standards). The court observed:

> We doubt whether there is a substantive difference today between the standard for judging the lawfulness of a merger challenged under section 1 of the Sherman Act and the standard for judging the same merger challenged under section 7 of the Clayton Act…. A transaction violates section 1 of the Sherman Act if it restrains trade; it violates the Clayton Act if its effect may be substantially to lessen competition. But both statutory formulas require, and have received, judicial interpretation; and the interpretations have, after three quarters of a century, converged.

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Attacking a merger as a combination in restraint of trade is an interpretation of §1 of the Sherman Act, not §2.[221] Here, §2 would appear to reach more narrowly because it challenges only monopolizing conduct. A merger that merely facilitated a price increase in the collusion sense would not be "monopolizing," at least not if it fell short of creating a monopoly. In any event, application of either §2 of the Sherman Act or §7 of the Clayton Act should be clear when the purpose of the acquisition is to keep a competitive firm off the market entirely – at least in those circumstances when dominance is realistically threatened or prolonged.

The Federal Trade Commission's complaint against Facebook challenges FB's acquisitions of Instagram and Whatsapp under §2 of the Sherman Act rather than either §1 or §7 of the Clayton Act. Section 7 clearly applies. At this writing, whether omitting a §7 claim was a good litigation strategy remains to be seen. Much depends on the market definition that the court is willing to accept. A merger challenged under traditional §7 grounds might require a market share no greater than 30% or so. That would very likely not be enough to support a Sherman §2 challenges.

Section 2 of the Sherman Act condemns "exclusionary" practices. By contrast, today nearly all enforcement of the merger law under the government's Guidelines addresses concerns more properly likened to collusion. That is, they harm competition by reducing competition between the merging firms or else among all of the competitors in the market in which the merger is challenged. The reach of private merger enforcement can be broader, reaching exclusionary conduct such as dealer terminations resulting from a merger.[222]

President Biden's Executive Order on Competitiveness[223] encourages the Antitrust Agencies to consider revising the Merger

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898 F.2d at 1281.

[221] *E.g.*, Rockford Memorial, 898 F.2d 1278

[222] *E.g.*, Steves and Sons, Inc. v. JELD-WEN, Inc., 988 F.3d 690 (4th Cir. 2021) (successful merger challenge by terminated dealer).

[223] Exec. Order No. 14036 on Promoting Competition in the American Economy, 86 Fed. Reg. 36,987 (July 9, 2021), §1 ("the Attorney General and

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Guidelines. Should they do so, one thing on the agenda should be addition of a section addressing mergers such as the numerous acquisitions of small firms made by the large digital platforms. Here, the more realistic threat is not collusion-like behavior but rather removal of potential competitors before they have had a chance to grow to maturity.

In addition, so-called "killer" acquisitions are best analyzed as exclusionary rather than collusion facilitating practices.[224] Killer acquisition have a long history going back to the 1911 *American Tobacco* case prior to the passage of the Clayton Act. The defendant was condemned in part for engaging in the "…persistent expenditure of millions upon millions of dollars in buying out plants, not for the purpose of utilizing them, but in order to close them up and render them useless…."[225]

A merger plus shutdown of the acquired assets deserves harsh treatment because such acquisitions virtually never produce plausible cost savings. The only reason we subject mergers of competitors to something less than per se scrutiny is the belief that there might be offsetting efficiencies that makes the merger productive on balance. However, the only realistic effect of a killer acquisition is removal of the rival's acquired assets from the market. That makes it very little different from a cartel, which we routinely condemn without examining effects.[226]

The enforcement treatment, however, should be based on *ex ante* rather than *ex post* analysis. Not all mergers work out. As a result,

the Chair of the FTC are encouraged to review the horizontal and vertical merger guidelines and consider whether to revise those guidelines").

[224] Facebook's acquisition of WhatsApp and Instagram are not killer acquisitions – both assets are still in active production.

[225]United States v. American Tobacco Co, 221 U.S. 106, 182 (1911); *see also id*. at 164 n. 5, which includes a list of firms that were closed as soon as they were purchased. *See also* United States v. American Can Co., 230 F. 859, 875 (D.Md. 1916) (purchase and shutdown of rival can companies); United States v. Keystone Watch Case Co., 218 F. 502 (E.D.Pa. 1915) (condemning defendant in part for acquiring interests in firms and shutting hem down).

[226]*See* Herbert Hovenkamp, *Antitrust and Platform Monopoly*, 130 YALE L.J. 1952, 2045-2048 (2021).

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some failed acquisitions must subsequently be spun off.[227] A firm should not be condemned if it realistically planned on putting the acquired assets to productive use but things subsequently did not go as planned. Here the best approach would be to inquire whether an acquisition was made in good faith with production in mind, or whether the plan from the beginning was to shut it down.

Anticompetitive Product Design and Restraints on Innovation

The successful introduction of a new or significantly revised product often injures rivals committed to other technologies. Major innovations, such as the automobile, the plain paper copier, or handheld electronic calculator often wipe out entire markets for products such as horses and buggies, mimeograph machines, and slide rules that subsequently became obsolete. Notwithstanding this fact there is almost no antitrust case law approving "direct," primary market challenges to innovation as anticompetitive. As the Ninth Circuit once put it,

> To accept CalComp's [the plaintiff competitor's] position would be to hold that IBM could not compete if competition would result in injury to its competitors, an ill-advised reversal of the Supreme Court's pronouncement that the Sherman Act is meant to protect the competitive process, not competitors. [228]

Today the consensus is very robust that a product improvement in and of itself is protected from antitrust challenge. Arguably there is a tradeoff worth measuring between the amount of benefit that an innovation confers on consumers and others, and the amount of harm

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[227] Most notably, Time-Warner/AT&T, which beat a Justice Department vertical merger challenge but later spun the acquired assets off as an acquisition failure. *See* United States v. AT&T, Inc., 916 F.3d 1029 (D.C.Cir. 2019); *and see* Jon Brodkin, *AT&T to Spin Off WarnerMedia, Basically Admitting Giant Merger Was a Mistake* (ArsTechnica, May 17, 2021), available at https://arstechnica.com/tech-policy/2021/05/att-to-spin-off-warnermedia-will-try-to-act-like-a-telecom-company-again/.

[228] *See, e.g.*, California Computer Prods., Inc. ("CalComp") v. IBM Corp., 613 F.2d 727 (9th Cir. 1979) (rejecting competitor's claim that IBM's introduction of smaller and faster computers "at a 'much cheaper' cost of design and manufacture" was "technological manipulation").

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it causes to rivals, but the courts consistently reject any claims challenging innovation caused by product designs on that basis.[229]

One Ninth Circuit decision rejected as speculative a smaller rival's claim that IBM's introduction of new computer models had to consider "impact costs," or a reduction in profits on the old line resulting from its obsolescence. The theory was presented as a form of predatory pricing: even though the new model was sold at a fully profitable price, that might not be true if one subtracted the unrealized revenue that might have been earned on the old model had the new one not been introduced.[230] The plaintiff was saying, in effect, that in considering the impact of a new product one had to subtract all the profits that would have been earned on older versions that had now become obsolete. In addition to being a measurement nightmare, such a theory would impose tremendous threats to innovation.

Nearly all of the challenges to product changes claimed to be innovations, including the relatively few successful ones, occur in markets for complementary or vertically related products. The challenge is not to harm caused by innovation of a primary product, but rather to unreasonably exclusionary behavior in a complementary, or secondary, product. As a result, the antitrust analysis is very similar to the one that applies to refusals to deal.[231] That is, even dominant firms are generally able to innovate in their primary market without antitrust concern about harm to rivals. However, cognizable injuries in related markets are possible, although they are usually analyzed as technological ties, which borrows at least some doctrine from the law of tying arrangements.

For example, Berkey Photo challenged Kodak's simultaneous introduction of a new camera and new film that was compatible only

[229]Allied Orthodpedic Appliances, Inv. V. Tyco Health Care Group, LP, 592 F.3d 991, 1000 (9th Cir. 2010) ("there is no room in this analysis for balancing the benefits or worth of a product improvement against its anticompetitive effects").
[230]Transamerica Computer Co., Inc. v. IBM Corp., 698 F.2d 1377, 1383 n 3 (9th Cir. 1983).
[231]*See* discussion *supra*, text at notes ___; and Erik Hovenkamp, *Refusal to Deal*, *supra* note __.

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with the camera.[232] The Federal Circuit's decision in C.R. Bard, Inc. v. M3 Sys., was concerned with Bard's introduction of a redesigned hypodermic gun for taking skin biopsies, together with its redesigned disposable needles that eliminated the generic and competitive market for needles.[233] The principal challenge in the *Microsoft* case was not Windows dominance as such in its primary market, which might exclude rival operating systems. Rather, it focused on the harm to a complementary product, namely Netscape's internet browser.

This harm can occur in the secondary market even if the conduct falls short of creating a monopoly there. That is why the tying analogy has proven so useful: tying requires market power in the tying product, but not the creation of monopoly in the secondary product.[234] For example, if a redesign of product A transforms the complementary B market from a highly competitive generic to one in which the defendant acquires 40% of the secondary product it could do enormous harm to rivals, consumers, and others. It could be treated analytically as a tech. tie, but not realistically as monopolization of the secondary market.

In *Microsoft,* the defendant dominated the operating system market (with Windows), but the court found that a browser market was never properly defined.[235] As a result the attempt to monopolize claim faltered because it requires a market definition of the market in which the attempt occurred.[236] There was also a tying claim involving the operating system and the browser that the court remanded under the rule of reason and was subsequently dropped.[237] The court did condemn a tech tie on the theory that Microsoft "commingled" the Windows and browser code into the same program, making it impossible to acquire one without the other.[238] The tech tie claim

[232]Berkey Photo, Inc. v. Eastman Kodak Co., 603 F.2d 263 (2d Cir. 1979), cert. denied, 444 U.S. 1093 (1980). *See* the discussion, *supra*, note __, on "leveraging" claims in the same decision.
[233] C.R. Bard, Inc. v. M3 Sys., Inc., 157 F.3d 1340 (Fed. Cir. 1998).
[234]*See* 10 PHILLIP E. AREEDA & HERBERT HOVENKAMP, ANTITRUST LAW ¶¶1731-1733 (4th ed 2019).
[235]United States v. Microsoft Corp., 253 F.3d 34, 81-82 (D.C. Cir. 2001).
[236] *Ibid*. *See* discussion *supra*, text at notes __, and Spectrum Sports, Inc. v. McQuillan, 506 U.S. 447, 448 (1993).
[237]*Id*. at 84-91 (remanding tying came for analysis under rule of reason).
[238]*Id*. at 66-67.

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under §2 requires dominance in the primary product and requires foreclosure in the secondary product.

Once again, defining the monopolization offense as "abuse of dominance" could go far toward addressing these problems when there is no realistic danger that the conduct will fall short of realizing monopoly in the secondary market.[239] The danger is that under such a standard "abuse" could be interpreted to include many tort-like injuries that do not amount to injuries to competition or, worse yet, are actually procompetitive. Nevertheless, an abuse of dominance standard can be a useful tool for examining product changes that cause unnecessary harm to complementary products – particularly those that threaten generic competition in secondary markets. For this reason, as developed below, the courts have generally imposed a "no benefit" rule. A dominant firm's product redesign that alters a complementary product can be challenged if it is not in any way superior but serves only to make rival complementary products incompatible.[240]

More specifically, antitrust policy should take a position that favors innovation, but with a few limitations. Liability should be limited to situations where (1) the product change was not an improvement; and 2) the defendant never intended for it to be an improvement, but only to commandeer the market for the complementary product.

For a time, the academic literature toyed with the idea of "predatory product innovation,"[241] but it never took hold in the case law. Even in that literature, nearly all identified instances of predatory product innovation involved modification of secondary products in order to make them incompatible with rivals' complementary products.[242]

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[239] *See* discussion *supra*, text at notes _.
[240] *See* discussion *infra*, text at notes __.
[241] Janusz A. Ordover & Robert D. Willig, *An Economic Definition of Predation: Pricing and Product Innovation*, 91 yale L.J. 8 (1981).
[242] For a critique of the Ordover-Willig model, *see* Joseph Gregory Sidak, *Debunking Predatory Innovation*, 83 COL. L. REV. 1121 (1983), noting that it involved firms who made complementary products in order to leverage sales in the secondary product.

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The presence of government regulation can cause some complicating issues when the regulation itself limits consumer choice. One prominent example is pharmaceutical "product hopping," which has found recognition in the case law.[243] This practice involves the maker of a popular drug who, with patent expiration looming, makes small modifications and yanks regulatory approval from the older version in order to force doctors and their patients to migrate to the new one.[244] The result is to prolong effective patent or regulatory exclusivity.[245] The strategy is entirely a consequence of the defendant's ability to manipulate a regulatory regime. In the absence of regulation there is no obvious way that a producer could "hop" customers from the older version to the new one.

Some primary product redesigns, such as the proverbial Ford Edsel, are failures. Even in the case of altered complementary products, failed redesigns should not be a strict liability offense. The question is not whether ex post the design ends up not being an improvement. Rather, the question is whether the defendant ever intended the design to be an improvement, or simply wished to make a complementary product incompatible. For example, in the *Keurig* litigation the defendant modified its product by placing a barcode on each K-cup that was rationalized as a way that consumers could identify the particular cup's recipe. In fact, however, according to the

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[243] *E.g.*, New York ex rel. Schneiderman v. Actavis, PLC, 787 F.3d 638 (2d Cir. 2015) (recognizing product-hopping as a §2 theory of harm).

[244] The court rejected the argument that limiting product hopping in this case would restrain innovation:

> Defendants have presented no evidence to support their argument that antitrust scrutiny of the pharmaceutical industry will meaningfully deter innovation. To the contrary, as the American Antitrust Institute amici argue, immunizing product hopping from antitrust scrutiny may deter significant innovation by encouraging manufacturers to focus on switching the market to trivial or minor product reformulations rather than investing in the research and development necessary to develop riskier, but medically significant innovations.

Id. at 659.

[245] *See* HERBERT HOVENKAMP, MARK D. JANIS, MARK A. LEMLEY, CHRISTOPHER R. LESLIE, & MICHAEL A. CARRIER, IP AND ANTITRUST: AN ANALYSIS OF ANTITRUST PRINCIPLES APPLIED TO INTELLECTUAL PROPERTY LAW §15.03(b)(1) (3d ed. 2021).

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plaintiff's claims the only thing that it did is prevent the redesigned Keurig machine from operating when the cup did not contain the proprietary barcode. As a result, rivals' generic K-Cups, which were extremely popular, could no longer be used.[246]

In sharp contrast to allegedly anticompetitive innovations, exclusionary *restraints* on innovation are conceptually easier to address because no countervailing policy favors them. They are harmful, pure and simple, provided that they are properly identified. For example, n *Microsoft* the defendant was found to have used its monopoly power to force Intel to stop its development program of a "Java-enabled" processor chip, which would have been able to process instructions across different interfaces.[247] Microsoft worried that this chip would increase the level of compatibility between the Windows platform and non-Windows computers and thus make alternative platforms more viable. In this case, Microsoft was not able to offer any justification.[248]

Strategic Pricing and the Equally Efficient Rival

The classic theory of predatory pricing is simple to state. A dominant firm cuts its price to a level below its costs. Because it is dominant, it can absorb the loss of profits while smaller and weaker rivals are not. Once the rivals have been destroyed the predator raises its price to monopoly levels and then enjoys a "recoupment" period of high profits.

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[246] *See* Amended and Supplemental Complaint, In re Keurig Green Mountain Single-Serve Antitrust Litig. (1:14-cv-00905-VSB, 1:14-md-02542-VSB, S.D.N.Y. Dec. 2, 2014), available at 2014 WL 7250107. *See also in re* Keurig Green Mountain Single-serve Coffee Antitrust Litig., *2, n. 6 2014 WL 12778832 (S.D.N.Y. Sep. 19, 2014) (denying preliminary injunction and fnding a likely "factual dispute over whether the technology serves a purpose in addition to preventing the use of unlicensed portion packs"). *See also* United States v. Microsoft Corp., 253 F.3d 34, 66-67 (D.C.Cir. 2001) (while commingling of Windows and browser code increased browser's user share, "Microsoft failed to meet its burden of showing that its conduct serves a purpose other than protecting its operating system monopoly.")

[247] United States v. Microsoft Corp., 253 F.3d 34, 77-79 (D.C. Cir. 2001).

[248] *Id*. at 77. *See* Herbert Hovenkamp, *Restraints on Innovation*, 29 CARDOZO L. REV. 247, 249-252 (2007).

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Predatory pricing law is one place where the idea of the "equally efficient" rival makes some sense. Some courts and writers have suggested that an "equally efficient rival" rule should be used to define the scope of §2 liability generally – that is, conduct is unlawful only if it tends to exclude an equally efficient rival.[249] Others have correctly noted, however, that while the standard of exclusion of an equally efficient rival may be useful in pricing cases it is underdeterrent elsewhere.[250] The reason is simple: multi-firm markets contain firms with different levels of efficiency and tolerating them is necessary to attain competitive equilibrium. Even in a competitive market, the marginal firm is the highest cost firm capable of surviving. The others, and particularly the dominant firm, will generally have lower costs.

The reason for maintaining an equally efficient rival test for exclusionary pricing cases has to do with measurement and the risk of overdeterrence. We do not have good tools for identifying anticompetitive above cost pricing; as a result, the courts have quite consistently clung to cost-based pricing theories of liability.[251] The limit of any cost-based theory is naturally marginal cost or some surrogate, and that entails that a firm could not exclude an equally efficient rival as long as its own price were above its costs.

Since the 1980s, the case law on predatory pricing has made it extremely difficult for plaintiffs to win cases, either because they are unable to show the appropriate prices below cost, or else because they cannot show a predictably promising period of recoupment. For one thing, the amount of specificity needed to prove recoupment has made

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[249] *E.g.*, RICHARD A. POSNER, ANTITRUST LAW 194-95 (2d ed. 2001) (defining exclusionary conduct generally as that which is "likely in the circumstances to exclude from the defendant's market an equally or more efficient competitor")

[250] ZF Meritor, LLC v. Eaton Corp., 696 F.3d 254, 281 (3d Cir. 2012) ("equally efficient rival" doctrine might apply to price complaints, but not to exclusive dealing); Southeast Missouri Hosp. v. C.R. Bard, Inc., 616 F.3d 888 (8th Cir. 2010) (applying equally efficient rival rule to discount claim); Cascade Health Solutions v. PeaceHealth, 515 F.3d 883 (9th Cir. 2008) (similar);

[251] For fuller treatment of the literature and the case law, *see* 3A PHILLIP E. AREEDA & HERBERT HOVENKAMP, ANTITRUST LAW ¶¶735-741 (5th ed. 2022) (in press).

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the doctrine impossible in all cases except a few where the predicted recoupment period is very short.[252] The Supreme Court's decision in Brooke Group v. Brooke Group Ltd. V. Brown & Williamson Tobacco Corp.,[253] which accomplished this result, did so entirely on the basis of its strict recoupment requirement rather than pricing.

One problem with *Brooke Group* was its posture on the question of oligopoly stability. *Brooke Group* was brought under original §2 of the Clayton Act, which prohibits discriminatorily low prices directed at rivals and does not require monopoly. However, the Supreme Court adopted Sherman Act standards.[254] The theory was not that predatory pricing was enabling the defendant to create a monopoly, but rather that it was being used to stabilize an oligopoly.

Predatory pricing in oligopoly is a different phenomenon than predatory pricing intended to achieve monopoly. In an oligopoly equilibrium each firm sets prices at a level where its own marginal cost is equal to its own marginal revenue, just as a monopolist would, except that marginal revenue is computed from the firm's "residual" demand curve. That is the demand after the output of other members of the oligopoly are considered. Brown & Williamson, the defendant, was a significant player in this oligopoly, although its own market share was only about 12%.[255]

One thing that can happen in oligopoly markets, and did in the *Brooke Group* case, is that a firm deviates from the oligopoly by cutting its price, often leading to a price war. The purpose of predatory pricing in that setting is not to destroy a firm but rather discipline it so as to make it conform once again to the oligopoly equilibrium. As a result, predatory pricing is both more plausible and should be easier to prove than in cases of monopoly, as the Supreme Court acknowledged.[256] When a firm is faced with destruction from a rival's

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[252]Spirit Airlines, Inc. vs. Northwest Airlines, Inc., 431 F.3d 917 (6th Cir. 2005) (denying summary judgment in predatory pricing case where assets were mobile and the recoupment period was thus very short).

[253]509 U.S. 209 (1993)

[254]*Id*. at 221-223 (equating Robinson-Patman and Sherman Act standards).

[255]*Id*. at 228.

[256] *See Brooke Group*, 509 U.S. at 228:

> From one standpoint, recoupment through oligopolistic price coordination could be thought more feasible than recoupment

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below cost price it will almost certainly be more tenacious in resisting. In oligopoly, by contrast, the predator offers the fellow oligopoly member a carrot: rejoin the fold and your profits will go back up to the oligopoly level. That is, predatory pricing in oligopoly is a form of stabilization strategy, in which the predator need only communicate that raising the price back to the oligopoly level will be more profitable than continuing to cut.

The plausibility of this strategy depends on the stability of the underlying oligopoly. The structuralists of the Harvard School often assumed that certain concentrated market structures made oligopoly virtually inevitable, and thus they were very stable.[257] In sharp contrast, the members of the Chicago School, led by George Stigler in economics[258] and Robert Bork in Law,[259] argued that oligopoly is unstable, always threatened by a breakout of competition, and as a result there was little to worry about. Bork in particular concluded that predatory pricing was such a risky practice that it was irrational.[260] Without stating that extreme a conclusion, the Supreme Court ended up doing largely the same thing, agreeing with the Stigler position that a predator could not rely on a stable period of recoupment to justify its predation strategy.[261]

> through monopoly: In the oligopoly setting, the victim itself has an economic incentive to acquiesce in the scheme. If forced to choose between cutting prices and sustaining losses, maintaining prices and losing market share, or raising prices and enjoying a share of supracompetitive profits, a firm may yield to the last alternative.

[257]Turner, *Definition of Agreement*, *supra* note __.

[258]George J. Stigler, A Theory of Oligopoly, 72 J. Pol. Econ. 44 (1964). *See* Hovenkamp, *Antitrust Error Costs*, *supra* note __.

[259]ROBERT H. BORK, THE ANTITRUST PARADOX: A POLICY AT WAR WITH ITSELF 221 (1978).

[260]*Id*. Interestingly, Richard Posner did not. *See* RICHARD POSNER, ANTITRUST LAW 219 (2d ed. 2001) (arguing that Areeda-Turner test for predatory pricing was too weak).

[261] *Brook Group*, 509 U.S. at 227-228:

> Firms that seek to recoup predatory losses through the conscious parallelism of oligopoly must rely on uncertain and ambiguous signals to achieve concerted action. The signals are subject to misinterpretation and are a blunt and imprecise means of ensuring smooth cooperation, especially in the context of changing or

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That conclusion seems rather naïve in an industry that had been subject to lockstep follow the leader pricing for decades.[262] Under *Brooke Group* oligopolists are able to discipline cheaters more effectively. *Brooke Group* largely took the teeth out of the use of antitrust to pursue below cost pricing as an oligopoly stabilization device.

Most of the discussions of predatory pricing and the large digital platforms are not concerned with the oligopoly issue. Uber and Amazon in particular have faced numerous allegations that they have engaged in predatory pricing. One district refused to dismiss a predatory pricing complaint against Uber, brought by an upstart but failed competitor in the app-driven ride-hailing market.[263] That complaint alleged that Uber for a time charged riders a price lower than it was paying to the driver in the same transaction.[264] Further, Uber raised its prices once the plaintiff exited.[265] In another case involving Philadelphia, however, the Third Circuit rejected predatory pricing claims.[266] To date, no fully adjudicated case has found predatory pricing against Uber.

> unprecedented market circumstances. This anticompetitive minuet is most difficult to compose and to perform, even for a disciplined oligopoly.

See also Id. at 253 (Stevens, J. dissenting) (noting the oligopoly pricing had been stable for "about half a century").

[262] The court acknowledged as much. See 509 U.S. at 217

[263] SC Innovations, Inc. v. Uber Tech., Inc., 2020 WL 2097611 (N.D.Cal. May 1, 2020). *Cf.* Malden Transp., Inc. v. Uber Tech., Inc., 321 F.Supp.3d 174 (D.Mass. 2018) (while Uber's worldwide revenues were shown in a report to be lower than its costs, no evidence indicated prices below cost in the Boston market subject to the litigaton); MacCausland v. Uber Tech., Inc., 312 F.Supp.3d 209 (D.Mass. 2018) (failure to allege facts showing price below cost); DeSoto Cab Co., Inc. v. Uber Tech., Inc., 2018 WL 10247483 (N.D.Cal. Sep. 24, 2018) (plaintiff sufficiently alleged prices below cost but not a likelihood of recoupment); see also Desoto Cab Co., Inc. v. Uber Tech., Inc., 2020 WL 10575294 (N.D.Cal. March 25, 2020) (granting plaintiff another opportunity to amend its complaint).

[264] *Id*. at *3.

[265] *Ibid*.

[266]Philadelphia Taxi Assn., Inc. v. Uber Tech., Inc., 886 F.3d 332, 340 (3d Cir. 2018).

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Predatory pricing complaints against Amazon have fared even more poorly. In United States v. Apple, Inc., the *eBooks* case, the Second Circuit briefly discussed the issue but no predation clams had been brought.[267] The other complaints, discussed below, are entirely in the secondary literature.

While *Brooke Group* itself clearly needs revisiting, that does not account for the bulk of the problems in predatory pricing cases involving digital platforms. The problems with most of the literature finding predatory pricing fall into one of several categories: 1) failure to understand the nature of promotional pricing; 2) conclusions drawn from aggregated data that are not sensitive to the appropriate measures of cost; 3) failure to appreciate the significance of pricing on two-sided platforms; or 4) failure to understand specific technologies or the relevance of high fixed costs.

Promotional pricing is a common feature attending the introduction of new products. Indeed, it would be difficult to come up with a worse antitrust rule than one the required a firm's new entry or new product offering to be profitable on the very first day. Many, perhaps most, products go through an initial period in which they are unprofitable, in the prospect that eventually they will become so.

When considering promotional pricing, the critical distinction is between attaining profitability as a consequence of getting sales volume up to a certain minimum level, and attaining monopoly profits by destroying competitors and creating a monopoly. If fixed costs are at all substantial a newly introduced product will be unprofitable simply because sales volume is too low. As it produces more, per unit costs decline until they intersect the point of profitability. Promotional pricing can be procompetitive even when the price is "below cost" on an individual transaction basis. For example, it is not uncommon for

[267] *See* United States v. Apple, Inc., 791 F.3d 290, 342 (2d Cir. 2015) (noting that the book publishers believed that Amazon was predatorily pricing their ebooks); for more facts, see the district court's opinion, 889 F.Supp.2d 623 (S.D.N.Y. 2012) (noting testimony of CEO of book publisher that Amazon used below cost pricing to establish a dominant position in the ebooks market just as it was emerging). *See* the district court's opinion 952 F.Supp.2d 638, 641-653 (S.D.N.Y. 2013) (describing Apple's pricing model for ebooks).

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a firm to introduce a new product by giving it away for free – a price below cost under any measure.[268]

One important signal that such promotional pricing is nonpredatory is that the profitability point occurs when the firm's market share is still at nondominant levels. The minimum output level for profitability is ordinarily not a function of the firm's market share, but rather of its absolute output. That market share can be relatively large or small, depending on the overall structure of the market.

A second problem, closely related to promotional pricing, is the use of aggregated data about profitability. These data suffer from two problems. First, they typically fail to segregate fixed from variable costs, and thus often confuse struggling firms with predatory monopolists. Price determination reflects mainly variable, or marginal costs. As a result, a firm can often be earning high per transaction profits on a certain product even though it is losing money because its overhead (fixed) costs are so high.

Alternatively, multiproduct sellers may be earning a profit overall even as they are pricing individual goods or services at below cost. This typically not a monopoly problem at all, but simply one in revenue maximization across aggregated sales, although it is often confused with monopoly.[269] For example, a tiny pizza joint might offer free delivery, thus making independent delivery unprofitable for third-party services. Or a convenience store might sell milk, located in the back of the store, at below cost because it has a proven expectation that people who come in will also take higher margin

[268] *See* 3A AREEDA & HOVENKAMP, ANTITRUST LAW, *supra* note __, ¶746.
[269] *E.g.*, Lina Khan, *Amazon's Antitrust Paradox*, 126 YALE L.J. 710, 759-760 (2017); Carl T. Bogus, *Books and Oliver Oil: Why Antitrust Must Deal with Consolidated Corporate Power*, 52 UNIV. MICH. J. L. REFORM 265, 321 (2019) (arguing that using low prices on ebooks to make Kindle readers more attractive is anticompetitive; of course, a purchased ebook can be read on any platform with the free Kindle app, including non-Amazon platforms such as iPad and the iPhone); Guy A. Rub, *Amazon and the New World of Publishing*, 14 I/S: J.L. & POL'Y FOR INFO. SOC'Y 367 (2018); Jared Killeen, *Throwing the E-Book at Publishers: What the Apple Case Tells Us About Antitrust Law*, 22 J.L. & POL'Y 341 (2013) *See* Christopher R. Leslie, *Predatory Pricing and Recoupment*, 113 COL. L. REV. 1695, 1747 (2013).

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products as well. If we disaggregate the loss product from the others we appear to have below cost pricing. But once we put them together we discover that the offering at below cost is profitable because the costs are more than offset by increased volume in something else. The strategy can be profitable and procompetitive for even a tiny firm.

A second problem with aggregated data is that they do not provide usable information about any individual product. A firm may be unprofitable even though its margins on particular products are more than sufficient. Famously, both Uber and Amazon have lost money for many years of their operation. But jumping from that observation to a conclusion of predation fails to distinguish competitively healthy investment in new products from predatory pricing. More significant is the fact that Amazon has attained profitability and done so without acquiring a dominant market share in any particular product with the possible exception of eBooks, although in readers it is clearly non-dominant.[270]

A third problem with many popular allegations of predatory pricing is their failure to appreciate that the firms about which they are speaking are typically two-sided markets.[271] Often the products on one side of the market, such as Facebook membership, are free and the revenue is coming in from the other side.[272] This problem is really a variation of the problem of the multi-product firm. One needs to look at the overall cost/revenue picture and not just at one side. For example, a magazine may operate in a two-sided market in which it

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[270] See Worldwide Tablet Shipments Return to Growth (IDC, Feb. 1, 2021), https://www.idc.com/getdoc.jsp?containerId=prUS47423721 (showing 2020 markets shares for tablets as Apple=36.5%, Samsung, 19.4%, Lenovo, 10.7%, and Amazon=6.8%). These are dramatically different from sales of ebooks themselves, indicating that many people purchase Amazon's ebooks in order to read them on non-Amazon devices such as the iPad or iPhone. However, even today ebooks make up only about 21% of total book sales. See https://about.ebooks.com/ebook-industry-news-feed/ (last visited Nov. 7, 2021).

[271] *See* Erik Hovenkamp, *Platform Antitrust*, 44 J.CORP.L. 713, 732 (2019) (noting this error).

[272] *See, e.g.*, Ben Bloodstein, *Amazon and Platform Antitrust*, 88 FORDHAM L. REV. 187, 210 (2019) (suggesting that use of below cost prices on a two-sided market is predatory pricing because it is a way of "getting both sides on board in pursuit of critical mass").

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obtains revenue from both subscriptions and advertisements. One looking only at the subscription revenue might mistakenly see prices below cost.

Finally, a fourth problem is failure to understand the technology underlying certain products. Once again, a prominent example is ebooks, which have a much lower equilibrium price point than do print books. Conventional books have a fairly common mixture of fixed and variable costs. The latter includes per sale royalties, production, shipment, and retailing. Ebooks dramatically change that picture. Nearly all of the costs are fixed except for royalties and very small distribution costs. As a result, the equilibrium price point for ebooks is significantly lower than for print books.[273] About the only significant variable cost is royalties, and as a result many out-of-copyright ebooks are sold at a price of zero, even by Amazon.[274]

The discussion of below cost pricing in the Apple ebooks case bears this out. The district court concluded that for a time Amazon's price on ebooks was $9.99, roughly equal to its costs. However, at the behest of Apple the publishers began raising their ebook prices to Amazon while it continued to hold the line on its own prices. For a time, Amazon's prices on many ebooks fell below direct acquisition costs.[275] As a result of this Apple-induced change of policy, for a time the publishers charged Amazon the same price for ebooks as for conventional print books.[276]

That price charged by the publishers to Amazon was actually the irrational one because it did not reflect the enormous difference in variable costs that the publishers encountered in making the two types of sales. In addition, the publishers agreed with each other to combat Amazon's aggressive pricing program by delaying the release of books in an ebook format, a process that they called "windowing" – something they believed they could accomplish only if they acted in

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[273] On the relevant economics, see Herbert Hovenkamp, Antitrust and Information Technologies, 68 Fl.L.Rev. 419, 437-445 (2016).
[274] For good discussion, *see* John B. Kirkwood, *Collusion to Control A Powerful Customer: Amazon, E-Books, and Antitrust Policy*, 69 UNIV. MIAMI L. REV. 1 (2014).
[275] *See* United States v. Apple, Inc., 952 F.Supp.2d 638, 650 (S.D.N.Y. 2013).
[276] *Id*. at 650.

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concert.[277] The very one-sided discussions of the entire episode in some of the literature fails to mention these things. It was Amazon, not the publishers, who was attempting to push the price of ebooks toward a more competitive equilibrium that reflected their true distribution costs.

None of this is to say that Amazon, Uber, or any other digital platform has not engaged in predatory pricing. But such claims need a coherent theory and factual support, and so far these are in short supply.

Exclusionary Patent Practices

It is no secret that the patent system does not work equally well in every industry. It performs best in traditional technologies including plant and equipment, chemicals, and other durable non-electronic products. As it moves into information technologies, however, particularly computers and the internet, cellular phones, nearly any type of electronics or any field in which digital networking is a dominant feature, it works much more poorly. Indeed, some studies indicate that its value in many of these technologies is actually negative.[278] Aside from statutory recognition of design patents and plant protection, however,[279] the statutory system is unitary.

Antitrust law is also uniform in this sense across industry. Except for a few markets with regulatory immunities, the same antitrust law applies apply to all technologies. Antitrust has done a far better job than patent law, however of accommodating its own rule making to the differential demands of different industries.

[277] *Id*. at 651.
[278]JAMES BESSEN AND MICHAEL J. MEURER, PATENT FAILURE: HOW JUDGES, BREAUCRATS, AND LAWYERS PUT INNOVATORS AT RISK 25–27, 151–61, 187–88, 246–57 (2008). On the range of differential applications in different industries, *see* John R. Allison, Mark A. Lemley, and David L. Schwartz, *Our Divided Patent System*, 82 UNIV. CHI. L. REV. 1073 (2015).
[279]35 U.S.C. §161 et seq (plants) (2018); 35 U.S.C. §171 et seq (design patents) (2018).

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The antitrust community today is deeply divided on the subject of the appropriate relationship between antitrust law and IP rights, particularly patents. Part of it – but only a part – is reflected in the debate over FRAND and patents recounted above.[280] At risk of overgeneralization, those on the right tend to favor strong patents and other IP rights, and would generally resolve conflicts in favor of IP protection, even in cases of fairly clear consumer harm.[281] This position was reflected in the Trump administration Justice Department's announcement of its "New Madison" doctrine, declaring that antitrust law should generally stay out of patent licensing disputes regarding standard essential patents.[282] The DOJ chose to side with Qualcomm and against the FTC in an important decision in which both exclusion of rivals and higher prices were largely undisputed.[283]

This dispute cannot properly be characterized as one about the importance of innovation. Most people presumably believe that innovation is important and wise antitrust policy should operate to facilitate it rather than undermine it. The dispute lies in a different place, which has to do with two things. First is the role of patents in furthering innovation. Second is the value of antitrust as a tool for identifying restraints that limit innovation unnecessarily, or else that limit competition without doing anything to further innovation. The New Madison doctrine says, in essence, that antitrust has no role here.

[280] *See* discussion *supra*, text at notes __.

[281] One example is the dissenting opinion in F.T.C. v. Actavis, Inc., 570 U.S. 136, 160, 161 (2013) (Roberts, C.J., dissenting, stating that goal of antitrust laws is to promote "consumer welfare" but then voting to approve a patent settlement that would have led to enormous price increases in drugs based on doubtful patents).

[282] Makan Delrahim, "The New Madison Approach to Antitrust and Intellectual Property Law" (March 16, 2018), available at Assistant Attorney General Makan Delrahim Delivers Keynote Address at University of Pennsylvania Law School | OPA | Department of Justice. For a critique, *see* Herbert Hovenkamp, *The DOJ's "New Madison' Doctrine Disregards Both the Economics and the Law of Innovation*, PROMARKET (Sep.8, 2021), available at https://promarket.org/2021/09/08/doj-madison-doctrine-antitrust-innovation/.

[283] FTC v. Qualcomm, Inc., 969 F.3d 974 (9th Cir. 2020). *See* discussion *supra*, text at notes __.

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Patents are granted in a largely *ex parte* proceeding involving the applicant and an examiner. The result is severe overissuance, which is strongly indicated by the fact that when these patents are subject to even the very limited adversarial review conducted through the PTAB *inter partes* reexamination process, a clear majority of them fail in whole or in part.[284] Furthermore, the PTAB process does not even cover questions of infringement, as opposed to validity. Depending on the technology, determining a patent's scope can be just as difficult as determining its validity. While patents enjoy a statutory presumption of validity when they are challenged in court, the presumption is defeated for at least some claims in most of the cases.

These facts suggest that a doctrine like New Madison constitutes serious overreaching in favor of patent protection at the expense, not only of competition policy but also of innovation. That is clearly the case with respect to information technologies, where the rate of patent failure is very high and that was the focus of the New Madison doctrine. For that reason President Biden was wise to issue a new set of Guidelines for the licensing of standard-essential patents that decisively reject the doctrine.[285]

Another important factor in this calculus is that antitrust today is in a better place than patent law is. For all of the divisions over antitrust policy there still remains a greater amount of consensus over the conditions facilitating or undermining competition under constant technology than there is over the conditions facilitating or undermining innovation. In any event, antitrust challenges to patent practices are virtually never simple challenges to basic patent validity or coverage. Those issues are determined by the Patent Act and the PTAB process and not subject to antitrust challenge except in a few cases involving

[284]*See*, e.g., Christian Helmers & Brian J. Love, *Patent Validity and Litigation: Evidence from U.S. Interpartes Review* (SSRN Working Paper June 29, 2021), available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3720709.

[285]At this writing the Guidelines are in draft form. *See* Department of Justice, United States Patent and Trademark Office, and National Institute of Standards and Technology, *Draft Policy Statement on Licensing negotiations and Remedies for Standard-Essential Patent Subject to Voluntary F/Rand Commitments* (Dec. 6, 2021), available at SEP Policy Statement (justice.gov).

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such things as patents that were improperly obtained.[286] Most of the challenges are to licensing or acquisition practices that are not addressed by the Patent Act itself, which states only that patents are to be treated as personal property and then provides for licensing.[287] Personal property is, after all, what most of antitrust enforcement is about.

This is an area where antitrust law's institutional superiority comes in. Antitrust has had decades of practice weighing the diverse set of issues that go into determining whether a particular practice is anticompetitive. In very sharp contrast, patent law tends to focus exclusively on validity and scope, competition be damned.[288]

The irony is that one of the things that has made FRAND so valuable is that it has enabled limited recognition of the differences between information technology patents and more traditional patents – something that the patent act itself does not recognize. FRAND is a voluntary mechanism through which participants in certain informational and networked technologies have agreed to a patent regime which is "weaker" than the one that we generally apply via the Patent Act. None of the provisions of those agreements are inconsistent with the Patent Act; they merely involve patentees who forego rights that they are entitled to bargain away. In particular, they have agreed that they will not refuse to license other participants regardless of competitive relationship, and that they will accede to royalty determinations guided by impartial tribunals.

Instead, the now defunct "New Madison" doctrine was a heavy-handed approach to force FRAND patents arising in some of the most innovative of industries into the same mold that has guided more traditional patent law and produced much weaker results.

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[286] Walker Process Equip., Inc. v Food Machinery & Chem. Corp., 382 U.S. 172 (1965) (filing of patent infringement action by one who knew the patent to be invalid could meet the conduct requirement for a §2 violation).
[287] 35 U.S.C. §261 (2018).
[288] *E.g.,* Trebro Mfg., Inc. v. Firecly Equip., LLC, 748 F.3d 1159 (Fed. Cir. 2014) (permitting patentee to obtain injunction on unpracticed patent because the rival was a competitor in the product market).

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Conclusion

Because of its relative isolation from common law doctrine and complete lack of specificity, §2 of the Sherman Act has left courts more interpretive freedom than any other antitrust statute – or for that matter, more than almost any other provision in United States code. A very simple and nontechnical model of economics has been its predominant but hardly exclusive guide. Whether one agrees with or appreciates that assessment, one thing that seems clear is that antitrust policy respecting dominant firms cannot be coherent without understanding the likely consequences of the practices that it is evaluating.

Lack of specificity is also key to §2's flexibility, however, both as to the range of markets and firms to which it applies and its ability to create frameworks for analyzing practices. In general, this language will accommodate virtually everything it needs to, with one important limitation. A fair reading of the "monopolizing" provision is that it does not prohibit conduct that is anticompetitive but that falls short of threatening monopoly in a complementary or other related market. This has become a much bigger problem than it was decades ago, because networking and the interlinking of products and markets has become a much more prominent feature of the economy. For that, a properly constrained "abuse of dominance" standard would be superior.

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