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C. SCOTT HEMPHILL & TIM WU

Parallel Exclusion

ABSTRACT. Scholars and courts have long debated whether and when "parallel pricing"—adoption of the same price by every firm in a market—should be considered a violation of antitrust law. But there has been a comparative neglect of the importance of "parallel exclusion"—conduct, engaged in by multiple firms, that blocks or slows would-be market entrants. Parallel exclusion merits greater attention, for it can be far more harmful than parallel price elevation. Setting a high price leaves the field open for new entrants and may even attract them. In contrast, parallel action that excludes new entrants both facilitates price elevation and can slow innovation. Reduced innovation has greater long-term significance for the economy. Moreover, parallel exclusion regimes may be more stable than parallel price-elevation regimes. A basic game-theoretic analysis reveals that the factors that leave price elevation vulnerable to breakdown do not apply as strongly to parallel exclusion. Indeed, in some instances, maintaining an exclusion scheme is a dominant strategy for each of the excluders. In such cases, the likelihood of collapse is even lower, yielding a potentially indefinite system of parallel exclusion. This Article proposes the recognition of parallel exclusion as a form of monopolization—subject to the strict limits already present in case law, including monopoly power, anticompetitive effect, and an absence of sufficient procompetitive justification. It also explains why parallel exclusion is a proper concern for merger policy, and why it is bad policy to automatically condemn certain boycotts without any evaluation of their anticompetitive effects.

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ARTICLE CONTENTS

INTRODUCTION

Markets with just a few competitors have long posed daunting problems for antitrust law. Consider the problem in its most familiar form. Two gas stations, the only alternatives on a long stretch of highway, both choose a high price. Each is aware of, and dependent on, the fact that its opponent is making the same choice, but there is no explicit agreement. Must such de facto price-fixing be tolerated? This, the puzzle of "parallel pricing," was the subject of a famous debate between Richard Posner and Donald Turner in the 1960s and has continued to confound courts and scholars for more than forty years.[1]

The classic debate, however, is incomplete, for it is fixated on pricing and thus neglects the importance of parallel exclusion. Parallel exclusion is conduct, engaged in by multiple firms, that blocks or slows would-be market entrants. If Visa and MasterCard together dominate the provision of credit card services and both make it difficult or impossible for American Express to issue a competing card, they are practicing a form of parallel exclusion.

Parallel exclusion deserves much greater attention, for its anticompetitive forms have much greater social consequences than parallel pricing due to their potential to influence not just prices, but also the pace of innovation. After all, setting a high price leaves the field open for new entrants and may even attract them. In contrast, parallel action that excludes new entrants both facilitates price elevation and can slow innovation. As a source of dynamic inefficiency, it has greater long-term significance for the economy.[2]

Parallel exclusion is pervasive in industries that comprise a few major players, as our paper demonstrates.[3] Despite its prevalence, and its potential to do more harm than parallel pricing, the phenomenon too frequently has been neglected. Particular aspects of parallel exclusion have received some attention under various headings, but the phenomenon has seen little systematic or sustained treatment across disparate doctrinal areas and industries.[4] This Article is an effort to fill that gap. We seek to explain the importance of anticompetitive parallel exclusion, characterize its real-world prevalence and

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1. *See* Richard A. Posner, *Oligopoly and the Antitrust Laws: A Suggested Approach*, 21 STAN. L. REV. 1562 (1969); Donald F. Turner, *The Definition of Agreement Under the Sherman Act: Conscious Parallelism and Refusals To Deal*, 75 HARV. L. REV. 655, 677-81 (1962) [hereinafter Turner, *Definition*]; Donald F. Turner, *The Scope of Antitrust and Other Economic Regulatory Policies*, 82 HARV. L. REV. 1207 (1969) [hereinafter Turner, *Scope*]; *infra* Section I.C (discussing the Turner-Posner debate and later analyses).

2. *See infra* Section II.B (discussing these harms and their significance).

3. *See infra* Section I.B (presenting examples).

4. *See infra* Section I.A (exploring the literature).

harms, and assess various possible solutions.

As is the case with single-firm conduct, we do not insist that all parallel exclusion is anticompetitive, nor do we think that most parallel conduct is exclusionary. Much parallel conduct, such as the tendency of firms to design similar products, has no plausible exclusionary effect. Moreover, some exclusionary conduct is justified and efficiency enhancing and thus should not be subject to antitrust liability. Just as with single-firm monopolization, an evaluation of parallel exclusion requires attention to market structure, conduct, and effects.

Yet we stress that the existence of the bad forms of parallel exclusion is far more than a theoretical phenomenon. Multiple case studies, threaded through the Article, reveal both its mechanisms and the factors that tend to yield stable exclusion. Studies of credit card payment systems, shipping lines, film, telephone services, tobacco, and other industries suggest that lasting exclusionary patterns depend on reliable coordination points for exclusion. A history of exclusion makes it easier to coordinate in the future. Thus, a specific history of monopoly or regulatory exclusion may be a strong predictor of stable exclusion, for the firms involved can simply continue the former monopoly's patterns of exclusion, or find ways to continue the exclusion once provided by now-repealed government regulations.

Our project sits at the intersection of two lines of thinking developed by industrial organization economists and legal scholars: analyses of exclusionary conduct and examinations of cartel stability. As for the latter, a major difference from single-firm conduct is the interaction among the excluders, and the prospect that one might have a unilateral incentive to deviate and cause the scheme to collapse. The incentive to deviate is a key predicate question for any regime of parallel activity. A basic game-theoretic analysis suggests that parallel exclusion regimes may in fact be more stable than parallel price-elevation regimes. That is because the factors that leave price elevation vulnerable to breakdown do not apply as strongly to parallel exclusion. Moreover, in some instances, maintaining an exclusion scheme can simply be a win-win or "dominant" strategy for each of the excluders. In such cases, the likelihood of collapse is even lower, yielding a potentially indefinite system of parallel exclusion.

We conclude that U.S. antitrust doctrine should be adjusted to address anticompetitive parallel exclusion more effectively. At present, form is sometimes exalted over substance, with the effect that horizontal agreement among the excluders is treated as either necessary or sufficient for liability. Properly understood, it is neither. It is the anticompetitive effect of the conduct that should matter, rather than the presence or absence of agreement. We therefore outline several doctrinal proposals to reduce the significance of horizontal agreement.

In particular, we propose that antitrust doctrine recognize parallel exclusion as a form of monopolization.[5] Antitrust liability for monopolization is normally associated with the conduct of a single, dominant firm. We would extend its application to exclusion by multiple firms, subject to the strict limits already present in case law, including monopoly power, anticompetitive effect, and an absence of sufficient procompetitive justification. Second, we support a more robust appreciation of "aggregation," a doctrine recognized by the Supreme Court and applicable to parallel exclusion that is accomplished through contracts between the excluders and other firms, whereby the contracts are evaluated by reference to their cumulative effects.[6] We also spell out why parallel exclusion is a proper concern for merger policy and why we need not automatically condemn those horizontal agreements that lack an anticompetitive exclusionary effect.

Beyond the scholarly debate, this Article has important implications for antitrust enforcers. Our experience suggests that enforcement agencies may decline to even consider the investigation of exclusionary conduct if practiced by multiple firms. The reluctance stems in part from the mistaken view that Turner, in his debate with Posner, demonstrated that the law should never target "mere" parallel conduct, whatever the form. In fact, Turner, while reluctant to pursue parallel pricing, strongly believed that enforcers should pursue cases of oligopoly exclusion—indeed, he believed that "the law on shared monopoly may be brought virtually in line with the law on individual monopoly."[7] Beyond Turner, we believe that if enforcers are excessively reluctant to investigate parallel exclusion, the result may be too much tolerance of anticompetitive conduct.

This Article proceeds in four parts. Part I defines parallel exclusion and its connection to the well-developed debate about parallel pricing. Part II examines the mechanisms and effects of parallel exclusion. Part III evaluates the stability of parallel exclusion schemes, despite individual incentives to deviate from parallel conduct. Part IV explicates our doctrinal recommendations.

5. 15 U.S.C. § 2 (2006) ("Every person who shall monopolize, or attempt to monopolize, or combine or conspire with any other person or persons, to monopolize any part of the trade or commerce among the several States, or with foreign nations, shall be deemed guilty of a felony . . . .").

6. *See infra* Section IV.B (describing the doctrine and advocating its use).

7. Turner, *Scope*, *supra* note 1, at 1230.

I. PRELIMINARIES

A. Situating Parallel Exclusion

A traditional dichotomy in antitrust analysis tends to obscure the concept of parallel exclusion. The dichotomy is between "exclusion" and "collusion," the two basic categories of anticompetitive conduct.[8] Exclusion refers to the improper preservation of incumbency through self-entrenching conduct.[9] That term is broad enough to embrace exclusion by multiple incumbents,[10] but in practice it has often been limited to exclusion by a single, dominant firm.[11] Collusion refers to cooperation that reduces competition. Arguably that term embraces a variety of strategies, including exclusionary strategies. But its primary meaning within the dichotomy is cooperation that does not entail exclusion: price elevation and other forms of reduced competition among members, such as advertisement or product quality, that tend to attract rather than restrict entry.[12]

Parallel exclusion does not fit the dichotomy as it is commonly understood.

8. *See, e.g.*, RICHARD A. POSNER, ANTITRUST LAW 40-41 (2d ed. 2001) (identifying the "fundamental" distinction between "collusive practices" and "exclusionary practices"); Thomas G. Krattenmaker & Steven C. Salop, *Anticompetitive Exclusion: Raising Rivals' Costs To Achieve Power over Price*, 96 YALE L.J. 209, 211 (1986) (noting that antitrust prohibits "undue collusion among competitors and unjustifiable exclusion of competing firms").

9. *E.g.*, POSNER, *supra* note 8, at 40-41 ("An exclusionary practice is generally a method by which a firm having a monopoly position invests some of its monopoly profits in making it unprofitable for other sellers to compete with it, thus perpetuating its monopoly."); Krattenmaker & Salop, *supra* note 8, at 213-14 (arguing that exclusion occurs when a "defendant firm" places competitors at "a cost disadvantage," thereby increasing the monopolist's ability to raise price).

10. *See* POSNER, *supra* note 8, at 40 (exclusionary practices entail "coercion of sellers outside of the collusive *group*" (emphasis added)).

11. *See id.* at 265 ("Exclusive dealing poses a threat to competition only when it is done by a monopolist . . . ."); Frank H. Easterbrook, *On Identifying Exclusionary Conduct*, 61 NOTRE DAME L. REV. 972 (1986) (discussing exclusionary conduct only in the context of a single dominant firm); sources cited *supra* note 9. Similarly, when courts consider exclusion, they often limit attention to the dominant-firm case. *See, e.g.*, Leegin Creative Leather Prods., Inc. v. PSKS, Inc., 551 U.S. 877, 893 (2007) (evaluating exclusion-based theories of resale price maintenance only by reference to a single "powerful manufacturer or retailer").

12. *See* POSNER, *supra* note 8, at 40 (defining "pure" collusive practice as cooperation to raise price, which "carries the seeds of its own destruction" by attracting entry); George J. Stigler, *A Theory of Oligopoly*, 72 J. POL. ECON. 44, 45 (1964) (adopting the assumption that "collusion takes the form of joint determination of outputs and prices by ostensibly independent firms," and noting alternative strategies of merger or joint sales agency); *id.* at 47 (characterizing the problem of internal detection as one of policing "price-cutters").

As we use the term, parallel exclusion is self-entrenching conduct, engaged in by multiple firms, that harms competition by limiting the competitive prospects of an existing or potential rival to the excluding firms. This definition excludes some forms of parallel conduct of antitrust interest, including so-called facilitating practices that may reduce competition among firms but without impeding entry,[13] and refusals by multiple firms that, even if exclusionary, are not *self*-entrenching.[14]

Fitting within neither category neatly, parallel exclusion is often overlooked or discussed from some unusual angle. For example, some examinations of parallel exclusion come under the discussion of "boycotts," a label that only increases the confusion. The term is famously slippery and unhelpful.[15] Some conduct labeled a boycott does not entail parallel exclusion, such as actions taken on behalf of a *single* beneficiary that competes with the excluded firm or firms,[16] or a parallel refusal by suppliers to sell to a buyer unless the buyer accepts more profitable terms.[17] The boycotts that entail parallel exclusion are those in which multiple firms, by means of explicit agreement or formal organization, act jointly to exclude a rival.[18]

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13. *E.g.*, E.I. du Pont de Nemours & Co. v. FTC, 729 F.2d 128 (2d Cir. 1984). Similarly, many instances of "shared monopoly" or "collective dominance," as those terms are commonly used, have no prospect of self-entrenchment. *E.g.*, Barry E. Hawk & Giorgio A. Motta, *Oligopolies and Collective Dominance: A Solution in Search of a Problem*, *in* TREVISO CONFERENCE ON ANTITRUST BETWEEN EC LAW AND NATIONAL LAW 59 (8th ed. 2008); George A. Hay, *Oligopoly, Shared Monopoly, and Antitrust Law*, 67 CORNELL L. REV. 439 (1982).

14. *E.g.*, Interstate Circuit, Inc. v. United States, 306 U.S. 208 (1939). In *Interstate Circuit*, the multiple distributors acting in parallel were not doing so to entrench themselves, but rather were acting for the benefit and at the behest of a customer.

15. POSNER, *supra* note 8, at 238 ("The antitrust boycott cases involve an extraordinarily heterogeneous body of practices . . . ."); Kenneth L. Glazer, *Concerted Refusals To Deal Under Section 1 of the Sherman Act*, 70 ANTITRUST L.J. 1, 1 (2002) (describing the confusion).

16. *E.g.*, Klor's, Inc. v. Broadway-Hale Stores, 359 U.S. 207 (1959); Toys "R" Us, Inc. v. FTC, 221 F.3d 928 (7th Cir. 2000).

17. *Cf., e.g.*, FTC v. Ind. Fed'n of Dentists, 476 U.S. 447, 449-50 & n.1 (1986) (finding a violation where a group of dentists collectively refused to submit x-rays to insurance companies).

18. Glazer calls these "rival-directed" boycotts. Glazer, *supra* note 15, at 3, 14-18. Examples include *Radiant Burners, Inc. v. Peoples Gas Light & Coke Co.*, 364 U.S. 656 (1961) (per curiam), concerning an association of manufacturers who denied quality certification to a competing manufacturer; *Fashion Originators' Guild of America, Inc. v. FTC*, 312 U.S. 457 (1941), involving an association of dress manufacturers who agreed not to sell to retailers who bought from competing manufacturers of "knockoff" clothing; and *Eastern States Retail Lumber Dealers' Ass'n v. United States*, 234 U.S. 600 (1914), regarding an association of lumber dealers who agreed among themselves not to buy from wholesalers who competed by selling directly to customers.

To be clear, much of our analysis applies to boycotts that implement parallel exclusion, but we do not favor using the "boycott" label. Moreover, our analysis is not limited to exclusionary systems governed by explicit agreements or by an organization, such as boycotts and joint ventures that deny an entrant access to a key input.[19] In such cases, stability is easy to achieve, and there is little point in discussing it. Instead, we focus our analysis on what we regard as the more interesting and difficult instances in which there is no formal organization —indeed, generally no clear and explicit agreement among the excluders. In these instances stability is a salient question,[20] and the doctrine is unsettled.

Beyond boycotts and joint ventures, parallel exclusion sometimes arises in discussions of collusion and oligopoly that, while mainly focused on price elevation, mention exclusion as well.[21] Other analyses consider particularized forms of parallel exclusion.[22] Further work connects price-fixing with parallel

19. *E.g.*, Associated Press v. United States, 326 U.S. 1 (1945); United States v. Terminal R.R. Ass'n, 224 U.S. 383 (1912).

20. In the analogous context of price elevation, Stigler briefly noted the existence of joint sales agencies as a means of coordination, but focused instead on price elevation achieved without resort to such an explicit mechanism. Stigler, *supra* note 12, at 45.

21. *E.g.*, JOSEPH E. HARRINGTON, JR., HOW DO CARTELS OPERATE? 64-69 (2006) (providing European examples of attempts by cartels to exclude nonmembers); James W. Brock, *Antitrust Policy and the Oligopoly Problem*, 51 ANTITRUST BULL. 227 (2006) (focusing primarily on price elevation by oligopolists in several industries, but also assembling evidence of exclusion); Margaret C. Levenstein & Valerie Y. Suslow, *What Determines Cartel Success?*, 44 J. ECON. LITERATURE 43, 74-75 (2006) (describing exclusionary practices, particularly by enlisting the aid of government, as a means to ensure cartel stability).

22. For an economic model and empirical analysis of multiple excluders using exclusive dealing contracts, see Laura Nurski & Frank Verboven, *Exclusive Dealing as a Barrier to Entry? Evidence from Automobiles* (Ctr. for Econ. Policy Research, Discussion Paper No. 8762, 2012), http://ssrn.com/abstract=1988693. For an analysis of "cumulative foreclosure" in exclusive contracting, see EINER ELHAUGE, UNITED STATES ANTITRUST LAW AND ECONOMICS 343-46 (2d ed. 2010); Einer Elhauge, *Tying, Bundled Discounts, and the Death of the Single Monopoly Profit Theory*, 123 HARV. L. REV. 397, 476–77 (2009) [hereinafter Elhauge, *Tying*]; and Einer Elhauge, *Antitrust Analysis of GPO Exclusionary Agreements: Comments Regarding Hearings on Health Care and Competition Law and Policy—Statement for DOJ-FTC Hearings on GPOs*, FTC 3 (Sept. 26, 2003), http://www.ftc.gov/os/comments/healthcarecomments2/elhauge.pdf [hereinafter Elhauge, *GPO*]. For legal analysis of an agreement among competitors to engage in tying, see Christopher R. Leslie, *Tying Conspiracies*, 48 WM. & MARY L. REV. 2247, 2259-60 (2007). For a model of multiple excluders that employ "meet-or-release" contracts, see Edward M. Iacobucci & Ralph A. Winter, Collusion on Exclusion (Jan. 11, 2012) (unpublished manuscript) (on file with authors). For an economic analysis of exclusionary bundling of academic journals by multiple publishers, see Aaron S. Edlin & Daniel L. Rubinfeld, *Exclusion or Efficient Pricing? The "Big Deal" Bundling of Academic Journals*, 72 ANTITRUST L.J. 119, 152 (2004). Early examinations of predatory pricing by oligopolists include work by Phillip Areeda, Donald Turner, and Oliver Williamson. *See* Phillip Areeda & Donald F. Turner, *Predatory Pricing and Related Practices Under Section 2 of the Sherman Act*, exclusion by considering the conditions under which cartel members might also engage in exclusionary conduct.[23] Closest in spirit to our project is recent work treating "joint dominance" as a serious policy problem.[24]

What is missing is a systematic inquiry into the phenomenon of parallel exclusion, across multiple doctrinal categories and industries. This Article is an effort to fill that gap. We identify the harms, prevalence, and varied mechanisms of parallel exclusion, examine its surprising stability compared to oligopolistic price elevation, and spell out the implications for U.S. antitrust doctrine. We begin by presenting several examples of parallel exclusion in action.

B. Paradigmatic Examples

Visa and MasterCard were the first firms to offer general-purpose credit cards issued by banks, beginning in the 1960s.[25] By the 1980s, the two companies had come to completely dominate the bank-issued credit card industry, and most American banks issued both cards, a state of affairs called "duality" in the industry. Roughly the same banks owned shares of both

88 HARV. L. REV. 697, 712 n.35 (1975) ("In an oligopoly situation it would be difficult if not impossible to distinguish 'disciplinary' price-cutting from an outbreak of competitive pricing under the pressures of excess capacity."); Oliver E. Williamson, *Predatory Pricing: A Strategic and Welfare Analysis*, 87 YALE L.J. 284, 292 (1977) ("Although behavior akin to predatory pricing can appear in loose oligopolies or even in competitively organized industries, such behavior . . . must be distinguished from the strategic efforts to acquire long-term market power that characterize predatory behavior by dominant firms and collusive oligopolies.").

23. *See* Randal D. Heeb et al., *Cartels as Two-Stage Mechanisms: Implications for the Analysis of Dominant-Firm Conduct*, 10 CHI. J. INT'L L. 213, 216-17 (2009) (arguing that cartels first suppress interfirm rivalry, then move on to exclusionary behavior, and presenting evidence of exclusionary behavior by cartels); William E. Kovacic et al., *Plus Factors and Agreement in Antitrust Law*, 110 MICH. L. REV. 393 (2011); Robert C. Marshall, Leslie M. Marx & Lily Samkharadze, Dominant-Firm Conduct by Cartels 2-3 (Feb. 15, 2011) (unpublished manuscript), http://www.econ.psu.edu/~lxs951/dominantfirm.pdf (presenting a model of cartel behavior in which "concordant" cartels, in which within-cartel rivalry is successfully suppressed, are more likely to also engage in exclusionary conduct). One implication of these analyses, which we take up in Part IV, is that the observable exclusionary conduct can serve to identify otherwise unobservable price-fixing.

24. Edward M. Iacobucci & Ralph A. Winter, *Abuse of Joint Dominance in Canadian Competition Policy*, 60 U. TORONTO L.J. 219 (2010).

25. They were not the first to offer a general-purpose credit card, a model pioneered by the Diner's Club. The Visa card, moreover, was originally known as Bankamericard. *See* LEWIS MANDELL, THE CREDIT CARD INDUSTRY: A HISTORY 1-10, 31 (1990). At the beginning, Visa demanded exclusivity of its banks, but after antitrust litigation and pressure from the Department of Justice, Visa amended its rules, and both the Visa and MasterCard networks became open to any bank wishing to join. *Id.* at 40-41.

payment networks, and virtually every retailer accepted both cards. As we shall see, this situation created conditions ripe for parallel exclusion, which tends to arise in industries that comprise a few major players—usually an oligopoly[26]—and in which there is some prospect of innovative entry.

In the late 1980s and 1990s, various firms attempted to enter the lucrative market for credit cards, including Discover and American Express (Amex), the latter of which had until then traditionally issued its own charge cards under a different business model. Matters came to a head when American Express began to recruit banks to issue a new line of Amex-branded credit cards. To prevent the arrival of a true competitor in the credit card market, Visa and, later, MasterCard adopted similar exclusionary rules.[27] The rules banned any member banks from issuing Amex or other cards, on pain of losing the right to issue cards from Visa and MasterCard.[28] With the rules in place, a bank would have to completely forgo issuing Visa and MasterCard cards if it wanted to deal with American Express.

Visa and MasterCard's parallel adoption of exclusionary rules illustrates how parallel action can replicate the exclusive conduct of a monopolist. Critically, there was never any agreement between the two to exclude American Express. However, the two networks, considered together, shared more than seventy percent of the market, measured by volume of transactions. As such, the practical consequence of their exclusion rules was a united front that blocked Amex's market entry.[29]

The Visa-MasterCard case shows how two or more firms that dominate an industry can pursue exclusionary strategies similar in effect to a monopolist's. Our next example, from the pipe industry, is the paradigmatic example of an industry using a formal, industry-wide scheme to block market entry.

Conduit is a form of piping used to carry electric wiring through a building. For much of the twentieth century, it was made of steel and supplied by an oligopoly of manufacturers. In the late 1970s, innovations in plastic

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26. As discussed in Section III.B, *infra*, parallel exclusion can also arise where the excluders are monopolists, each with a limited territory (in geographic or product terms), such that each has an interest in excluding an entrant that will compete with all of them.

27. *See* United States v. Visa U.S.A., Inc., 344 F.3d 229, 236 (2d Cir. 2003).

28. *See id.* at 237. Similar exclusion was alleged as to the issuance of competing Discover cards. *Id.* at 234; *see also* SCFC ILC, Inc. v. Visa U.S.A., Inc., 36 F.3d 958 (10th Cir. 1994) (finding that Visa's refusal to permit Discover to join the Visa network did not violate antitrust law).

29. In this case, the agreement requirement was easily met because the banks were also the owners of each network. *United States v. Visa*, 344 F.3d at 242-43. On market power, the Second Circuit concluded that the two networks had power "jointly and separately." *Id.* at 239.

technologies made possible the use of plastic polyvinyl chloride (PVC) conduit. Plastic conduit had several advantages over steel. Unlike steel, the plastic could be cut by hand, and it was cheaper, lighter, and reduced the risk of short-circuiting.[30] To achieve widespread usage of plastic conduit, its manufacturers, beginning in 1978, sought to have plastic conduit approved by the National Fire Protection Association (NFPA), a standard-setting body that publishes the National Electric Code. Incorporation into the Code was essential to the wide-scale adoption of plastic conduit.[31]

A proposal to allow plastic conduit in the Code, backed by its manufacturers and importers, worked its way through the standards process. The steel conduit interests, however, did not stand idly by. According to the rules of the NFPA, approval of the proposal required a majority vote at the Association's next annual meeting. To pack the meeting, one steel conduit manufacturer, Allied Tube, brought 155 new members, including employees, sales agents, and the wife of the national sales director. Each new member registered to vote, attended the annual meeting, and voted against the proposal. Other steel interests, including other conduit manufacturers and major sales agents of steel conduit, made parallel efforts, leading to the recruitment of a total of 230 new voters, who collectively killed the plastic conduit proposal.[32]

The campaign conducted by members of the steel conduit industry is a textbook example of parallel exclusion. The introduction of plastic conduit, a superior product for at least some uses, was slowed or blocked, to the private benefit of steel conduit manufacturers. The exclusion was simple, obvious, and relatively cheap for the incumbents to effect.

Parallel exclusion is a pervasive issue in oligopoly markets. Throughout the Article, we introduce a series of examples drawn from a wide range of industries. Table 1 provides a large set of illustrative examples, drawn from antitrust litigation and commentary.[33] We do not take a view on whether the alleged conduct actually occurred in every case, or if so, whether that conduct amounted to anticompetitive exclusion. Some of the cases are the subject of

30. *See* CHRISTINA BOHANNAN & HERBERT HOVENKAMP, CREATION WITHOUT RESTRAINT: PROMOTING LIBERTY AND RIVALRY IN INNOVATION 250 (2012) (describing these advantages).

31. Allied Tube & Conduit Corp. v. Indian Head, Inc. (*Allied Tube II*), 486 U.S. 492, 495-96 (1988); Indian Head, Inc. v. Allied Tube & Conduit Corp. (*Allied Tube I*), 817 F.2d 938, 939-40 (2d Cir. 1987). The issue, as it came to the Supreme Court, was the applicability of the *Noerr-Pennington* doctrine, a question not important to this Article.

32. *Allied Tube II*, 486 U.S. at 496-97; *Allied Tube I*, 817 F.2d at 940-41.

33. The examples were compiled from a wide range of sources. Several of the cases are discussed in Leslie, *supra* note 22, at 2256-60.

famous critiques or have plausible procompetitive explanations. The collective weight of these examples, however, suggests that parallel exclusion is a phenomenon worthy of sustained attention.

Table 1.
EXAMPLES OF PARALLEL EXCLUSION ALLEGATIONS

INDUSTRY	ALLEGED CONDUCT
Breakfast cereals	Product proliferation[34] Slotting fees paid to grocery stores[35]
Can-closing equipment	Exclusive dealing contracts, volume discounts, and tying of can-closing equipment and cans[36]
Cemetery services	Tying cemetery plots and foundation preparation services (independent servicers)[37]
Cigarettes	Purchase of tobacco beyond actual needs (discount cigarette manufacturers)[38]
Conduit for electric wiring	Campaign to control product approval process of National Fire Protection Association (plastic conduit)[39]
Film production and distribution	Various agreements and practices by integrated studios (independent producers and theaters)[40]
Medical devices	Discounts conditioned on high market shares to group purchasing organizations and hospitals[41]
Payment networks	Exclusionary rule prohibiting bank issuance of competing general purpose credit cards[42] Tying credit cards and "signature" debit cards (PIN debit networks)[43]

34. Kellogg Co., 99 F.T.C. 8 (1982).
35. *Report on the Federal Trade Commission Workshop on Slotting Allowances and Other Marketing Practices in the Grocery Industry*, FED. TRADE COMMISSION (Feb. 2001), http://www.ftc.gov/os/2001/02/slottingallowancesreportfinal.pdf.
36. United States v. Am. Can Co., 87 F. Supp. 18 (N.D. Cal. 1949).
37. Rosebrough Monument Co. v. Mem'l Park Cemetery Ass'n, 666 F.2d 1130 (8th Cir. 1981).
38. Am. Tobacco Co. v. United States, 328 U.S. 781, 803-04 (1946).
39. *Allied Tube II*, 486 U.S. 492, 496 (1988).
40. United States v. Paramount Pictures, Inc., 334 U.S. 131 (1948).
41. Genico, Inc. v. Ethicon, Inc., No. 5:04-CV-229, 2006 U.S. Dist. LEXIS 96909 (E.D. Tex. Mar. 23, 2006); Elhauge, *GPO*, *supra* note 22.
42. United States v. Visa U.S.A., Inc., 344 F.3d 229 (2d Cir. 2003).
43. Wal-Mart Stores, Inc. v. Visa U.S.A. Inc., 396 F.3d 96 (2d Cir. 2005).

Petroleum refining	Exclusive requirements contracts with service stations[44] Various conduct to deny entry to independents[45]
Road contractors	Inducements to asphalt producers to refuse to sell to competing road contractor[46]
Soft drinks	"Flavor restrictions" imposed on bottlers (competing soft drink makers)[47]
Tabulating machines	Tying machine leases and punch cards (target unclear)[48]
Telecom (local wireline)	Refusal to deal (competitive local exchange carriers)[49]
Telecom (wireless)	Tying wireless service and handsets (unaffiliated handsets)[50] Refusal to accept Google Wallet mobile payment (competing payment offering)[51]
Waste disposal services	Exclusive contracts with purchasers[52]

This table omits examples of exclusion conducted through open, explicit agreements or formal organizations, discussed *supra* notes 18-19 and accompanying text. A parenthetical indicates the target of exclusion, where the target is not clear from the context.

C. An Unfinished Debate

The scholarly consideration of parallel conduct in oligopoly markets represents an unfinished debate. Most of the analysis is focused on the maintenance of parallel, elevated prices by all members of the oligopoly, as in our opening example of two gas stations on an isolated stretch of highway. In that context, a large "cartel stability" literature in economics seeks to

44. Standard Oil Co. of Cal. v. United States (*Standard Stations*), 337 U.S. 293 (1949).

45. Exxon Corp., 98 F.T.C. 453 (1981).

46. JTC Petroleum Co. v. Piasa Motor Fuels, Inc., 190 F.3d 775 (7th Cir. 1999).

47. FTC v. Coca-Cola Co., 641 F. Supp. 1128, 1136 (D.D.C. 1986); Lawrence J. White, *Application of the Merger Guidelines: The Proposed Merger of Coca-Cola and Dr. Pepper*, *in* THE ANTITRUST REVOLUTION: THE ROLE OF ECONOMICS 76 (John E. Kwoka, Jr. & Lawrence J. White eds., 2d ed. 1986).

48. Int'l Bus. Machs. Corp. v. United States, 298 U.S. 131 (1936).

49. Bell Atl. Corp. v. Twombly, 550 U.S. 544, 553-54 (2007).

50. *In re* Wireless Tel. Servs. Antitrust Litig., 385 F. Supp. 2d 403 (S.D.N.Y. 2005).

51. Letter from Barbara van Schewick, Assoc. Professor, Stanford Law Sch., to Julius Genachowski, Chairman, Fed. Commc'n. Comm'n (Dec. 19, 2011) (on file with authors).

52. Comm'r of Competition & Waste Serv. (CA) Inc. and Waste Mgmt. of Can. Corp., CT-2009-003 (Competition Trib. 2009), *discussed in* Iacobucci & Winter, *supra* note 22, at 23-25.

understand the conditions under which a group of firms can maintain elevated prices for an extended period.[53]

The ability of law to address oligopolistic price elevation has been a preoccupation of legal analysis since the 1960s, when it was the subject of a famous debate between Donald Turner and Richard Posner.[54] The debate centered on section 1 of the Sherman Act, which requires a "contract, combination . . ., or conspiracy, in restraint of trade."[55] That provision clearly covers, for example, explicit agreements to fix a particular price. It does not cover parallel pricing in which there is no communication or other evidence of interdependence. By interdependence, we mean that "firms refrain from price cutting because of an expectation of retaliation derived from a shared appreciation of their circumstances."[56] (Often, the phrase "conscious parallelism" is also used.[57]) Parallel pricing without interdependence might be the innocuous consequence of shared cost pressures, for example. If the price of steel goes up, it has never been considered an issue if the price of steel pipes should also rise, in parallel, for each pipe producer.

The harder question has been what to do when there is evidence of interdependence, but no clear evidence of an explicit agreement between the competing firms. Reaching a collectively beneficial outcome is the familiar result of a repeated prisoner's dilemma among the participants. Each firm complies out of fear of punishment if its price is not kept high. Section 1's requirement of agreement fits awkwardly with this economic model.

Nonetheless, Turner and Posner agreed that interdependent pricing, taken alone, is a meeting of the minds and hence an agreement, as that term is generally understood.[58] Their disagreement was about whether, as a policy

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53. *See, e.g.*, POSNER, *supra* note 8, at 60-69; Alexis Jacquemin & Margaret E. Slade, *Cartels, Collusion, and Horizontal Merger*, *in* 1 HANDBOOK OF INDUSTRIAL ORGANIZATION 415 (Richard Schmalensee & Robert D. Willig eds., 1989) (reviewing factors that promote cartel stability); Carl Shapiro, *Theories of Oligopoly Behavior*, *in* 1 HANDBOOK OF INDUSTRIAL ORGANIZATION, *supra*, at 329 (surveying economic theories of oligopoly behavior); Stigler, *supra* note 12, at 48-56.

54. *See* sources cited *supra* note 1.

55. 15 U.S.C. § 1 (2006).

56. Louis Kaplow, *Direct Versus Communications-Based Prohibitions on Price Fixing*, 3 J. LEGAL ANALYSIS 449, 451 (2011).

57. *E.g.*, Kovacic et al., *supra* note 23, at 395; Turner, *Definition*, *supra* note 1, at 663.

58. *See, e.g.*, Posner, *supra* note 1, at 1575-76 ("There is no distortion of accepted meanings . . . in viewing what I have termed tacit collusion as a form of concerted rather than unilateral activity."); Turner, *Definition*, *supra* note 1, at 671 ("[W]hile there are arguable grounds for saying there is no agreement, there are far better grounds for saying that though there may be 'agreement' it is not unlawful agreement."); *id.* at 681 (accepting that interdependence is

matter, such agreements amounted to an unlawful conspiracy under section 1.[59] Turner argued that interdependent pricing is the inevitable result of ordinary profit maximization by oligopolists. Such conduct is different in kind and less troubling than self-entrenching, exclusionary conduct. Moreover, efforts to remediate the pricing would face insuperable practical difficulties. In particular, an injunction would be futile: How could a court implement or a firm respond to the requirement that a firm instead charge a more competitive price, or cease taking its competitor's prices into account?[60]

Posner took the more interventionist view that such price elevation does violate antitrust law. (As a judge, Posner has been more circumspect.[61]) He emphasized that the structure of the problem of oligopolistic price elevation does not depend on "detectable acts of collusion."[62] Price elevation is hardly inevitable, but rather is voluntary. Posner acknowledged that identifying actionable price elevation would be difficult, and with respect to remedies, thought that the main challenge was to make sure that damages are high enough to achieve adequate deterrence, given the difficulties of proving a case and the reluctance of courts to impose high penalties.[63]

Louis Kaplow has recently revived this debate. Kaplow begins from the premise that law should identify and deter interdependent price elevations with a view to reducing the resulting social cost.[64] He contrasts that goal with a current focus of judicial policy, which is to find interdependent price elevation that is based on the existence of an agreement, particularly as identified through communication among firms.[65] The two goals, as he makes clear, are

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a basis for finding agreement, but arguing that more is required for finding an "unlawful conspiracy" under the Sherman Act).

59. *See* Turner, *Definition*, *supra* note 1, at 672 ("The conclusion that noncompetitive oligopoly pricing is not unlawful means that mere interdependence of basic price decisions is not conspiracy.").

60. *Id.* at 669 ("[S]uch an injunction, read literally, appears to demand such irrational behavior that full compliance would be virtually impossible.").

61. *See In re* High Fructose Corn Syrup Antitrust Litig., 295 F.3d 651, 654 (7th Cir. 2002) ("[I]t is generally believed, and the plaintiffs implicitly accept, that an express, manifested agreement, and thus an agreement involving actual, verbalized communication, must be proved in order for a price-fixing conspiracy to be actionable under the Sherman Act.").

62. Posner, *supra* note 1, at 1562; *see also id.* at 1575 ("There is . . . no vital difference between formal cartels and tacit collusive arrangements; the latter are simply easier to conceal.").

63. *Id.* at 1590-91.

64. *See* Kaplow, *supra* note 56, at 450 (advocating that antitrust policy target "socially harmful coordinated price elevation that can be detected and sanctioned effectively").

65. *Id.* at 449-50 (identifying the tendency of courts to focus on penalizing "certain sorts of interfirm communications that facilitate coordinated oligopolistic price elevation").

inconsistent: the factors that tend to indicate the existence of an agreement are poor proxies for socially costly price elevation.[66]

Indeed, the mismatch leads to a paradox, which Kaplow terms a "paradox of proof."[67] Under current law, the markets where it is easiest for rivals to set high prices in parallel are actually *less*, rather than more, likely to give rise to liability. That follows because agreement—whether explicit or based on inexplicit conduct, such as communications that fall short of clear agreement—tends to be needed only when it is difficult to elevate prices without resort to that conduct. That antitrust liability depends on particular horizontal tactics further encourages firms to steer clear of those tactics if possible. In other words, according to Kaplow, antitrust law ends up chasing an esoteric subset of price elevation achieved through direct communication, while ignoring the price elevation that occurs without it.[68]

These issues, carefully examined in the context of parallel price elevation, have not been similarly explored in the context of parallel exclusion. Posner, for example, focused on price elevation, not parallel exclusion.[69] Kaplow limits his analysis to coordinated price elevation.[70] Turner, who generally viewed self-entrenchment as a more important concern than price elevation, is the exception.[71]

The general neglect of parallel exclusion has had unfortunate doctrinal

66. *See, e.g.*, Louis Kaplow, *On the Meaning of Horizontal Agreements in Competition Law*, 99 CALIF. L. REV. 683, 758, 813-14 (2011) (under certain conditions, a narrow agreement requirement "relieves from liability a wide swath consisting of all of the cases posing the greatest danger," while imposing liability for cases posing less concern).

67. *Id.* at 758. This line of thinking has also been pursued in 6 PHILLIP E. AREEDA & HERBERT HOVENKAMP, ANTITRUST LAW ¶ 1432b1 (2d ed. 2003), which laments this "perverse" result on the ground that "the more concentrated market makes the agreement unnecessary, and thus the conduct can be explained without it"; and Jonathan B. Baker, *Two Sherman Act Section 1 Dilemmas: Parallel Pricing, the Oligopoly Problem, and Contemporary Economic Theory*, 38 ANTITRUST BULL. 143, 180-86 (1993).

68. Kaplow, *supra* note 66, at 758-65.

69. Posner, *supra* note 1, at 1562 ("The problem is: What rules and remedies are necessary to prevent supracompetitive prices in oligopolies, markets in which a few sellers account for most of the output?").

70. Kaplow, *supra* note 56, at 450 n.2 ("Attention is confined to coordination on price.").

71. *See* Turner, *Definition*, *supra* note 1, at 677-78. Turner considered several instances of parallel exclusion, including *American Tobacco Co. v. United States*, 328 U.S. 781 (1946), in which each oligopolist cigarette manufacturer allegedly purchased more tobacco than it needed in order to exclude discount cigarette makers. *See* Turner, *Definition*, *supra* note 1, at 677-78. We discuss this case in the text accompanying notes 93-100, *infra*. In later work, Turner discussed a hypothetical based on *United States v. United Shoe Machinery Corp.*, 391 U.S. 244 (1968). *See* Turner, *Scope*, *supra* note 1, at 1228-30.

consequences. As an example, consider *Bell Atlantic Corp. v. Twombly*, an important recent Supreme Court case about what suffices to allege an agreement in restraint of trade.[72] Plaintiffs accused the local Bell companies—the "Baby Bells" produced by the 1984 breakup of AT&T—of agreeing not to enter one another's geographic territories.[73] This is a collusion allegation of the ordinary sort: a nonprice agreement to limit competition among incumbents.

Plaintiffs also made a second allegation, however: that the Bell companies had agreed among themselves to exclude competitive new entrants in their territories.[74] Here, the plaintiffs alleged parallel exclusion.[75] In other words, the *Twombly* complaint alleged two forms of conduct that are fundamentally different. But the Court gave no indication that it recognized that there might be a meaningful difference between the two types of allegations, as to the likelihood of horizontal agreement or in the magnitude of the consequences for consumer welfare.

Twombly is now the law of the land, interpreted by lower courts to apply to both parallel pricing and exclusion cases.[76] However, there are important reasons to differentiate between exclusion and price elevation. These reasons are the subject of the next two Parts.

II. MECHANISMS AND EFFECTS

This Part takes a deeper look at the mechanisms, harms, and potential benefits of parallel exclusion. We first describe some of the main ways in which an industry may effectuate exclusion of entrants and the potential harms of such exclusion. Next, we consider benign and efficient forms of parallel conduct. The implicit premise of this Part is that the excluders are able to act, in effect, as a single dominant firm engaged in monopolization.

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72. Bell Atl. Corp. v. Twombly, 550 U.S. 544 (2007).

73. *Id.* at 549, 551, 567-69.

74. *Id.* at 550-51, 566-67.

75. This is an example of alleged parallel exclusion involving local monopolists, rather than oligopolists. See *infra* Section III.B for further discussion.

76. For an example of its application to parallel exclusion, see *In re Insurance Brokerage Antitrust Litigation*, 618 F.3d 300, 324-25 & n.25 (3d Cir. 2010), which stated that *Twombly* abrogated *Bogosian v. Gulf Oil Corp.*, 561 F.2d 434, 445-46 (3d Cir. 1977), an earlier case that took a lenient view at the pleading stage in evaluating an alleged concerted tie.

A. Mechanisms of Foreclosure

Anticompetitive exclusion can occur by a wide variety of means. As the D.C. Circuit explained in considering the U.S. government's antitrust suit against Microsoft, "the means of illicit exclusion . . . are myriad."[77] When harmful, these methods may weaken the rival, for example, by preventing it from achieving the economies of scale required to offer a competitive price. Lack of scale may also preclude a rival from gaining enough consumer adoption for a virtuous cycle to kick in, whereby widespread adoption makes the product more attractive for all users. The weakened competitor might also find it difficult to finance, either from external capital markets or retained earnings, the research and development needed to better displace the incumbent in the future. In the limit, these tactics may prevent entry entirely.

An extensive literature describes various means by which a powerful firm can exclude a rival and thereby harm competition.[78] These analyses of exclusion, while developed in the monopoly context, inform an understanding of the mechanisms of parallel exclusion. In this Section, we demonstrate with illustrative examples that these models adapt well to the oligopoly context.[79] Oligopolistic excluders, like a single dominant excluder, have both the incentive and the means to exclude. Here we identify six main mechanisms of exclusion used both unilaterally and in parallel.[80]

77. United States v. Microsoft Corp., 253 F.3d 34, 58 (D.C. Cir. 2001) (en banc) (per curiam).

78. For an introduction, see MICHAEL D. WHINSTON, LECTURES ON ANTITRUST ECONOMICS 133-97 (2006).

79. One mechanism of exclusion has always been primarily associated with oligopoly. A "meeting competition" clause gives a seller the option to retain a buyer's business by matching any lower price offered by a rival seller. Such a clause can have the effect of maintaining high prices by oligopolists by lowering the profitability of attempted defections. But it also limits the incursion of new entrants by providing a trigger strategy that applies to unwelcome outsiders as well as insiders. For a discussion, see Steven C. Salop, *Practices that (Credibly) Facilitate Oligopoly Co-ordination*, *in* NEW DEVELOPMENTS IN THE ANALYSIS OF MARKET STRUCTURE 265, 279-82 (Joseph E. Stiglitz & G. Frank Mathewson eds., 1986). For a formal model, see Iacobucci & Winter, *supra* note 22.

80. For a related categorization, see Jonathan B. Baker, *Exclusion as a Core Competition Concern*, 78 ANTITRUST L.J. (forthcoming 2013) (manuscript at 10-14), http://ssrn.com/abstract=2001579, which assesses exclusion mechanisms in terms of three overlapping categories: acting on one's own, buying a right from nonrivals, and altering rivals' incentives.

1. Simple Exclusion

In the simplest story, the excluders act on their own, without enlisting assistance from other parties, to raise the costs of market entry. The excluders might manipulate a standard-setting process to exclude the rival, engineer product incompatibility, or game the regulatory system. Though the methods vary, their shared features are that the excluder does not need to contract with others to succeed and that the costs of exclusion are relatively low. In the monopoly context, a good example of simple exclusion is AT&T's alleged effort in the 1970s to exclude MCI from long-distance service, including sabotaging MCI's connections, punishing its own customers when they chose MCI services, and disparaging the quality and reliability of MCI's products.[81] AT&T accomplished the exclusion on its own and at relatively low cost.

Members of an oligopoly can also use these techniques of simple exclusion.[82] Consider, for example, the *Allied Tube* case discussed in detail above. In *Allied Tube*, a group of steel conduit manufacturing firms used a standards process to exclude their rivals, plastic conduit manufacturers. The effort was led by a few firms and succeeded without extensive expenditures or dependence on other layers of the industry. As such, it is a good example of how parallel exclusion schemes can sometimes be most easily accomplished by the excluding industry acting by itself.

2. Recruiting Agents

A second means of exclusion is for the excluder to recruit "agents" at a different point in the chain of production—for example, a manufacturer's downstream distributors—to assist it in accomplishing the exclusion.[83] Microsoft, for example, entered into exclusive contracts with the firms that preloaded software on computers in order to starve Netscape, its rival, of the

81. *See* MCI Commc'ns Corp. v. AT&T Co., 462 F. Supp. 1072 (N.D. Ill. 1978).

82. *Cf.* Susan A. Creighton et al., *Cheap Exclusion*, 72 ANTITRUST L.J. 975, 976 n.7 (2005) (noting that exclusion "can be achieved by either collusive or unilateral means").

83. *See, e.g.*, Eric B. Rasmusen, J. Mark Ramseyer & John S. Wiley, Jr., *Naked Exclusion*, 81 AM. ECON. REV. 1137, 1137 (1991); Ilya R. Segal & Michael D. Whinston, *Naked Exclusion: Comment*, 90 AM. ECON. REV. 296, 297 (2000); John Simpson & Abraham L. Wickelgren, *Naked Exclusion, Efficient Breach, and Downstream Competition*, 97 AM. ECON. REV. 1305, 1305 (2007).

most important means of distribution.[84] Using such agents to weaken or exclude a competitor is one way to raise a rival's costs.[85]

The credit card case discussed in Part I illustrates the mechanism. As described above, Visa and MasterCard both promulgated rules that forbade member banks who issued credit cards from issuing any credit cards other than MasterCard or Visa, on threat of losing membership in the respective networks.[86] The networks, in other words, used the banks as their agents to exclude American Express from the market for bank-issued credit cards. The threat of being cut off from the Visa or MasterCard network kept each bank in line.

In a European example, the European Commission in the 1990s challenged the exclusionary tactics of a group of eight cargo shipping firms that were parties to a shipping association (or "shipping conference") known as CEWAL (Associated Central West Africa Lines).[87] CEWAL members shipped goods between Europe and West and Central Africa. Among other exclusionary methods,[88] the eight shipping companies devised a similar scheme of "loyalty contracts." In exchange for a 12.5% discount, customers shipping goods between Zaire and Northern Europe agreed to the exclusive use of CEWAL member firms for their shipping needs. Any customer found using an independent shipping firm, even in a very limited fashion, was placed on a blacklist and denied not just the rebate, but also, ominously, any expectation of "normal adequate service."[89]

Agent-driven schemes, unlike simple exclusion, can be expensive for the excluders. This is because the agents lose the opportunity to deal with outsiders, who may offer an innovative product or lower prices. Consider, for example, the distributor who typically wants to carry new or cheaper products.

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84. United States v. Microsoft Corp., 253 F.3d 34, 59-64 (D.C. Cir. 2001) (en banc) (per curiam); *see also* United States v. Dentsply Int'l, Inc., 399 F.3d 181, 187-97 (3d Cir. 2005) (imposing liability for exclusive dealing by a dominant firm).

85. Krattenmaker & Salop, *supra* note 8, at 214.

86. United States v. Visa U.S.A., Inc., 344 F.3d 229, 237 (2d Cir. 2003).

87. For the facts, see Commission Decision 93/82, 1993 O.J. (L 34) 20 (EC), http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:1993:034:0020:0043:EN:PDF.

88. CEWAL also featured a quasi-regulatory exclusionary mechanism. The shipping conference managed to convince or coerce the Zairian shipping authority to require that all goods carried between its ports and Northern Europe be carried on CEWAL vessels. When the Zairian authority decided to break with CEWAL to allocate two percent of the trade to a non-CEWAL shipper, CEWAL threatened the agency with various forms of retaliation, such as refusing to pay fees due, so as to prevent any further slippage. *See id.* at 25-26.

89. *Id.* at 26.

The agent, therefore, must either be paid off, threatened, or both, to make it cooperate with the scheme.

The cost of such a scheme is not necessarily high. Exclusion may be cheap where there are multiple agents and no single agent bears the full cost of exclusion. With multiple agents unable to coordinate their response, and no agent absorbing the full cost of accommodation, one agent may be played off against another, with a resulting equilibrium payment that verges on zero.[90] When the buyers are not final consumers but intermediaries, the problem may be particularly severe.[91] In the Microsoft setting, for example, a given PC manufacturer could be left out of the scheme without jeopardizing the effectiveness of the exclusion. Thus, Dell or HP would have a particularly strong incentive to sign up, lest they be left behind.

The difference between agent-driven and simple exclusion can be somewhat blurry. In many instances of simple exclusion (including the *Allied Tube* example discussed above), the excluders rely on another institution to achieve exclusion. One difference is that the agent-driven excluders must work with a different part of the industry, with its own business interests, as opposed to an independent body, like a standard-setting organization or government agency.

3. Overbuying an Input

A third mechanism of exclusion is to buy up an input necessary to an entrant's success. The particular form of the input varies by industry. It might be a natural resource, such as oil deposits or radio spectrum, or an input created by regulation, such as slots at airports for takeoffs and landings. What matters is that the resource must be scarce, such that its restriction by incumbents harms a rival by raising its costs. The mechanism overlaps the recruiting of an agent discussed above, but focuses on the purchase of inputs in spot-market transactions, rather than through more elaborate contracts. As with recruiting an agent, the excluders must pay for the additional unneeded quantity, making the scheme a potentially expensive proposition.[92]

For example, in the 1940s the Department of Justice sued an oligopoly of three cigarette manufacturers—American Tobacco, Liggett, and Reynolds—that had emerged from the dissolution of the American Tobacco Company

90. *See* WHINSTON, *supra* note 78, at 144-47.

91. Simpson & Wickelgren, *supra* note 83, at 1306-07.

92. Weyerhaeuser Co. v. Ross-Simmons Hardwood Lumber Co., 549 U.S. 312, 325-26 (2007) (specifying conditions under which predatory overbuying violates antitrust law).

monopoly in 1911.[93] The government alleged that the "Big Three" had excluded rivals by overbuying tobacco, the key input.[94]

Each of the Big Three depended for most of its business on a single, highly advertised cigarette (Lucky Strike, Chesterfield, and Camel, respectively), which was blended using relatively expensive tobaccos. In the early 1930s, in the depth of the Depression, smaller rivals to the oligopoly began offering lower-price cigarettes (ten cents per pack, compared to fourteen cents), which proved popular.[95] The entrants relied on cheaper blends of tobacco to keep costs down. Acting in parallel, according to the Department of Justice, American Tobacco, Liggett, and Reynolds began to purchase, in bulk, the cheap tobacco leaf that the discounters depended upon, so as to raise the discounters' costs.[96] There was no evidence that the Big Three even used the cheaper tobacco.[97] The goal, according to the government, was "to raise the price of such tobacco to such a point that cigarettes made therefrom could not be sold at a sufficiently low price to compete with the petitioners' more highly advertised brands."[98] The Court concluded that the jury had found an intent, through this and various other efforts, "to establish a substantially impregnable defense against any attempted intrusion by potential competitors into these markets."[99] The Court reached this conclusion despite the apparent absence of an explicit agreement among the Big Three.[100]

93. *See* United States v. Am. Tobacco Co., 221 U.S. 106 (1911) (ordering the dissolution of the American Tobacco Company).

94. Am. Tobacco Co. v. United States, 328 U.S. 781, 803-04 (1946). This was one of many complaints against the firms.

95. *Id.* at 806-08.

96. *Id.* at 803 ("[W]hen the manufacturers of lower priced cigarettes were beginning to manufacture them in quantity, the petitioners commenced to make large purchases of the cheaper tobacco leaves used for [their] manufacture. . . . No explanation was offered as to how or where this tobacco was used by petitioners.").

97. *Id.*

98. *Id.* at 804.

99. *Id.* at 800.

100. *Id.* at 789 (noting that conspiracy "was established, not through the presentation of a formal written agreement, but through the evidence of widespread and effective conduct" by the Big Three); *id.* at 800 ("[A]lthough there was no written or express agreement discovered among [the Big Three] their practices included a clear course of dealing . . . [that] evidently convinced the jury of the existence of a combination or conspiracy. . . ."); *see also id.* at 809 ("It is not the form of the combination or the particular means used but the result to be achieved that the statute condemns.").

4. *Tying and Bundling*

A related strategy is for the incumbent to insist that a purchaser of one product also take a second product offered by the firm. For example, Microsoft offered an Internet browser bundled with its operating system. This was a useful exclusionary strategy if, as was alleged, the independent version of the tied product—in this case, Netscape's browser—might otherwise emerge as a competitive substitute for the incumbent's tying product.[101] Under certain conditions, moreover, excluding the entrant can provide a source of additional profits from sales of the tied good.[102] These outcomes from tying, however, are far from inevitable. In other settings, tying provides no means for increased profit,[103] and indeed frequently is a source of increased efficiency.[104]

The conduct of Visa and MasterCard provides a second example of alleged parallel exclusion, in the form of parallel tying. A private antitrust suit, pursued simultaneously with the government challenge to the exclusionary rules, challenged the two firms' conduct pertaining to debit card products.[105] Debit cards, unlike credit cards, take money from an affiliated checking account immediately or within a short time. In the 1990s, when ATMs became widespread, a collection of payment networks, with names like Honor, Maestro, and Shazam, offered retailers the service of processing debit card

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101. United States v. Microsoft Corp., 253 F.3d 34, 64-67, 84-97 (D.C. Cir. 2001) (en banc) (per curiam).

102. This is the case when some customers of the tied good do not also demand the tying good, and where depriving the rival access to "captive" customers weakens it and thereby provides additional profit opportunities in the tied good. Michael D. Whinston, *Tying, Foreclosure, and Exclusion*, 80 AM. ECON. REV. 837, 840 (1990). For a nontechnical treatment, see Dennis W. Carlton, *A General Analysis of Exclusionary Conduct and Refusal To Deal—Why* Aspen *and* Kodak *Are Misguided*, 68 ANTITRUST L.J. 659, 667-68 (2001). Carlton calls this the "desert island" story, which he attributes to Robert Gertner. *Id.* at 667 n.19. *See generally* Elhauge, *Tying*, *supra* note 22 (discussing a range of circumstances where tying reduces welfare).

103. For an early statement of what has come to be known as the "one monopoly profit" result, see Aaron Director & Edward H. Levi, *Law and the Future: Trade Regulation*, 51 NW. U. L. REV. 281, 289-90 (1956).

104. Among other sources of efficiency, tying is a means to avoid double marginalization, in which two firms offering complementary goods fail to take each other's pricing decisions into account, resulting in higher price and lower quantity, compared to a single seller offering both goods. JEAN TIROLE, THE THEORY OF INDUSTRIAL ORGANIZATION 174-75 (1988).

105. *See* Wal-Mart Stores, Inc. v. Visa U.S.A., Inc., 396 F.3d 96 (2d Cir. 2005); *In re* Visa Check/Mastermoney Antitrust Litig., 280 F.3d 124 (2d Cir. 2001); *In re* Visa Check/Mastermoney Antitrust Litig., 297 F. Supp. 2d 503 (E.D.N.Y. 2003).

payments.[106] For authentication these firms relied on a personal identification number (PIN) and immediate access to the customer's checking account.

Beginning in the 1990s, Visa and MasterCard launched competing debit systems (built into bank-issued ATM cards, which gained a Visa or MasterCard logo). Their systems relied on a signature, rather than a PIN, and had a much higher fee: roughly, according to plaintiffs, the same percentage fee charged the retailer for credit card services, between one and two percent.[107] Signature debit was more vulnerable to fraud (due to the absence of a PIN) and slightly slower (because a signature was required).

The difference in price led some merchants to seek to refuse to honor the debit cards. However, Visa gave them the choice of either accepting both its credit and debit cards or making do with neither. MasterCard did the same.[108] This demand was sometimes referred to as the "honor-all-cards" rule.[109] The honor-all-cards rule is a good example of an exclusionary tying scheme taken in parallel. The rule served both as a way to blunt the competitive threat to credit cards from PIN debit, and to earn additional profits—billions, according to the retailers—from the debit market.

5. Resale Price Maintenance

Resale price maintenance (RPM) is a contractual practice by which a manufacturer sets the minimum price at which a retailer resells to consumers. As the Supreme Court recently noted, RPM can be used to exclude a rival manufacturer.[110] Economists have spelled out how RPM can have an exclusionary effect.[111] By employing RPM, a manufacturer can ensure that a retailer enjoys a profit when it sells the manufacturer's goods. The threat of losing that profit can be used to induce the retailers to behave in a way that

106. *In re* Visa Check/Mastermoney Litig., 192 F.R.D. 68, 72 (E.D.N.Y. 2000).

107. *Id.* at 72-73.

108. *Wal-Mart Stores*, 396 F.3d at 101.

109. *Id.*

110. *See* Leegin Creative Leather Prods., Inc. v. PSKS, Inc., 551 U.S. 877, 897 (2007); *see also* EUROPEAN COMM'N, GUIDELINES ON VERTICAL RESTRAINTS ¶ 100, at 32 (2010).

111. John Asker & Heski Bar-Isaac, *Vertical Practices Facilitating Exclusion* (NYU Stern Working Paper No. EC-12-20, 2012), http://web-docs.stern.nyu.edu/old_web/economics/docs/workingpapers/2012/Asker_BarIsaac-VerticalPractices_Oct2012.pdf; *see also* B.S. YAMEY, THE ECONOMICS OF RESALE PRICE MAINTENANCE 5-6, 34 (1954) (describing the use of resale price maintenance (RPM) by manufacturers to "dispos[e] some distributors more favourably towards their brands" and thereby "hinder[] the entry of new firms or growth of excluded firms").

benefits the manufacturer. That induced behavior can be procompetitive, as when the margin is used to encourage service or other valuable activities in support of the product.[112] But it can also be deployed to deter entry.[113] If entry reduces the incumbent's profits, that in turn may reduce the profits transferred to the retailer. As a result, the retailer comes to share the manufacturer's interest in avoiding competition, and might decline to carry a competing brand. The argument applies not only to RPM, but also to other means by which a margin is supplied to the retailer, such as the payment of "slotting fees" to retailers.

A study of the U.S. Sugar Trust in the late nineteenth and early twentieth centuries demonstrates the potential for using RPM to pursue exclusionary goals. During the period in which it controlled more than eighty percent of the U.S. sugar market, the American Sugar Refining Company insisted that wholesale grocers not resell sugar below a minimum price.[114] Wholesalers who promised to adhere to this policy were guaranteed a profit by the payment of rebates, while those who broke ranks were denied a rebate.[115] The point of this scheme appears to have been the exclusion of rivals.[116]

The U.S. cigarette industry offers an illuminating example of the transition from a unilateral to a parallel RPM scheme. In the late nineteenth and early twentieth centuries, cigarette manufacturing was a monopoly, dominated by a Tobacco Trust that lasted for twenty-one years, headed by the American Tobacco Company.[117] During this period, the trust maintained high resale prices,[118] in part by helping cooperative distributors to gain dominance. These

112. Benjamin Klein & Kevin M. Murphy, *Vertical Restraints as Contract Enforcement Mechanisms*, 31 J.L. & ECON. 265, 265-66 (1988).

113. Asker & Bar-Isaac, *supra* note 111, at 25.

114. Howard P. Marvel & Stephen McCafferty, *The Welfare Effects of Resale Price Maintenance*, 28 J.L. & ECON. 363, 366 (1985).

115. *Id.*

116. *Id.* at 367 ("The desire to deny distribution to rivals has seemed to careful students the most plausible explanation for the use of RPM in the sugar trade."); *see also* ALFRED S. EICHNER, THE EMERGENCE OF OLIGOPOLY: SUGAR REFINING AS A CASE STUDY 193 (1969) (noting the scheme's effect as an impediment to new entry in refining).

117. ALLAN M. BRANDT, THE CIGARETTE CENTURY: THE RISE, FALL, AND DEADLY PERSISTENCE OF THE PRODUCT THAT DEFINED AMERICA 34 (2007).

118. RICHARD B. TENNANT, THE AMERICAN CIGARETTE INDUSTRY: A STUDY IN ECONOMIC ANALYSIS AND PUBLIC POLICY 49 (1950). The tactics used to maintain dominance included a variety of punishments to ensure that retailers did not cut prices, such as revoking rebates and denying the future supply of cigarettes. *Id.* at 304-06.

policies apparently were designed to prevent entry.[119]

After the Supreme Court ordered the dissolution of the Tobacco Trust in 1911, the Big Three each maintained the RPM scheme of the former monopoly. For example, the Big Three continued to deal exclusively with Metropolitan Tobacco Company, one of the cooperative distributors, in regions that Metropolitan dominated, prompting complaints of a "new four-headed trust."[120] After the Department of Justice threatened to reopen the decree, the four companies agreed to deal with other wholesalers. In the 1920s, some (though not all) manufacturers attempted to maintain the policy,[121] resulting in FTC action[122] that helped bring an end to the practice.[123]

Whether RPM by the tobacco oligopoly actually had an exclusionary effect is unclear. In the decades after the Trust's dissolution, from 1911 to the 1940s, there was minimal entry despite enormous profit margins, though the high cost of entry was likely the key impediment.[124]

6. Most Favored Nation Provisions

A final mechanism for exclusion by a dominant firm, also applicable to parallel exclusion, is the use of most favored nation (MFN) provisions in contracts.[125] An MFN provision provides the buyer with a kind of insurance. If the seller provides some other buyer with a lower price, the protected buyer also receives the lower price. Protection can also extend to nonprice terms, such as new business models.[126]

An MFN provision can enhance efficiency, for example, by lowering input costs, particularly where bargaining is costly, or by hedging against uncertain

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119. *Id.* at 305 ("The policy of the Trust seems to have been aimed both at securing its monopoly position by controlling distributors and at preventing indiscriminate price cutting.").

120. *Seeks To Reopen Tobacco Decree*, N.Y. TIMES, Jan. 4, 1914, at 1, 3.

121. TENNANT, *supra* note 118, at 309-11. Reynolds did not join the scheme, which made it fragile. *See id.* at 310.

122. Am. Tobacco Co. v. FTC, 9 F.2d 570 (2d Cir. 1925).

123. *See* TENNANT, *supra* note 118, at 310-11 (concluding that the prospect of further litigation, combined with competition from Reynolds, brought an end to the practice).

124. *Id.* at 353-66.

125. The term is an apparent reference to the similar provision in international trade agreements.

126. Shalini Ramachandran, *'Favored Nations' Fight for Online Digital Rights*, WALL ST. J., June 14, 2012, at B3, http://online.wsj.com/article/SB10001424052702303410404577466940749077080.html ("Initially about economic terms, clauses are now being negotiated around digital rights . . . .").

market conditions.[127] In some instances, however, an MFN provision can be used to exclude new distributors.[128] Suppose a new distributor, a discount store perhaps, hopes its low prices will help it compete with the incumbent's superior brand awareness or high consumer switching costs. If the discounter tries to get lower prices from sellers, its strategy will be impeded by an MFN provision that forces the seller to extend any new discount to the incumbent distributor as well.[129]

When multiple buyers have MFN agreements with sellers, the effect can be the same as an MFN with a single dominant firm.[130] As more buyers insist upon the MFN provision, it becomes increasingly expensive for a seller to offer a discount to any given buyer, because the discounted price would have to be shared with all the beneficiaries of the MFN clause. And it becomes incrementally more difficult for an entrant buyer to rely on a new and different business strategy because the seller who wants to deal with the new buyer must renegotiate multiple relationships with its existing buyers. One possible example of parallel MFN agreements that has received recent scrutiny is online video distributors, which offer video programming over the Internet in competition with traditional cable providers.[131]

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127. Jonathan B. Baker, *Vertical Restraints with Horizontal Consequences: Competitive Effects of "Most-Favored-Customer" Clauses*, 64 ANTITRUST L.J. 517, 531-32 (1996).

128. *Id.* at 523-25. *See generally* Fiona Scott-Morton, Deputy Assistant Att'y Gen., Dep't of Justice, Speech at Georgetown University Law Center Antitrust Seminar: Contracts that Reference Rivals 11-14 (Apr. 5, 2012) (transcript available at http://www.justice.gov/atr/public /speeches/281965.pdf) (assembling theory and evidence that most favored nation (MFN) provisions can have exclusionary effects). This is not the only potential anticompetitive effect. MFN clauses can also facilitate price elevation among sellers. Salop, *supra* note 79, at 273-79.

129. For an example of antitrust enforcement, see Competitive Impact Statement, *United States v. Delta Dental of Rhode Island*, 943 F. Supp. 172 (D.R.I. 1996) (No. 96-113P), http://www.justice.gov/atr/cases/f1000/1074.htm. Here, the entrant had reason to expect that it could get a better price than the incumbent, with respect to a particular set of dentists, by guaranteeing higher volume. *See also* United States v. Comcast Corp., No. 11:1-CV-106, 2011 WL 5402137, at *10-11 (D.D.C. Sept. 1, 2011) (prohibiting, as a condition of permitting a joint venture between Comcast and NBC Universal, certain agreements that reduce the incentive for other firms to provide content to online video distributors); Applications of Comcast Corp., Gen. Elec. Co. & NBC Universal, Inc., 26 F.C.C. 4238, 4361 (2011) (same).

130. *See* Scott-Morton, *supra* note 128, at 11-14 (noting the feasibility of exclusionary effect in both single-firm and multiple-firm settings).

131. *See, e.g.*, Thomas Catan & Amy Schatz, *U.S. Probes Cable for Limits on Net Video*, WALL ST. J., June 13, 2012, at A1, http://online.wsj.com/article/SB10001424052702303444204 577462951166384624.html (reporting a Department of Justice investigation into whether MFN clauses, required by cable companies, "stop programmers from experimenting with

7. Lessons

Aside from illustrating the myriad mechanisms of parallel exclusion, these examples present two general lessons about when to anticipate a risk of parallel exclusion.

First, these mechanisms are most effective at deterring the entry of a nascent competitor, as opposed to causing the exit of an existing rival. All of the examples are about keeping out new entrants—American Express, for example, had not yet entered the business of bank-issued cards when Visa and MasterCard deployed their exclusionary policies. Causing the exit of an existing, full-fledged rival is much more difficult because such rivals are better equipped to deter, avoid, or respond to their fellow incumbents' actions.

Second, the price of an exclusion mechanism predicts the frequency of its occurrence. Where exclusion is cheap to implement—for example, the exclusion of PVC pipes by steel pipe manufacturers—parallel exclusion can be supported even if the postexclusion equilibrium features many manufacturers and low profits. Where exclusion is expensive, such as overbuying an input, the exclusion mechanism must generate elevated prices for competitors in order to be viable.

B. Harms

Effective, anticompetitive parallel exclusion generates several distinct harms. First, like parallel pricing, parallel exclusion allows the excluders to sustain higher prices, which deflects some consumers, who value the good at or above its marginal cost, to less desired substitutes.[132] In fact, exclusion preserves and reinforces parallel pricing. After all, if the insiders are unable to maintain an elevated price on account of easy entry, there is no deadweight loss to worry about. Exclusion therefore can be closely linked to price elevation. Our contention, however, is that price elevation is not the only harm caused by exclusion.

The additional harms of parallel exclusion come from slowing or blocking product innovation of two types: the introduction of *higher-quality* substitutes and *lower-cost* substitutes.[133] This loss of innovation is a much more important

other forms of online distribution"); Ramachandran, *supra* note 126 (discussing entrants' difficulties in greater detail).

132. For a discussion of deadweight loss and other harms of oligopolistic price elevation, see Louis Kaplow, *An Economic Approach to Price Fixing*, 77 ANTITRUST L.J. 343, 353 (2011).

133. *See* BOHANNAN & HOVENKAMP, *supra* note 30, at 250 (describing "collusive innovation restraints"); Einer Elhauge, The Exclusion of Competition for Hospital Sales Through effect. In the 1950s, Robert Solow demonstrated that more than eighty percent of the increase in U.S. labor productivity was due to technical progress.[134] More recently, Herbert Hovenkamp concluded that "today no one doubts . . . that innovation and technological progress very likely contribute much more to economic growth than [other factors]."[135] New products and services drive economic growth, and economic analysis suggests that technological change ultimately dominates price effects in its long-run contribution to welfare.[136] A remarkable consensus across a spectrum of economic opinion takes dynamic harms and benefits as far more important than static ones. That observation, however, has not generally yielded a recognition that parallel exclusion can be far more significant than parallel price elevation.[137]

Group Purchasing Organizations (June 25, 2002) (unpublished manuscript), http://www.law.harvard.edu/faculty/elhauge/pdf/Elhauge_GPO_Report_June_2002.pdf ("[B]y far the bigger cost of such exclusionary agreements is that they are likely to prevent all sorts of innovative products from ever being created.").

134. Robert M. Solow, *Technical Change and the Aggregate Production Function*, 39 REV. ECON. & STAT. 312 (1957).

135. Herbert Hovenkamp, *Restraints on Innovation*, 27 CARDOZO L. REV. 248, 253 (2007); *see also* Joseph F. Brodley, *The Economic Goals of Antitrust: Efficiency, Consumer Welfare, and Technological Progress*, 62 N.Y.U. L. REV. 1020, 1026 (1987) (characterizing innovation as "the single most important factor in the growth of real output in . . . the industrialized world").

136. *See* JOSEPH A. SCHUMPETER, CAPITALISM, SOCIALISM, AND DEMOCRACY 63-120 (3d ed. 1942); Brodley, *supra* note 135 (arguing that dynamic efficiency matters more than static efficiency); Solow, *supra* note 134.

137. Indeed, some commentators have taken the view that *more* exclusion of competitors by incumbents, rather than less, would promote innovation. *E.g.*, Keith N. Hylton & Haizhen Lin, *Optimal Antitrust Enforcement, Dynamic Competition, and Changing Economic Conditions*, 77 ANTITRUST L.J. 247 (2010). This conclusion rests on two premises. First, the freedom to exclude confers a larger ex ante incentive on the incumbent, compared to ordinary monopoly profits, and thus promotes greater innovation by the future incumbent. Second, outsized incumbents are the best innovators, because they have the large scale needed for certain research and the capital to reinvest in research and development. PETER DRUCKER, THE CONCEPT OF THE CORPORATION 223-26 (1946); SCHUMPETER, *supra* note 136, at 81-106.

These premises have been challenged on multiple grounds. Kenneth Arrow showed that highly profitable incumbents often have little incentive to innovate because innovation cannibalizes an existing business. Kenneth Arrow, *Economic Welfare and the Allocation of Resources for Invention*, *in* THE RATE AND DIRECTION OF ECONOMIC ACTIVITIES: ECONOMIC AND SOCIAL FACTORS 609 (Richard Nelson ed., 1962). As an empirical matter, dramatic innovations in the twentieth century have tended to come from outsiders, not incumbent firms. TIM WU, THE MASTER SWITCH: THE RISE AND FALL OF INFORMATION EMPIRES (2010); *see also* Jonathan B. Baker, *Beyond Schumpeter vs. Arrow: How Antitrust Fosters Innovation*, 74 ANTITRUST L.J. 575, 583-88 (2007) (surveying the empirical literature). Meanwhile, dominant firms have frequently slowed innovation by obstructing the market entry of innovative outsiders. BOHANNAN & HOVENKAMP, *supra* note 30, at 245-50 (2011). Where

The expected size of the innovation effect will differ depending on the level of innovation already present in the industry. In established industries with familiar technologies, we do not expect the prospect of innovative entrants to make much of a difference. (A complicating factor is that the lack of innovation in an industry may itself be the result of exclusion, such that a low level of innovation is less informative than a high one.) In industries marked by rapid technological change, the exclusion of entrants has a far greater impact on the development of the industry. In these industries, exclusion, not price-fixing, is the "supreme evil"[138] that antitrust should address.

The costs are high where the excluded technological innovation is a better product. In an extreme case it might be so dramatically better that the new product supplants almost all the demand for the old one, as digital cameras did to film cameras. This is the "creative destruction" or "competition for the market" that Joseph Schumpeter took as the key to economic growth.[139] Where the innovative product is a serious existential threat to members of the oligopoly, the incentive to block or co-opt the entrant can (understandably) be strong.

Incumbents may also exclude firms whose innovation affects cost. These entrants or competitors do not offer a different product, but rather a lower-cost version of the same product, usually by improving the efficiency of production. Consider, for example, the well-studied threat to the U.S. steel industry by Japanese rivals from the 1950s through the 1970s. Most studies credit Japan's success in this period to the Japanese adoption of new technologies that facilitated increased economies of scale.[140] In such a case, even if the incumbents are pricing at or near a competitive level, they are likely to perceive a threat from a lower-cost entrant.

The harm from lost innovation is often, but not always, accompanied by

self-entrenchment excludes an innovator, the tradeoff is particularly stark: the permission to exclude is likely to have only a modest incremental positive effect on the ex ante incentives of the incumbent, but a powerful negative effect on the innovative entrant. *Id.* at 246.

138. Verizon Commc'ns Inc. v. Law Offices of Curtis V. Trinko, L.L.P., 540 U.S. 398, 408 (2004). To be precise, *Trinko* said that "collusion," not just price-fixing, was the supreme evil of antitrust. But the reference has been understood narrowly. *E.g.*, D. Daniel Sokol, *Cartels, Corporate Compliance, and What Practitioners Really Think About Enforcement*, 78 ANTITRUST L.J. 201, 228 n.119 (2012); Thomas O. Barnett, Assistant Attorney Gen., Dep't of Justice, Address at the Georgetown Law Global Antitrust Enforcement Symposium: Global Antitrust Enforcement 1 (Sept. 26, 2007), http://www.justice.gov/atr/public/speeches/226334.pdf.

139. *See* SCHUMPETER, *supra* note 136, at 63-120.

140. *See, e.g.*, Marvin B. Lieberman & Douglas R. Johnson, *Comparative Productivity of Japanese and U.S. Steel Producers, 1958-1993*, 11 JAPAN & WORLD ECON. 1, 2-3 (1999) (summarizing the reasons for the ascendance of the Japanese steel industry).

price elevation. Parallel exclusion effectively places a moat around incumbents, which shelters them from outside competition. In some instances, the shelter permits the incumbents to earn supracompetitive profits. In others, however, the threat from competition is existential, and the barrier simply allows insiders to continue to eke out a barely profitable existence.[141] Moreover, the feasibility of costly exclusion is related to the nature of the private benefits. Where the benefits are greater—in particular, where exclusion permits price elevation—then parallel exclusion may be undertaken even where it is costly.

In the evaluation of any prospective case of parallel exclusion, it is important to specify that the potential harms of any conduct are highly case-specific. Much turns on the exact nature of the conduct and the identity of both the excluders and the excluded. Hence prosecutorial and judicial discretion are extremely important in this area.

For example, we have identified strong potential effects on innovation as a principal harm of parallel exclusion. This only follows, however, if the would-be entrant is an innovator offering a higher-quality or lower-cost product. When that is not true, excessive entry can itself be inefficient. It requires the entrant to expend the additional fixed cost of entry, and even an entrant that is inefficient relative to the incumbents may be able to survive thanks to price elevation.[142] This is just one consideration that must be kept in mind. We now turn to a more systematic consideration of the benefits of parallel exclusion and related parallel conduct.

C. Benign and Efficient Parallel Conduct

While the subject of this Article is anticompetitive parallel exclusion, we think it important to make clear that across the vast range of business operations, only some fraction of parallel conduct is exclusionary and some fraction of that is both exclusionary and anticompetitive. The latter conclusion follows from the recognition that not all parallel exclusionary conduct is harmful, on balance, once justifications for the conduct are taken into consideration. In this Section we discuss classes and examples of parallel conduct that are unlikely to be of concern.

141. This point has been noted in the particular context of boycotts. *See* 13 HERBERT HOVENKAMP, ANTITRUST LAW ¶ 2202b, at 258, ¶ 2220b3, at 340 (2d ed. 2005).

142. For analyses making these points, see POSNER, *supra* note 8, at 14; Kaplow, *supra* note 132, at 346, 356-59 & n.35, 369, 414, 446; and N. Gregory Mankiw & Michael D. Whinston, *Free Entry and Social Inefficiency*, 17 RAND J. ECON. 48 (1986), which argues that exclusion may be socially efficient in homogeneous product markets if entry has a primarily share-stealing rather than market-expanding effect.

1. *Nonexclusionary Conduct*

There are many benign forms of parallel conduct. For example, it is a common and essential part of the competitive process for firms to imitate each other or act in concert, yielding conduct that is parallel but not anticompetitive. One precondition for antitrust scrutiny, then, is that the parallel conduct is of a kind that, in the hands of a dominant firm, would be potentially anticompetitive.

A first example within this category is coincidental or "best-practices" conduct that lacks self-entrenching effects. For example, competing firms might all do business with the same travel agent or order their office furniture from the same manufacturer. While this certainly counts as parallel conduct, it is hard to imagine circumstances in which it would be anticompetitive.

More important is the process of imitation, or parallel product design. The competitive process depends on firms imitating or copying each other's products and services, as happens frequently when the product is successful. Consider that Apple's successful iPad, a tablet computer introduced in 2010, was immediately imitated by competitors, including Samsung, Amazon, and others. The end result was a form of parallel conduct—numerous competing firms released somewhat similar tablets—yet also many more choices for the consumer, plus lower prices.[143]

Such imitation or parallel product design is central to the competitive process, for other firms must introduce products that meet the same consumer demand for there to be competition at all. At some point, of course, close copying could erode the incentives of the innovator, but that is an issue mainly of concern to the intellectual property laws.[144]

Outside of imitation, it is also very common for parallel product design to emerge when firms react similarly to trends, fashions, and external shocks. Hemlines tend to rise and fall in parallel, and cars become larger and smaller depending on consumer preference and the price of gasoline. Again, with

143. Whether such imitation violates intellectual property law is a separate question, outside the scope of this Article. For a taste of this debate, compare *Apple Inc. v. Samsung Electronics Co.*, 11-CV-01846, 2012 WL 4078433 (N.D. Cal. Aug. 24, 2012), in which the court awarded Apple more than $1 billion for infringement of patents and trade dress, with *Apple, Inc. v. Motorola, Inc.*, 1:11-CV-08540, 2012 WL 2376664 (N.D. Ill. June 22, 2012) (Posner, J., sitting by designation), in which the court dismissed litigation regarding patent infringement between Apple and Motorola Mobility with prejudice.

144. For perspectives, see C. Scott Hemphill & Jeannie Suk, *The Law, Culture, and Economics of Fashion*, 61 STAN. L. REV. 1147, 1175 (2009); and Kal Raustiala & Christopher Sprigman, *The Piracy Paradox: Innovation and Intellectual Property in Fashion Design*, 92 VA. L. REV. 1687 (2006).

important exceptions, such parallel product design decisions ought to be considered essential to the competitive process.

The next category of benign parallel conduct is practices that involve a potentially exclusionary tool but no substantial likelihood of exclusionary effect. For example, consider the commonplace parallel adoption of "loyalty cards" by competing coffee shops or supermarkets. This is parallel conduct, and it is not impossible that a loyalty program could either be used in an anticompetitive manner or form part of an exclusionary strategy. In the usual case, however, given that any new entrant can easily start its own loyalty program, and given the limited degree of loyalty such programs usually inspire, such cards are unlikely to represent anticompetitive parallel exclusion in the ordinary course of affairs.

Similarly, there are various industry-wide practices, such as bundling car radios with cars, or widespread use of the franchise model by restaurants, that may match the form of an exclusionary practice discussed in Section II.A. In each of these, the practice *could* be used in exclusionary manner, but in the normal course of affairs should be presumptively considered harmless parallel conduct. This is only a presumption, however. In Part IV, we consider the limited circumstances under which these practices, as a doctrinal matter, give rise to antitrust concerns.

2. *Efficient Exclusion*

Some of the most interesting cases concern parallel conduct that is exclusionary but nonetheless, on balance, not anticompetitive. Such conduct can be described as "incidental" or "justified" parallel exclusion, conduct where the exclusion is a secondary or even unintentional effect of some other, laudable goal that justifies it. Sometimes the exclusionary effect is known to the parties in question, but at other times, the firms involved might not even recognize that their actions support an exclusionary outcome.[145] Unfortunately, it is impossible to describe the full range of conduct that might be counted as incidental or justified parallel exclusion. Here we provide illustrative examples based on important cases.

Standard Setting. Standard setting is a form of parallel product design that is interesting precisely because its beneficial, innovation-inducing effects depend on parallel conduct by most of the members of the industry. As such it

145. *Cf.* DOUGLAS G. BAIRD, ROBERT H. GERTNER & RANDAL C. PICKER, GAME THEORY AND THE LAW 178 (1994) (noting that firms might not recognize that their activities support an anticompetitive equilibrium in the context of tacit collusion).

is an exemplar of beneficial or efficient parallel conduct. Though undeniably exclusionary by its very nature, standard setting is ordinarily justified.

We can describe a standard as an explicit or implicit agreement among competitors to design some aspect of a product in exactly the same way. Such standard setting can be pursued through a standard-setting organization (whether private, such as the Institute of Electrical and Electronics Engineers or Internet Engineering Task Force, or public, such as the Federal Communications Commission (FCC) and International Telecommunication Union), or, alternatively, arise in an organic fashion. An example of an explicit, agreed-upon standard is the 802.11 standard for WiFi routers, which ensures that any device adhering to the standard can connect to any other. The QWERTY keyboard is an example of an organic standard: it arose in the typewriter industry after being adopted by the Remington Company in the 1870s, and it remains the standard for personal computers and even mobile phones today.[146]

While the goal of standard setting is interoperability rather than exclusion, standard setting necessarily has incidental exclusionary effects. That follows because the choice of a standard excludes noncompliant products. However, such effects, in the usual case, should be considered secondary to the primary goal of ensuring interoperability or defining a set of standards that serve as a platform for follow-on products and applications.[147] In practical effect, a standard usually makes market entry easier, by allowing firms to enter a market without complete integration. A headphone manufacturer, for example, can be a stand-alone firm; the standard means it need not also make its own music players to compete. A successful standard, on balance, makes market entry easier, not harder.

But standard setting cannot always be given a free pass, because its exclusionary nature can, and has been, used for anticompetitive ends. A standard can have an exclusionary effect if it is crafted so as to exclude one class of disfavored competitors, rather than to spur innovation or serve other purposes. We need only return to *Allied Tube*, discussed earlier. There, the industry body, dominated by steel pipe manufacturers, set a standard that excluded plastic piping and thereby barred the manufacturers of such pipes

146. For historical accounts, see Paul A. David, *Clio and the Economics of QWERTY*, 75 AM. ECON. REV. 332 (1985); and W.E. Herfel, *Positive Feedback and Praxiology: Path Dependence in Action*, *in* PRAXIOLOGY AND THE PHILOSOPHY OF TECHNOLOGY 55, 58-59 (Wojciech W. Gasparski & Timo Airaksinen eds., 2008).

147. For more on the role of standards in creating platforms—ecosystems, in the jargon—see Tim Wu, *Taking Innovation Seriously: Antitrust Enforcement if Innovation Mattered Most*, 78 ANTITRUST L.J. 313 (2012).

from competing. The difference between *Allied Tube* and ordinary standard setting is that there the standard was deliberately engineered to exclude a certain class of competitors. It serves to show that per se legality for standard setting is inappropriate.

Parallel Marketing Practices. The adoption of parallel marketing practices is a good example of parallel conduct that, while intended for one purpose, may yield incidental exclusionary effects. Consider, as an example, the *Kellogg* case pursued by the FTC for most of the 1970s.[148]

The FTC accused four firms (with a combined ninety percent share of the ready-to-eat breakfast cereal market, as of 1970[149]) of using "brand proliferation," in parallel, as an exclusionary practice. Cereal manufacturers, the theory went, had flooded the market with multiple variations of a basic cereal concept in order to exclude competitors.[150] For example, in the flavored cereal area, Kellogg and its fellow oligopolists created multiple similar sugar cereals, including "Froot Loops, Cocoa Puffs, Trix, Orange Sugar Crisp, Kream Krunch, Kombos and Krinkles."[151] FTC staff argued that brand proliferation made it much more difficult for a would-be entrant to gain market share by exhausting shelf space and thereby limiting the scale available to a potential entrant. Brand proliferation required a would-be challenger to the oligopoly to enter with multiple brands at once in order to succeed.[152]

Whether the practice actually had this exclusionary effect was never quite clear, but if it did, the case is also a good example of what we have called incidental exclusion. For even if the secondary effect was exclusionary, the primary goal of carrying diverse brands was likely to serve a broader variety of consumer preferences. At least some brand proliferation was clearly warranted: even if both children and adults like sugary cereal, they will likely be attracted to different packaging. The Commission effectively admitted that the exclusion was incidental when it ended the *Kellogg* case, ruling that "[b]rand proliferation is nothing more than the introduction of new brands which is a legitimate means of competition."[153]

Requirements Contracts. A final notable area in which parallel exclusion is frequently justified is the industry-wide adoption of requirements contracts. A

148. Kellogg Co., 99 F.T.C. 8 (1982).

149. *Id.* at 11. In 1969, Kellogg led with a 45% share, followed by General Mills (21%), General Foods (16%), and Quaker (9%). *Id.*

150. *Id.* at 12-13, 32-35, 160-90.

151. *Id.* at 65.

152. *Id.* at 37-38, 172-73.

153. *Id.* at 256.

requirements contract is a form of exclusive contract that obligates a firm, for some period of time, to buy all of its needs for a certain product from a single supplier. Such contracts are common and often efficient, for example, because they allow the seller to maintain the quality of a branded service. When such a contract is entered into between two firms without market power, there is usually no reason to subject the agreement to antitrust analysis. However, when the practice of requirements contracting becomes an industry-wide standard, a different analysis becomes necessary.

The *Standard Stations* case illustrates the problem.[154] In the 1940s, the Department of Justice sued Standard Oil of California (Socal) based on its requirements contracts with Socal-branded gasoline retailers. The case raised the exclusionary concern that these contracts might suppress competition, apparently by limiting the remaining available outlets for retailing. The Supreme Court condemned this practice as an antitrust violation.[155]

This result is often criticized, but sometimes for the wrong reason. For example, one leading critic of the case dismisses the result on the ground that as to Socal, "the absence of market power could have been determined on the pleadings."[156] The idea is that a firm so unimportant would be incapable of orchestrating an anticompetitive result. But this critique misses an important aspect of the case. The Court's opinion was not an attack on Socal's conduct alone, but on an *industry-wide* practice of exclusive contracting. Collectively, the top seven firms accounted for a large fraction of distribution.[157] The Court centered its attention on the fact that "all the other major suppliers have also been using requirements contracts,"[158] which "enable[d] the established suppliers individually to maintain their own standing and at the same time *collectively, even though not collusively*, to prevent a late arrival from wresting away more than an insignificant portion of the market."[159]

In other words, *Standard Stations* is properly understood as a case about

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154. *Standard Stations*, 337 U.S. 293 (1949).

155. *Id.* at 314. The restraints were condemned as a violation of section 3 of the Clayton Act. The Court did not reach the question of whether section 1 of the Sherman Act was violated. *Id.*

156. Frank H. Easterbrook, *The Limits of Antitrust*, 63 TEX. L. REV. 1, 23 (1984).

157. *Standard Stations*, 337 U.S. at 309 n.12 (noting that the top seven firms "distributed . . . through 26,439 of approximately 35,000 independent service stations in the Western area").

158. *Id.*; *see also id.* at 295 ("It is undisputed that Standard's major competitors employ similar exclusive dealing arrangements."); *id.* at 302 (emphasizing the difference from earlier cases, in that Standard was not a dominant firm).

159. *Id.* at 309 (emphasis added). Later cases have identified the industry-wide nature of the practice as a key to the result. *See infra* Section IV.B.

parallel exclusion. Judged as such, nevertheless, the case was still wrongly decided. First, the anticompetitive effects of the practice are hard to discern.[160] The Court itself acknowledged the absence of demonstrated effect.[161] We are unaware of evidence that distribution resources were scarce or difficult to build, so exclusivity was unlikely to prevent the emergence of competitors to Socal and the other firms already in the market. Nor were the contracts of long duration, meaning that retailers could eventually switch suppliers if necessary. Even if the exclusion of additional competitors had been effective, moreover, the effect on *competition* would likely have been modest, as there were many competitors already. In this respect, the conduct is properly regarded as nonexclusionary.

Second, the conduct appears to have been justified on several grounds, indicating that this was a case of justified parallel exclusion. Indeed, the *Standard Stations* Court identified a variety of procompetitive benefits that could result from requirements contracts.[162] One not discussed by the Court, but applicable here, is the protection of Socal's investment in the stations, such as pumps and signage, that it expected to recoup through the contract over time.[163] Allowing the retailer to buy gasoline from another source would preclude a return on those investments. It would also permit a form of free riding, in which a dealer could invisibly pass off a lower quality gasoline from another provider as Socal's, a harm ultimately borne by Socal and other dealers.[164] Thus, any modest exclusionary effect of the industry-wide practice was likely outweighed by the justifications. It is in light of this fuller analysis that the requirements contracts in *Standard Stations* should not have been condemned.

III. STABILITY

A principal objection to our analysis so far might take the following form. We have assumed that a group of firms acts just like a single monopolist in excluding competitors. But in reality, they might behave differently. As in a

160. *See, e.g.*, POSNER, *supra* note 8, at 229, 264.

161. *Standard Stations*, 337 U.S. at 310-11. The Court noted the absence of demonstrated effect but determined that, for purposes of section 3 of the Clayton Act, there was no need to prove an "actual[] diminish[ment]" of competition. *Id.* at 311.

162. *Id.* at 306–07 (identifying as benefits, inter alia, improved planning, less price fluctuation, and avoided transaction costs).

163. Benjamin Klein, *Exclusive Dealing as Competition for Distribution "On the Merits*," 12 GEO. MASON L. REV. 119, 138 & n.60 (2003).

164. Benjamin Klein, *The Economics of Franchise Contracts*, 2 J. CORP. FIN. 9 (1995).

price elevation scheme, and unlike single-firm exclusion, one or more firms might deviate from an exclusion scheme and cause it to collapse.

We therefore turn to a consideration of the stability of parallel exclusion schemes. Parallel exclusion differs from parallel pricing in its relative resistance to collapse. Parallel pricing may be harder to sustain due to both external and internal factors. The external constraint is that the elevated price attracts entry from outsiders. The internal constraint is that cartels are unstable. We postulate that sustaining cooperation to exclude in parallel should usually be easier than pricing in parallel. Consequently, we predict that even oligopolies that compete on price may nonetheless cooperate on exclusion. Regulation of parallel exclusion is thus all the more important, and its relative neglect all the more surprising.

We proceed, following basic game theory, by examining two different games in which oligopolists find themselves. In the following Section, we examine those cases in which the excluders face a dynamic of interdependence, analogous to the familiar prisoner's dilemma of price elevation. In Section III.B, we consider a second game, in which exclusion is a dominant strategy.

A. Interdependent Exclusion

1. A Prisoner's Dilemma

A single excluding oligopolist generally faces some pressure to cheat, just as a single participant in a parallel pricing scheme does. One source of cheating is the impulse to accommodate the entrant. Consider a setting where a would-be entrant offers new technology. While it might be collectively advantageous for the incumbents to keep out the innovation, an entrant can pay one of the excluders to let it in, promising the excluder a share in the profits it will earn.[165]

The wireless telecommunications market provides an illustration. In November 2007, Google released Android, an open-source smartphone operating system.[166] At the time, the four dominant wireless carriers had reason to be wary. Android enabled the use of technologies that the carriers considered threatening, particularly WiFi technologies and voice-over-IP programs such as Skype that substituted for the wireless carriers' own

165. Indeed, in some models, such entry occurs in equilibrium. *See* Philippe Aghion & Patrick Bolton, *Contracts as a Barrier to Entry*, 77 AM. ECON. REV. 388, 388 (1987).

166. *See* Editorial, *The Not-Google Phone*, N.Y. TIMES, Nov. 7, 2007, at A28, http://www.nytimes.com/2007/11/07/opinion/07wed4.html.

telephone services.[167] However, each carrier also could gain a short-term advantage by adopting Android and offering to its customers features not otherwise available. That pressure to defect doomed any exclusionary scheme. At the time of Android's launch, T-Mobile, the weakest of the carriers, announced it would use Android,[168] and the other carriers eventually followed suit.[169]

A second potential source of cheating is shirking.[170] Exclusion costs something to implement. For example, distributors and suppliers are likely to recognize that less competition means higher prices to the distributor, or lower prices to the supplier. The agents therefore have to be paid—in effect, share in the profits from exclusion—in order to go along with the plan. (This point has less force if the agents can be played off against each other, as discussed in Part II.) Even in instances of cheap, "simple" exclusion such as *Allied Tube*, someone has to make the effort necessary to rig the standards process. The result is a collective action problem of the kind analyzed by Mancur Olson.[171]

Parallel exclusion schemes, therefore, will sometimes create the incentives of a prisoner's dilemma. In a one-period game, the dominant strategy is to defect.[172] Under the right conditions, nevertheless, the cooperative outcome is maintained. The repeated prisoner's dilemma amounts to, in effect, a

167. WU, *supra* note 137; Tim Wu, *Wireless* Carterfone, 1 INT'L J. COMM. 389, 390, 404, 406 (2007).

168. *See* Amol Sharma, *T-Mobile Wagers Deal with Google Is Worth the Risk*, Wall St. J., Nov. 12, 2007, at B1, http://online.wsj.com/article/SB119482551027089534.html.

169. *See* Laura M. Holson & Miguel Helft, *T-Mobile To Offer First Phone with Google Software*, N.Y. TIMES, Aug. 14, 2008, at C1, http://www.nytimes.com/2008/08/15/technology/15google.html.

170. *See* Iacobucci & Winter, *supra* note 24, at 221 (discussing the incentive to free ride on the exclusionary efforts of others).

171. MANCUR OLSON, THE LOGIC OF COLLECTIVE ACTION: PUBLIC GOODS AND THE THEORY OF GROUPS 14-16 (1965).

172. This account simplifies the actual state of affairs. It is a familiar result from game theory that a "volunteer's dilemma" is a true prisoner's dilemma only in the limit. Where the decision of the volunteer (here, the excluder) is pivotal to the achievement of the collective good, it is no longer a dominant strategy to defect. One special case in which the prisoner's dilemma will be absent is where cooperation from all of the excluders is necessary to achieve exclusion. In that case, the game is a coordination game even in a one-period setting. Thus, the discussion in the text potentially overstates the difficulty of achieving a cooperative (i.e., exclusionary) outcome.

coordination game.[173] If the shadow of the future looms large, each firm recognizes that defection will disrupt the cooperative equilibrium in future periods, and acts accordingly.

2. *The Superior Stability of Parallel Exclusion*

To this point, we have identified a similar tendency toward defection in parallel pricing and parallel exclusion. We now suggest reasons that exclusion schemes may be less likely to collapse.

Two important challenges for achieving coordination are identifying the coordination point and observing compliance.[174] Both are easier for parallel exclusion than for parallel pricing.

Identifying the coordination point in oligopolistic price elevation is complex. At its simplest, there is a continuum of prices that could be chosen, and the parties have to find some way, often through communication, to choose one of them. Moreover, that optimal price will change as supply or demand conditions change, requiring the parties, who may vary in their perceptions of what if anything has changed, to select a new elevated price. If the product is differentiated, there may be many different prices that must be coordinated. Figuring out how to allocate the gains from price elevation makes the problem even more complex,[175] because direct payments between the firms are obviously disfavored, and alternative mechanisms—taking turns in supplying a customer, or agreeing on the quantity to be sold by each producer—are likely to require forbidden communication. These allocations will also require rebalancing if supply or demand conditions change, or if the parties miscalculate. The need to rebalance increases the fragility of the arrangement.

By contrast, the implementation of parallel exclusion is often simpler.[176] In

173. *See* BRIAN SKYRMS, THE STAG HUNT AND EVOLUTION OF SOCIAL STRUCTURE 6 (2004) (providing an example where the prisoner's dilemma, when repeated, has the form of a "stag hunt" coordination game).

174. *See* Stigler, *supra* note 12, at 45-47 (noting, as central challenges, identifying terms and detecting secret deviations).

175. *See* Brooke Grp. Ltd. v. Brown & Williamson Tobacco Corp. (*Brooke Group*), 509 U.S. 209, 227 (1993) (noting the difficulty of allocating losses and gains in oligopolistic predatory pricing).

176. *See* 13 HOVENKAMP, *supra* note 141, ¶ 2202c, at 264 (noting the advantage of visibility in boycotts); POSNER, *supra* note 8, at 244 ("But the improbability is less when the cartelists do not have to agree on any price moves but have merely to agree on, say, not dealing with retailers who buy from new entrants into the cartelists' market.").

theory, the action is often binary: each firm either deals or refuses to deal with a new entrant; or either engages or does not engage in tying or exclusive dealing. For example, in *Allied Tube*, whether a steel manufacturer had voted to exclude plastic pipes from the Code was clear, as the vote was conducted by open ballot. Without a continuum, there is little need for delicate calibration. Moreover, changes in economic conditions are less likely to change the optimal selection. Gains are difficult to reallocate with such a blunt instrument, providing an incentive to stick with the initial allocation. As a result, readjustments in the sharing rule are also unnecessary.

Here, the comparison to predatory pricing conducted by oligopolists is instructive. In *Brooke Group*, a major predatory pricing case, the Court discussed the significant barriers to successful coordination. The "anticompetitive minuet" that the Court thought was so "difficult to compose and to perform" in the context of oligopolistic predatory pricing[177] is much simpler in the realm of parallel exclusion.

With price-fixing, observing compliance with the elevated price level is difficult. Rivals may secretly extend price cuts to particular customers. This is particularly true for differentiated products, for which comparisons are more difficult. It is also true when demand or supply conditions are uncertain, in which case it is unclear whether an unexpected drop in profits is attributable to a rival's secret price cut or instead to a change in conditions. With parallel exclusion, observing compliance is much easier. It is hard to secretly cut a deal with an innovative entrant or drop out of an industry-wide exclusive dealing arrangement unnoticed.

Beyond these two advantages, there is a third factor, which is that the permanence of the change resulting from accommodation makes parallel exclusion easier to sustain as compared to parallel pricing. Price cuts are reversible. Firms engage in price wars and then stop, raising their price to the old levels. Where the consequences of defection are temporary, firms are tempted to defect.[178] For parallel exclusion, permitting entry is comparatively permanent and thus severe. Once a firm allows an innovative new entrant, the market structure changes permanently. Consumers become used to and come

177. *Brooke Group*, 509 U.S. at 228 ("This anticompetitive minuet is most difficult to compose and to perform, even for a disciplined oligopoly.").

178. Rivals might find it in their interest to commit to a permanent price reduction if another firm defects, in order to discourage the cut in the first place, but this is difficult to accomplish. For a discussion of success factors in punishment, see Christopher Leslie, *Trust, Distrust, and Antitrust*, 82 TEX. L. REV. 515, 616-21 (2004). For a formal model of punishment, see Edward J. Green & Robert H. Porter, *Noncooperative Collusion Under Imperfect Price Information*, 52 ECONOMETRICA 87 (1984).

to rely on the new arrangement. Aside from consumer expectations, U.S. antitrust policy makes it harder for an incumbent to reverse course, because cessation of a course of dealing with a rival is a possible basis for liability.[179]

The exclusionary rules imposed by Visa and MasterCard illustrate the stability of parallel exclusion. The rules were not set at the same time. Visa set its rule first, in 1991, while MasterCard lagged by several years. Once Visa had set its rule, MasterCard had a golden opportunity. It could gain at Visa's expense by declining to exclude banks that adopted other cards, and thereby convince banks to leave Visa, in favor of issuing MasterCard and (thanks to MasterCard's openness) Amex. In fact, evidence produced during litigation revealed an extensive internal debate about the merits of an exclusionary rule, in which MasterCard managers argued that openness would help it gain market share at Visa's expense by inducing banks that wanted to issue Amex to abandon Visa.[180]

Ultimately, MasterCard adopted the exclusionary rule—following the counsel of its future CEO—that MasterCard should "make it as hard as possible to have Amex do anything anywhere in the world."[181] Based on the foregoing analysis, it is not hard to see why. The relevant rule was simple and well defined. Compliance was visible and easy to confirm. Unlike a secret price cut, accommodation here would have meant the end of exclusion. Once MasterCard opened the door to Amex, there would have been no going back.

While we expect parallel exclusion to be more durable than parallel pricing, there can be exceptions to this rule. For one thing, we have focused on the simple, canonical example of oligopolistic price elevation, in which firms each select a price in reliance on the optimal price chosen by rivals. As Jonathan Baker has noted, other forms of price elevation may be simpler to establish and sustain, such as the use of focal rules (e.g., raise price by five percent every twelve months).[182] Or, to take another example, firms engaged in geographical market division could each refrain from entering each other's territory.

179. Aspen Skiing Co. v. Aspen Highlands Skiing Corp., 472 U.S. 585 (1985) (emphasizing the termination of a previous course of dealing as a basis for liability); *see also* Verizon Commc'ns Inc. v. Law Offices of Curtis V. Trinko, LLP, 540 U.S. 398, 409 (2004) (emphasizing this aspect of *Aspen Skiing*).

180. Brief of United States at 19, United States v. Visa U.S.A., Inc., 344 F.3d 229 (2d Cir. 2003) (Nos. 02-6074, 02-6076, 02-6078), 2002 WL 32819130, at *18 (quoting the record).

181. *Id.* An important alternative explanation for MasterCard's adoption of similar rules is the fact that the two firms have a substantial overlap in ownership—both are, essentially, owned by the major banks. That may have given MasterCard less interest in profiting at Visa's expense.

182. Baker, *supra* note 67, at 162-69.

Avoiding certain forms of nonprice competition—a mutual decision not to innovate, for example—may be simpler than setting an elevated price.

There are additional factors that can lead to the failure of parallel exclusion, even where exclusion might be in the collective interest of the excluders. A powerful entrant can undermine its stability, in much the same way that a large enough buyer can disrupt a cartel of sellers. If the outsider seeking interconnection or cooperation owns a must-have application or device, it may be able to dictate terms that disrupt the existing parallel practice. So, while for years, carriers had resisted and blocked various smartphone features like WiFi and Bluetooth, which are valuable to consumers but threatening to carrier revenues,[183] Apple and Google were strong enough to induce the carriers to allow these technologies to operate on the carriers' networks.[184]

Moreover, the powerful outsider can play one oligopolist against another in achieving attractive terms. If AT&T cannot provide what Apple wants, perhaps Verizon Wireless can. There is a possibility of coordination failure among the oligopolists. The failure can be made more likely if the entrant commits to offering a differential benefit to the first defecting incumbent, for example, through exclusivity for a period.[185] This effect grows large as the number of oligopolists increases. In this respect, we see the relative weakness of oligopoly, compared to monopoly, in accomplishing exclusion.[186]

The stability of parallel exclusion has a further important implication.

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183. *See* Wu, *supra* note 147, 401-08 (describing the bans on features extant in 2007).

184. *See* Brad Stone, *AT&T: Tethering and MMS Coming to the iPhone*, N.Y. TIMES: BITS (June 8, 2009, 4:54 PM), http://bits.blogs.nytimes.com/2009/06/08/att-tethering-and-mms-coming-to-the-iphone-in-us.

185. Such an offer resembles "price freeze" proposals to combat oligopolistic price coordination and predatory pricing. *See* Aaron S. Edlin, *Stopping Above-Cost Predatory Pricing*, 111 YALE L.J. 941 (2002); Guy Sagi, *The Oligopolistic Pricing Problem: A Suggested Price Freeze Remedy*, 2008 COLUM. BUS. L. REV. 269.

186. On the other hand, there may be circumstances where oligopoly is stronger than monopoly in resisting collapse. For example, the ability to coordinate prices might be supportable with two firms, but not more than two. *See* Iacobucci & Winter, *supra* note 22 (manuscript at 26) (noting, as an argument not formally modeled by the authors, that since cartel stability decreases with cartel size, a duopoly might be more aggressive than a monopoly in excluding entry). In that case, a monopoly might find it profitable to accommodate, yet members of a duopoly prefer to exclude. Or a single firm might find it feasible to co-opt and incorporate the technology of a new entrant, without fear that the technology will spread to rivals. By contrast, members of an oligopoly recognize that if one firm goes down that path, permitting entry, there will be a series of rapid competitive responses. A related approach—though one that arguably stacks the deck in favor of oligopoly—is to compare oligopoly exclusion to the same conduct by a single firm, but one with a smaller share. *See, e.g.*, Leslie, *supra* note 22, at 2262; Iacobucci & Winter, *supra* note 22 (manuscript at 16-23).

Interdependent excluders will often not need any agreement—or, more specifically, will not need the communications that are emphasized in some accounts to provide a basis for finding agreement under section 1.[187] The characteristics of parallel exclusionary conduct—simplicity, transparency, and permanence—make it less necessary for communications that define, report, and respond to each firm's actions.[188]

This fact makes "agreement" a particularly poor proxy for determining when interdependent parallel exclusion will be harmful—setting up a paradox of proof of the kind introduced in Part I. Those exclusion schemes that are likely to last the longest and (all else equal) therefore to do the most harm can persist without communication. The easier and more effective parallel exclusion is, the less likely it is to be addressed under antitrust doctrine that focuses on horizontal agreement among the excluders. After all, if parallel exclusion is already easy, and (whatever gives rise to an inference of) agreement merely makes it a little easier, but much riskier legally, then the excluders will simply avoid that particular means of maintaining the oligopoly.

In fact, the paradox may be significantly more severe for parallel exclusion, compared to oligopolistic price elevation. It may be difficult in practice to accomplish price elevation without relying on the forbidden activities, such as communication, that support a finding of agreement.[189] By contrast, parallel exclusion may be relatively easy to accomplish without such activities, and if so, the paradox is more likely to arise in the context of parallel exclusion. Despite this, under current law, the existence of horizontal agreement is sometimes treated as a necessary condition for liability. This problem is taken up in Part IV.

3. Recidivist Exclusion

As argued above, exclusionary schemes may be less prone to collapse than pricing schemes. But the cooperative outcome is just one of many possible equilibria.[190] Why is that particular equilibrium chosen? Our case studies suggest that the particular history and developed customs of the industry, and

187. *E.g.*, William H. Page, *A Neo-Chicago Approach to Concerted Action*, 78 ANTITRUST L.J. 173, 184-93 (2012) (advocating such an approach).

188. Christopher Leslie has made a similar point in the context of tying—that this kind of conspiracy requires fewer meetings than a price-fixing conspiracy does. Leslie, *supra* note 22, at 2269-70.

189. For a suggestion along these lines, see Kaplow, *supra* note 66, at 762.

190. BAIRD, GERTNER & PICKER, *supra* note 145, at 172-73 (describing multiple equilibria and the problem of equilibrium selection).

especially prior episodes of explicit or monopolistic exclusion, may serve to identify a common coordination point and make detecting and punishing deviation easier.

Exclusionary schemes often result not from a careful calculation by an oligopoly's leaders, but rather arise when firms simply follow customary practices. An exclusionary scheme can result from merely copying the conduct of the industry leader, by continuing to do whatever the monopolist did prior to divestiture, or identifying some group as "outsiders" and keeping them out. It may also result from an earlier agreement among firms, such as a formal boycott of a rival, to which firms adhere even after the formal boycott is shut down. Firms may persist informally with the old practices when a focal point is created in the earlier period.

Numerous examples illustrate such "recidivist exclusion." Consider, for example, the Tobacco Trust. In this pattern, a one-time exclusionary monopoly is broken up by legal decree. In the decades that follow, however, the parts, after breakup, are able to cooperate to collectively exclude market entrants from their industry.

The tobacco oligopoly's continued use of the old Trust's exclusionary practices led to threats by the Department of Justice in 1914,[191] FTC action in the 1920s,[192] and finally a Department of Justice lawsuit, pursued in the 1940s, that resulted in the *American Tobacco* decision.[193] In its decision, the Supreme Court emphasized the recidivism problem. It was easier for the former parts of the Trust to exclude new competitors. The fact that "the sales of so many products of the tobacco industry have remained largely within the same general group of business organizations for over a generation," said the Court, "inevitably has contributed to the ease with which control over competition within the industry and the mobilization of power to resist new competition can be exercised."[194] The Court suggested that "[s]uch a community of interest . . . provides a natural foundation for working policies and understandings favorable to the insiders and unfavorable to outsiders."[195]

This pattern of recidivist exclusion repeats itself in wireline telecommunications. The AT&T monopoly, over its many decades as a federally regulated monopoly, practiced various strategies that kept out any

191. *Seeks To Reopen Tobacco Decree*, *supra* note 120.

192. FTC v. P. Lorillard Co., 283 F. 999 (S.D.N.Y. 1922), *aff'd*, FTC v. Am. Tobacco Co., 264 U.S. 298 (1924).

193. Am. Tobacco Co. v. United States, 328 U.S. 781 (1946), *aff'g* 147 F.2d 93 (6th Cir. 1944).

194. *Id.* at 793.

195. *Id.*

would-be competitors, often relying on the aid and consent of the government. Perhaps the most important of these strategies was a federal law that prohibited or strongly conditioned entry into markets controlled by AT&T.[196] By the 1920s, the exclusion of non-Bell firms from the telephone industry was an established practice.

Over time, AT&T added other techniques to keep outsiders out of markets such as long-distance carriage or home equipment. For example, Bell published and occasionally enforced tariffs threatening to disconnect the telephone service of any subscriber who attached non-Bell equipment, such as answering machines or speakerphones, to their telephone or telephone line.[197] The most famous example of this was Bell's exclusion of the Hush-A-Phone, a phone "silencer," whose exclusion was litigated before the FCC and the D.C. Circuit.[198] While AT&T ultimately lost the Hush-A-Phone case, it was decades before residential consumers were permitted, for example, to freely attach a foreign telephone or answering machine to a Bell telephone line. Similarly, at the other end of the local line, for decades Bell and the FCC refused to permit any competing long-distance firm to do business.[199] Consequently, until the mid-1960s, Bell's exclusion of competitors was more or less complete.

During the late 1960s and 1970s, the FCC changed its policies and began to allow entry into various telephone markets.[200] AT&T, however, continued its exclusionary strategies in defiance of the law, making life difficult for the sellers of handsets and long-distance carriers who wanted to attach to its system.[201] That pattern of exclusion was the impetus for the antitrust lawsuit that eventually broke up the firm.[202] The breakup of AT&T in 1984 left behind AT&T as a separate company and seven regional monopolies, the Baby Bells.

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196. *See* Federal Communications Act of 1934, Pub. L. No. 73-416, 48 Stat. 1064 (codified as amended in scattered sections of 47 U.S.C. (2006)); Willis-Graham Act of 1921, Pub. L. No. 67-15, 42 Stat. 27 (repealed 1934).

197. *See* WU, *supra* note 137, at 101-02.

198. Hush-A-Phone Corp. v. United States, 238 F.2d 266 (D.C. Cir. 1956); Hush-A-Phone Corp., 20 F.C.C. 391 (1955).

199. *See* Paul W. MacAvoy & Kenneth Robinson, *Winning by Losing: The AT&T Settlement and Its Impact on Telecommunications*, 1 YALE J. ON REG. 1, 11 (1983) ("For many years, long-distance service was left in the hands of regulated monopolies.").

200. *See id.* at 9-14.

201. *See* WU, *supra* note 137, at 191-93.

202. United States v. AT&T Co., 552 F. Supp. 131, 226-27 (D.D.C. 1982) (ordering the dissolution of AT&T), *aff'd mem. sub nom.* Maryland v. United States, 460 U.S. 1001, 1001 (1983).

Of the original eight, three firms remain: Verizon, Qwest, and AT&T.[203]

The long-standing practice of excluding non-Bell firms from the telephone industry was maintained, in different forms, by the various regional monopolies created by the 1984 AT&T breakup. Since the breakup, the former Bell companies have repeatedly been accused of parallel exclusionary practices similar to those practiced by the united AT&T in the 1970s (and for that matter, in the 1910s). The post-break-up promise of high margins in the telephone business attracted a rash of new entrants into local telephony, and later into Internet services, particularly after the 1996 Telecommunications Act, which was written to introduce competition in local telephone services.[204] Some of the entrants were new; others were long distance carriers seeking to offer local service, like MCI. However, regardless of which Bell the entrants faced, the firms encountered similar exclusionary practices that are widely understood by industry observers as contributing to the failure of competitive entry by the early 2000s.[205]

A history of explicit governmental protection from competition can also lay the foundation for later exclusionary practices. In the case of AT&T, the firm was statutorily protected from competition for many years, creating a focal point for later, private measures, discussed below. Similarly, the eight European shipping lines doing business in Africa in the CEWAL case had a long history of protection from competition dating back to colonial times.[206]

A history of monopoly exclusion is not the only kind of relevant history. Consider the American film industry, which, while never a monopoly, has a long history of repeated exclusionary practices. In 1908, the industry took on the form of an explicit exclusionary trust, which was broken up by federal decree in the 1910s.[207] By the 1930s, the industry had reassumed the form of an oligopoly of vertically integrated firms known as the "studio system"; these firms were found liable for various exclusionary practices and subjected to divestiture.[208] In later cases, industry players were once again found liable for

203. Vikas Bajaj, *BellSouth and AT&T Close Deal*, N.Y. TIMES, Dec. 30, 2006, at C1, http://www.nytimes.com/2006/12/30/business/30tele.html.

204. WU, *supra* note 137, at 243-48.

205. *Id.*

206. *See supra* notes 87-89 and accompanying text.

207. See, for example, the "Edison Trust," which was dissolved in *United States v. Motion Picture Patents Co.*, 225 F. 800, 802 (E.D. Pa. 1915), and is described in WU, *supra* note 137, at 63-73.

208. United States v. Paramount Pictures, Inc., 334 U.S. 131 (1948). *See generally* MICHAEL CONANT, ANTITRUST IN THE MOTION PICTURE INDUSTRY 84-153 (1960) (reviewing the history and background of the case).

the same practices they had engaged in predivestiture.[209]

As these examples indicate, anticompetitive parallel exclusion schemes need not arise as the product of a calculation or backroom deal. Rather, having successfully excluded entrants before seems to increase the ease of doing so again by simply following tradition and custom in the industry. These examples also suggest one potential limit on the effectiveness of divestiture as an antitrust remedy. The resulting firms have a significant capacity for exclusion even after divestiture, and their previous history of cooperation makes it more likely that they will continue to exclude.

4. Oligopoly Size

A second feature of industry structure—the size of the oligopoly—is also important in determining the stability of parallel exclusion, just as it plays a role in parallel pricing. This follows for several reasons. An exclusion scheme is usually a collective good, because it provides a benefit for each member of the group from which other members cannot be excluded. For example, if, by blocking entrants, an oligopoly maintains a higher price, each member benefits from that higher price and none can be excluded from it. As Olson's group theory suggests, the size of the group has an important and often decisive effect on the group's ability to produce such a collective good.[210] The smaller the group, the greater the chance that it will be worth it for a single member to invest to produce the good, even if the rest of the group is expected to free-ride on that effort. Compare an industry divided into three equal shares with one divided into fifty. In the former example, a unilateral investor in the exclusionary scheme still gets one-third of the benefits, even if the other two members of the group can be expected to shirk.[211]

In addition, the transaction costs of cooperation increase with group size. The costs of communicating, detecting, and punishing deviation increase as an oligopoly gets larger. That does not mean that large groups, comprising hundreds of members, cannot cooperate; it means that they will usually require some elaborate apparatus to ensure such cooperation.[212] Hence, all else being

209. *Compare* Theatre Enters., Inc. v. Paramount Film Distrib. Corp., 346 U.S. 537 (1954) (upholding the jury's acquittal), *with* Basle Theatres, Inc. v. Warner Bros. Pictures Dist. Corp., 168 F. Supp. 553 (W.D. Pa. 1958) (holding, after a bench trial, that the defendant distributors had violated antitrust law).

210. OLSON, *supra* note 171, at 22-36.

211. *Id.* at 33-34.

212. *See* Levenstein & Suslow, *supra* note 21, at 44 ("There are in fact many successful cartels in quite unconcentrated industries, but they almost always rely on industry associations."); *see* equal, a more concentrated industry will have an easier time finding a mutually beneficial cooperative outcome, even without explicit agreement.

And when we look at the main historical exemplars of parallel exclusion, small, tight oligopolies predominate. The fact that there were just two open credit card networks in the 1990s, Visa and MasterCard, likely made joint exclusion easier. The tobacco oligopoly was aided by its small size, just three major firms. The film industry convicted of jointly excluding theaters in the 1940s comprised five "major" studios.

All this does not mean it is impossible for a larger oligopoly to exclude entrants. As the *Allied Steel* case makes clear, exclusion can be accomplished by a large group, but a more sophisticated infrastructure of some kind will usually become necessary. That point, and the general disadvantages faced by larger groups, are well illustrated by the story of the Fashion Originators' Guild in the 1930s.[213]

At the time, just as American fashion was becoming an important cultural force, U.S. designers were afflicted by "style pirates," who copied and sold versions of their designs at a much lower price. Starting in 1932, under the leadership of Maurice Rentner, the self-styled "King of Fashion," a group of twelve dressmakers joined forces to do something about it. Members registered their designs with the Guild. The Guild employed enforcement agents who found and reported retailers who sold knock-offs. Every month, the Guild published a list of offenders, known as "red-carded" retailers, and Guild members were instructed not to show, ship, or sell their merchandise to any retailer appearing on the red-card list. Retailers therefore faced a choice: defy the Guild and face a group boycott by the most significant manufacturers, or comply by excluding the manufacturers of knock-offs.

The Guild's detection and enforcement infrastructure gives a good sense of what can be necessary to maintain an exclusionary scheme in an unconcentrated industry. The Guild was a success as a formal arrangement: one entity (the Guild) acted as an agent for all the firms in punishing retailers that did business with copyists. This arrangement, however, made it a target for antitrust enforcement. After private complaints, the FTC brought suit, and the Supreme Court eventually condemned the arrangement as a violation of the

also Leslie, *supra* note 178, at 537-46 (describing various means to build trust among cartel members).

213. *See* C. Scott Hemphill & Jeannie Suk, *The Fashion Originators' Guild of America: Self-Help at the Edge of IP and Antitrust*, *in* INTELLECTUAL PROPERTY AT THE EDGE: THE CONTESTED CONTOURS OF IP (Rochelle C. Dreyfuss & Jane C. Ginsburg eds., forthcoming 2013); Sara Marcketti & Jean L. Parsons, *Design Piracy and Self-Regulation: The Fashion Originators' Guild of America, 1932-1941*, 24 CLOTHING & TEXTILES RES. J. 214 (2006).

FTC Act.[214]

As the Guild dissolved, it exhorted individual firms to continue the practice on an individual basis.[215] The higher-priced fashion designers did indeed have a collective interest in pressuring retailers and boycotting those that sold knock-offs. But each designer also had powerful incentives to shirk those responsibilities and let others do the work, or to give up entirely on the assumption that many others would do so as well. Predictably, the Guild's efforts collapsed.

The Guild's failure, in contrast with the success of similar efforts in other industries, may have just been a matter of numbers. This was no tight oligopoly, but a collection of 176 manufacturers.[216] Its exclusionary strategy was also extremely elaborate. The Guild monitored some 12,000 cooperating retailers, and had a sophisticated process for monitoring violations of the exclusion regime, which otherwise were difficult to detect.[217] Extensive communication—a complex machinery for detecting and punishing retailers—was absolutely necessary. Without that machinery, the problems of defection and shirking became pervasive.

B. Exclusion as a Dominant Strategy

Parallel exclusion does not always require interdependence. In important cases, it can be achieved through the independently incentivized action of each firm. The essential dynamic is no longer a prisoner's dilemma, because exclusion is a dominant strategy for each firm.

For example, exclusion may be a dominant strategy in an oligopoly, when it becomes cheap enough for a single member of the oligopoly to pursue exclusion, even if the other members were to free-ride. For example, the manipulation of standard setting in *Allied Tube* did not require the payment of any agents. Though it was not costless to stack the meeting, the costs were low. Even where agents must be paid to go along, the agents often are unable to coordinate their response, so the payment is minimal.

Parallel exclusion may also be implemented in dominant strategies when the excluders are not competing oligopolists, but monopolists. Let us return to the example of wireline telecommunications. When AT&T was broken up into regional Bells, the result was multiple firms in place of a previous nationwide

214. Fashion Originators' Guild of Am., Inc. v. FTC, 312 U.S. 457, 465-68 (1941).

215. *Fashion Designers Seek Protection*, N.Y. TIMES, June 8, 1941, at F6.

216. *Fashion Originators' Guild*, 312 U.S. at 462.

217. *See id.* at 461.

monopoly. But this did not create an oligopoly of competing providers, as it did in the tobacco industry. Rather, it created a set of local monopolies.

Compared to a member of an oligopoly considering defection from an exclusionary scheme, a local monopoly has much less to gain from accommodating entry. There is no profitable accommodation by the firm, where the result would be lower profits (due to competition) in the region where the incumbent has market power. The outcome is predictable: each incumbent will fiercely resist entry, whatever the others do. But there is an additional effect. Successful resistance by each incumbent can be synergistic. It contributes to the overall difficulty that the new entrant faces in achieving minimum scale.

We can see this dynamic play out in wireline telecommunications. An industry-specific statute, the 1996 Telecommunications Act, was designed to facilitate the market entry of competitive carriers into the local territories of the Bell companies.[218] It provided a legal pathway whereby these entrants could reach consumers by leasing parts of the incumbent's infrastructure, including, most importantly, the copper wire that enters a subscriber's home. That pathway provided a mandated basis for competition.

Nevertheless, the incumbents each fought fiercely to limit entry. Various lawsuits document a remarkably similar range of efforts, from delays and misfeasance to sabotage, to exploit competing carriers' dependence on the underlying physical infrastructure.[219] These efforts apparently made it difficult or impossible to offer service of comparable quality and reliability.

The conduct, much of which violated the 1996 Act if it took place as alleged, was matched by some regulatory responses. Between 1996 and 2002, regulators imposed on the Bells an estimated $1.8 billion in fines.[220] However, the effect of these measures on Bell behavior was unclear, and entrants and some commentators remained dissatisfied with the regulatory response.[221]

218. Telecommunications Act of 1996, Pub. L. No. 104-104, 110 Stat. 56 (codified as amended in scattered sections of 47 U.S.C.).

219. *See, e.g.*, Law Offices of Curtis V. Trinko, L.L.P. v. Bell Atl. Corp., 305 F.3d 89, 109 (2d Cir. 2002), *rev'd sub nom*. Verizon Commc'ns Inc. v. Law Offices of Curtis v. Trinko, L.L.P., 540 U.S. 398 (2004); Covad Commc'ns Co. v. BellSouth Corp., 299 F.3d 1272, 1277-78 (11th Cir. 2002), *vacated*, 540 U.S. 1147 (2004); Goldwasser v. Ameritech Corp., 222 F.3d 390, 394-95 (7th Cir. 2000) (listing twenty practices alleged to be exclusionary).

220. *See* ASS'N FOR LOCAL TELECOMM. SERV., ANNUAL REPORT: THE STATE OF LOCAL COMPETITION 2002, at 23 (2002).

221. James B. Speta, *Antitrust and Local Competition Under the Telecommunications Act*, 71 ANTITRUST L.J. 99, 105-06 (2003) (summarizing complaints about enforcement of the 1996 Act by the FCC).

Some entrants and customers filed antitrust suits against individual Bells under section 2, and others filed the *Twombly* case, alleging that the Bells had engaged in a conspiracy to exclude would-be entrants.

Our interest here is not in the merits of the allegations or in the interaction between antitrust and telecommunications law, but rather the game-theoretic interaction of the Bells and their ability to sustain an exclusion regime. The first element worth noting is that each Bell had a clear, straightforward incentive to exclude new entrants in its region, as successful entry would reduce the profits of the Bell.[222] In addition, this direct exclusion had a second effect: it made it more difficult for a would-be entrant to gain sufficient scale to assist it in entering other regional markets.

This additional benefit conferred on other Bells was unlikely to cause any Bell to cut back on its exclusionary efforts. Each Bell had a powerful unilateral incentive to exclude, and could do so at low cost. Thus the temptation to shirk was low. Moreover, the size of the externality was small in practice. From the standpoint of each Bell, successful exclusion in other regional markets was valuable, because it reduced the entrant's opportunity to pose a competitive challenge to the Bell in the future. So part of the external benefit is internalized after all. To this extent, the Bells had a unified, collective interest, in addition to their individual interests.

These dynamics received some attention in the *Twombly* decision. The Court pointed out that for each Bell, there was no benefit to accommodation. Agreeing to let a competitor in was of no clear advantage to one Bell against the others.[223] To the contrary, the Court recognized, any individual Bell had a very strong incentive to prevent the entry of its competitor, because it simply took revenue away from the Bell.[224] This was true regardless of what the other Bells decided to do.

The Court also recognized the potential synergy among the Bells' exclusion decisions. It acknowledged the possibility that "success by even one . . . [entrant] in an . . . [incumbent's] territory would have revealed the degree to which competitive entry . . . would have been successful in the other territories."[225] This is a distinct (and, in our view less plausible) effect than the

222. The statement takes as true the Bells' assertion that the 1996 Act compelled each Bell to resell service to entrants at a price lower than the Bell otherwise would have chosen. *See also* C. Scott Hemphill, *Network Neutrality and the False Promise of Zero-Price Regulation*, 25 YALE J. ON REG. 135, 154-59 (2008) (discussing conditions underpinning the unilateral incentive to exclude).

223. Bell Atl. Corp. v. Twombly, 550 U.S. 544, 566-67 (2007).

224. *Id.*

225. *Id.* at 566 (internal quotation marks and citation omitted).

one we suggested above. But it has the same implication, that the decisions are mutually reinforcing without any suggestion that the dominant strategy has been undercut.

This analysis suggests that a group of noncompeting monopolists, like the Bells with respect to wireline service, can maintain a stable parallel exclusion scheme for far longer than a typical, internally competitive oligopoly. Moreover, they may be able to do so without any significant interdependence in their decisions to exclude. Where exclusion is a dominant strategy, hunting for a horizontal agreement is both fruitless and beside the point.

IV. DOCTRINE

The analysis so far demonstrates several points. A scheme of parallel exclusion may be more harmful than one of parallel pricing, yet easier to maintain. When the decisions of excluders are interdependent, often no communication among them will be necessary, and when communication does occur, it will be difficult to detect. Sometimes exclusion can even be implemented as a dominant strategy without any interdependence.

These features of parallel exclusion suggest that a doctrinal focus on horizontal agreement among the excluders is misplaced and counterproductive. Despite this, lower courts sometimes emphasize or insist upon such agreement as a prerequisite to liability.[226]

In this Part, we offer two doctrinal routes for handling parallel exclusion claims, without looking to a horizontal agreement among the excluders as an important feature for establishing liability. Both are rooted in commentary or case law. They stem from two fundamental antitrust claims that may be brought against a monopolist: Did the monopolist improperly maintain its monopoly power and thereby "monopolize"; and did the monopolist enter into contracts with other parties that illegally restrain trade? Our approach can be understood by asking the following hypothetical question: If Microsoft had been split into two or three firms that undertook the same exclusionary activity, would we treat them differently and more leniently? Our fundamental answer is no.

The first proposal, considered in Section IV.A, is to recognize a "shared monopoly" claim of monopolization under section 2 of the Sherman Act. We propose that such a claim be carefully limited to those circumstances under

226. *See, e.g.*, *In re* Wireless Tel. Servs. Antitrust Litig., 385 F. Supp. 2d 403, 406-07 (S.D.N.Y. 2005); *In re* Visa Check/Mastermoney Antitrust Litig., No. 96-CV-5238, 2003 WL 1712568, at *3-4 (E.D.N.Y. Apr. 1, 2003).

which the conduct, if engaged in by a single firm rather than the multiple excluders, would state a claim under section 2. Acknowledging some courts' insistence that a horizontal agreement among the excluders must be present, we identify several ways to satisfy that requirement. This Section also suggests a fallback position for those concerned about an expansion of antitrust liability, which is for the FTC to bring monopolization claims under section 5 of the FTC Act, an authority separate from the Sherman Act that is unenforceable by private plaintiffs.

The second route, discussed in Section IV.B, assigns liability for parallel exclusion accomplished through vertical agreements, such as exclusive dealing and tying. This result is already embodied in Supreme Court precedent, under which the exclusionary effect of multiple excluders must be added up, or "aggregated," in order to properly assess the overall exclusionary effect of the conduct. We believe this doctrine, though it does not reach all instances of competitive harm accomplished through parallel exclusion, is valuable in resolving some important instances.

The remainder of the Part describes two further doctrinal implications of our analysis. Section IV.C spells out an implication of parallel exclusion for horizontal merger policy: if a merger improves the ability of remaining firms to engage in parallel exclusion, this can be a basis for prohibiting the transaction. Section IV.D examines one implication of our de-emphasis of horizontal agreement among excluders—that just as horizontal agreement is not necessary for antitrust liability, neither is it sufficient.

A. Monopolization by Multiple Firms

1. Shared Monopoly

Section 2 of the Sherman Act, which prohibits "monopoliz[ing],"[227] is a natural place to look for relief from anticompetitive exclusion by excluders acting in parallel. Suppose that the excluders are collectively acting in a way that mimics the exclusionary behavior of a single firm, and that behavior, if practiced by a single firm with comparable power to the excluders, would violate section 2. Then from a functional perspective, the same legal treatment should apply when multiple firms undertake the behavior. Such a case is sometimes called a "shared monopoly" violation,[228] though this is a misnomer, because the

227. 15 U.S.C. § 2 (2006).

228. *See, e.g.*, 1 ABA SECTION OF ANTITRUST LAW, ANTITRUST LAW DEVELOPMENTS 328-29 (7th ed. 2012); 3B AREEDA & HOVENKAMP, *supra* note 67, ¶ 810, at 467-81 (3d ed. 2008).

allegation is *monopolization*, rather than mere monopoly. Monopoly as a status offense is not recognized under U.S. antitrust law; monopolization is.

Section 2 is a suitable home for parallel exclusion cases. One important benefit is to invite a disciplined inquiry into the economic consequences of the conduct. These consequences, rather than the fact of horizontal agreement, are the more appropriate focus of analysis. Section 2 instead focuses attention on the truly important question: whether rivals were unjustifiably excluded from the market, with harm to consumers. To be sure, this is not an easy task, but it is one worth undertaking, and for the same reasons that we pursue the analogous task for single-firm conduct to which section 2 applies.

A further benefit of using section 2 is to eliminate the paradox of proof. As discussed previously, the paradox arises if a decisionmaker, assessing a market structure highly conducive to exclusion without provable agreement among the excluders, paradoxically concludes that this factor counts against liability.[229] By focusing directly on the economic effects of exclusion, this risk is avoided.

As an initial matter, a parallel exclusion claim under section 2 would have to rely on a uniform practice adopted in parallel by the firms in question, which is itself a highly demanding test. This is an "exceptionally powerful" filter because it rules out many situations in which an entrant has an adequate means of purchasing inputs and reaching consumers.[230]

Under our approach, a plaintiff must then establish the three key elements of a claim of anticompetitive exclusion, as provided for in *United States v. Grinnell*, *United States v. Microsoft*, and other cases.[231] First, is there sufficient monopoly power to produce an anticompetitive effect? Here, the inquiry would typically focus on the traditional questions of market definition and market share, with the difference that the court would consider collective market share rather than the share of a single dominant firm. As with other market power inquiries, moreover, the status of monopoly power could be inferred from the effects of the conduct.

Compared to the more familiar monopoly power analysis where there is a single excluder, here there is an additional factor. We need to evaluate the internal stability of the excluders, in addition to the external constraints that temper the exertion of monopoly power. With a large number of excluders and no means to coordinate their actions, successful exclusion is unlikely; firms are

229. *See supra* Section I.C, Subsection III.A.2.

230. Easterbrook, *supra* note 156, at 30; *see id.* at 18, 30-31 (advocating the use of this filter, which "screens out almost all challenges to vertical practices").

231. *See, e.g.*, United States v. Grinnell Corp., 384 U.S. 563, 570-71 (1966); United States v. Microsoft Corp., 253 F.3d 34, 51 (D.C. Cir. 2001) (en banc) (per curiam).

more likely to defect and shirk. Thus, we would impose a presumption that monopoly power is absent, unless there is either a small number of excluding firms or a horizontal agreement among them that gives rise to a "conspiracy to monopolize," an alternative explored in more detail below.

Second, does the conduct in question—whichever of the many mechanisms of exclusion are used—restrict the prospects of competitors in a manner that in turn harms competition? As discussed in Part I, often the answer will be no.[232] If the answer is yes, we reach a third question: Is the conduct nevertheless justified on account of the efficiencies it produces? Only at the end of these three demanding steps would antitrust liability be found.

We can return to the Visa-MasterCard litigation with which we began the Article to see our section 2 approach in application. There, the two major networks adopted parallel rules punishing banks that issued Amex cards. The case was brought as a section 1 case, but might have been more suitably litigated as a shared monopoly case.

Visa and MasterCard both adopted functionally the same rule, satisfying the uniformity requirement. Given a combined market share of over seventy percent, the two would collectively have a preponderant share in the "network services" market, the market asserted by the United States and found by the Second Circuit. The case would then have turned on whether the exclusionary rule indeed excluded its competitors, with harm to competition, and what (if any) procompetitive justifications the defendants might have devised.

This is a preferable approach, first, because it does not turn on the existence of an agreement, whether between the two payment networks or between the network and its member banks. This overemphasis on agreement has been aptly criticized by the payment networks themselves.[233] Nor does the analysis change if the network is an independent corporation rather than owned by the banks. Moreover, it remains unchanged if the rule is implemented through a threat rather than by formal adoption. These factors are important for section 1 litigation, but inessential to section 2. Moreover, the section 2 approach has a second advantage, which is to focus analysis on the

232. Here, the presence of a large number of incumbents may suggest that entry can be accomplished at a relatively low cost, and hence that effective exclusion is unlikely.

233. *See* Brief of Mastercard International Inc. and Visa U.S.A. Inc. as Amici Curiae in Support of Petitioners at 1-2, Bell Atl. Corp. v. Twombly, 550 U.S. 544 (2007) (No. 05-1126), 2006 WL 2474077, at *1-2 (arguing that the payment networks are frequent targets of "conspiracy" claims, which "often support the critical element of conspiracy with nothing more than allegations that the two networks, or individual banks associated with them, acted in similar ways, even when such conduct on its face makes perfect sense as a matter of each individual actor's economic self-interest, given the structure of the payment-card industry").

cumulative effect of the conduct, rather than treating the conduct of Visa and MasterCard each in isolation.

Donald Turner, though remembered today as an opponent of parallel pricing cases, was a forceful advocate of the shared monopoly approach to parallel exclusion. He suggested liability under section 2 "[w]here oligopolists sharing monopoly power have engaged in restrictive conduct lacking any substantial justification."[234] Our analysis also leaves us in agreement with other prominent commentators, including Areeda and Hovenkamp, who have proposed "congruent treatment" of shared monopoly and single-firm conduct.[235] A shared monopoly approach is also supported by the interpretation, expressed in older Supreme Court cases, that section 2 functions to prevent frustration or evasion of section 1 (here, due to the lack of a provable horizontal agreement).[236] The shared monopoly approach also enjoys some support in Europe, where the analogue to section 2 may be understood to reach parallel exclusion as an abuse of "collective dominance."[237]

Lower courts, however, have rejected the shared monopoly approach to section 2, even while recognizing the unjustified gap that would thereby be created in antitrust law.[238] These courts tend to insist that a single firm have

234. Turner, *Scope*, *supra* note 1, at 1230. As a doctrinal matter, Turner favored liability under section 2 as a form of attempted monopolization.

235. 3B AREEDA & HOVENKAMP, *supra* note 67, ¶ 810d, at 473 (3d ed. 2008).

236. *E.g.*, Standard Oil Co. of N.J. v. United States, 221 U.S. 1, 60 (1911).

237. Article 102 of the Treaty on the Functioning of the European Union prohibits "[a]ny abuse by *one or more undertakings* of a dominant position within the internal market or in a substantial part of it." Consolidated Treaty on the Functioning of the European Union art. 102, May 9, 2008, 2008 O.J. (C 115) 89 (emphasis added). The reference to multiple entities leaves an opening for a shared monopoly claim. However, it appears to be an open question whether the provision extends so far, although at least one case has suggested it does in supportive dicta. *See* Joined Cases C-395/96 P&C-396/96 P, Compagnie Maritime Belge Transps. SA v. Comm'n, 2000 E.C.R. I-1442 ("[T]he existence of an agreement or of other links in law is not indispensable to a finding of a collective dominant position; such a finding may be based on other connecting factors and would depend on an economic assessment and, in particular, on an assessment of the structure of the market in question."); *see also* Hawk & Motta, *supra* note 13, at 87 (reviewing precedent and concluding that the lack of explicit analysis under EU law "precludes a definitive answer" in the case of mere interdependence).

238. *See, e.g.*, Rebel Oil Co. v. Atl. Richfield Co., 51 F.3d 1421, 1443 (9th Cir. 1995) ("To pose a threat of monopolization, one firm *alone* must have the power to control market output and exclude competition. . . . We recognize that a gap in the Sherman Act allows oligopolies to slip past its prohibitions, but filling that gap is the concern of Congress, not the judiciary." (citations omitted)); *see also* 1 ABA SECTION OF ANTITRUST LAW, *supra* note 228, at 328 ("Lower courts consistently have rejected the shared monopoly theory in the absence of any allegation of a conspiracy to monopolize, not permitting Section 2 to be invoked as a tool to monopoly power. The reasons for this are murky, but might ultimately rely on a highly textual reading of section 2.[239]

2. Conspiracy To Monopolize

Section 2 imposes liability not only for "every person who shall monopolize," but also for those who would "combine or conspire . . . to monopolize." A substantial amount of anticompetitive parallel exclusion can be pursued as a conspiracy to monopolize. Reliance on this provision would rule out claims premised on independent exclusion, while claims based on interdependent exclusion would remain in play. One court, for example, has suggested that "oligopolistic interdependence" among the excluders would be enough to satisfy the horizontal agreement requirement.[240] We agree, and would interpret the horizontal agreement requirement broadly, to minimize its effect as a formalistic impediment to liability. Our broad reading has three components:

Interdependence. The most ambitious position is to understand "agreement" in a way that reaches all interdependent parallel exclusion. This position might appear to face a significant doctrinal hurdle. After all, *Twombly* can be read to reject mere interdependence as a basis for horizontal agreement.[241] However, properly conceived, *Twombly* is a holding about parallel and mutual forbearance from competition, not parallel exclusion. It is not a holding about what constitutes agreement for purposes of parallel exclusion.

To see why, recall that *Twombly* addressed two different allegations by

challenge oligopolies engaged in parallel but noncollusive conduct."); 3B AREEDA & HOVENKAMP, *supra* note 67, ¶ 810g, at 480 & n.35 (3d ed. 2008) (collecting cases and concluding that courts have rejected "shared monopoly" as a viable section 2 theory).

239. In particular, the existence of liability for "conspiracy to monopolize" among multiple excluders may have been taken, in a sort of *exclusio* reasoning, to eliminate section 2 liability where the excluders have not conspired, or cannot be convincingly shown to have conspired.

240. JTC Petrol. Co. v. Piasa Motor Fuels, Inc., 190 F.3d 775, 780 (7th Cir. 1999) (Posner, J.) (declining to recognize a shared monopoly theory, but concluding that where "oligopolistic interdependence" could be shown, plaintiff could establish "a combination or a (tacit) conspiracy"). Section 2 liability for parallel exclusion is apparently sufficiently disfavored that sometimes it is overlooked entirely. The original panel opinion in *JTC Petroleum* missed the section 2 issue. *Compare* 179 F.3d 1073 (7th Cir. 1999) (noting the withdrawal of the original opinion, which had decided the case without mentioning section 2 or shared monopoly), *with* 190 F.3d 775 (revised opinion, considering section 2 claims but rejecting a shared monopoly theory).

241. *See* Bell Atl. Corp. v. Twombly, 550 U.S. 544, 553-54 (2007). *But see* Kaplow, *supra* note 66, at 731-43 (arguing, based on pre-*Twombly* precedent and the language of *Twombly* itself, that one could conclude that the agreement requirement reaches all interdependent conduct).

plaintiffs.[242] One was an allegation of mutual forbearance from competition, that each regional Bell had decided not to enter other Bells' markets, in anticipation of retaliation if it did so.[243] Here, the Court indicated that mere interdependence is insufficient to raise an inference of horizontal agreement.[244] The Court also considered an allegation of parallel exclusion, that each Bell had denied entry to new rivals.[245] But as discussed in Section III.B, the allegation of parallel exclusion did not entail interdependence. Each Bell had an *independent* incentive to exclude. The Court therefore had no occasion to decide whether *interdependent* parallel exclusion raises an inference of horizontal agreement.

Thus, even if *Twombly* has closed the door in the context of parallel pricing and other forms of mutual forbearance from competition, the door remains open in the distinct context of parallel exclusion.[246] We therefore disagree with cases that treat *Twombly* as controlling the outcome of parallel exclusion,[247] particularly where interdependent exclusion, rather than independent exclusion, is being alleged. Moreover, a different rule for parallel exclusion is desirable, for all the reasons that we have discussed, including the important harms at stake and the superior stability of exclusion, particularly the relative ease with which exclusion can be supported without extensive communication or other infrastructure of agreement.

Price-Fixing as a Shortcut. A second route exploits the connection between parallel exclusion and parallel pricing. In some instances, incumbents simultaneously engage in price-fixing and parallel exclusion. Moreover, the exclusionary conduct may be visible, while the horizontal agreement as to price

242. *See supra* notes 72-75 and accompanying text.

243. *Twombly*, 550 U.S. at 551, 567-69.

244. *Id.* at 554; *see also id.* at 569 (concluding that "antitrust conspiracy was not suggested" by incumbents' unwillingness to enter each others' markets).

245. *Id.* at 550-51, 566-67.

246. Similarly, we would read narrowly certain dicta issued by the Court in an earlier case about parallel action. In *Brooke Group*, 509 U.S. 209 (1993), the Court cast doubt on mere interdependence as a basis for horizontal concert:

> Tacit collusion, sometimes called *oligopolistic price coordination* or conscious parallelism, describes the process, not in itself unlawful, by which firms in a concentrated market might in effect share monopoly power, setting their prices at a profit-maximizing, supracompetitive level by recognizing their shared economic interests and their interdependence with respect to price and output decisions.

Id. at 227 (emphasis added). There, the Court appears to have been discussing parallel pricing, or, at most, parallel exclusion instituted through oligopolistic predatory pricing. The discussion did not consider parallel exclusion as a category that raises distinctive concerns.

247. For a discussion of one such case, see *supra* note 76.

remains hidden and difficult to prove. Where direct evidence of a price-fixing agreement is missing, plaintiffs may instead present evidence about the defendants' conduct or market structure that provides a basis for a fact-finder to infer that a price-fixing agreement is present. This indirect evidence of a hidden price-fixing agreement, often referred to as "plus factors," can include the observation of parallel exclusionary activity.[248]

From the standpoint of deterring parallel exclusion, this is a highly indirect approach, as it uses parallel exclusion as a means to prevent price-fixing cartels, which in turn would limit the prevalence of parallel exclusion associated with the cartel. It is also limited, inasmuch as parallel exclusion is not always a means to support and reinforce interdependent, oligopolistic price elevation. As we have explained, in some instances the excluders do not actually earn supracompetitive profits, but merely keep out better competitors. Indeed, recognizing that fact undermines the inference that parallel exclusion necessarily implies price elevation. Moreover, even if there is price elevation, it does not follow that the price elevation should be actionable simply by virtue of parallel exclusion. An automatic inference of agreement, if recognized, would open an enormous back door to liability for price elevation. In our view, parallel exclusion imposes distinct harms that we might wish to prohibit, even if we tolerate a certain amount of price elevation.

History. Finally, we would recognize, as one of the "plus" factors that suffices to create a factual question as to horizontal agreement among the excluders, the history of the industry.[249] It is plausible to infer that the Big Three tobacco companies, postdivestiture oil producers, or major film companies might have an understanding based upon their previous work together. A history of previous agreement between the defendants seems particularly valuable in identifying concerted action.

We do not prefer this approach of treating exclusion as a conspiracy to monopolize under section 2; it would be better to dispense with horizontal agreement in a monopolization case. Our suggestions do not completely remove horizontal agreement among the excluders from the picture, as a factfinder would still be free to reject the possible inference of horizontal agreement arising from the plus factor. But this approach would at least reduce

248. *See* POSNER, *supra* note 8, at 79, 93 (identifying exclusionary practices by multiple firms as evidence of actionable collusion); Kovacic et al., *supra* note 23, at 425 (discussing "dominant-firm conduct by cartels" as a "plus" factor); *see also* Heeb et al., *supra* note 23, at 227 (concluding that "monopolization conduct by non-dominant firms" may indicate cartel activity).

249. *See, e.g.*, William E. Kovacic, *The Identification and Proof of Horizontal Agreements Under the Antitrust Laws*, 38 ANTITRUST BULL. 5, 44 & nn.113-14 (1993) (collecting cases).

the importance of horizontal agreement. Our recommended approach is a stopgap measure demanded by some courts' unwillingness to consider section 2 liability without such an agreement.

Moreover, we must stress that the finding of a horizontal agreement is one step in a longer chain. We do not, therefore, advocate per se liability for a horizontal agreement to engage in conduct potentially capable of having an exclusionary effect. As discussed in Section IV.D, we do not regard horizontal agreement as sufficient. The virtue of a section 2 approach is that we must still satisfy the usual rigorous steps of section 2 analysis. A claim would fail if the defendants lacked sufficient market power. The claim would also fail if the practice in question had no anticompetitive effect or had a powerful procompetitive justification.

3. FTC Enforcement

The judicial resistance to recognizing shared monopoly as an antitrust violation, which is generally unexplained in the cases, may have less to do with theory and more to do with concerns about private litigation. Even though oligopoly exclusion can have similar economic effects as monopoly exclusion, courts seem reluctant to open up opportunities for antitrust attacks against entire industries. As exclusion may be easy to allege, and expensive to disprove, shared monopoly complaints might become an attractive area for strike suits. This reluctance is consistent with a tendency in the courts to identify areas where conduct may give rise to competitive harm but where the Sherman Act should, at most, be sparingly applied because of prudential concerns. This tendency reflects the idea, stated by the Court in recent years, that the "cost of false positives" sometimes outweighs the benefits of antitrust intervention and "counsels against an undue expansion of section 2 liability."[250]

For those with this concern, we suggest that parallel exclusion is a suitable subject for FTC enforcement under section 5 of the FTC Act.[251] Section 5 grants the FTC the authority to challenge "unfair methods of competition." The exact scope of the Commission's authority remains unclear, but Turner had "little doubt" that section 5 was available in cases of shared monopoly.[252] It seems to us that section 5 could be a useful tool for combating forms of parallel exclusion that clearly violate the policy of the Sherman Act, even if they may

250. Verizon Commc'ns Inc. v. Law Offices of Curtis V. Trinko, L.L.P., 540 U.S. 398, 414 (2004).

251. Federal Trade Commission Act, Pub. L. No. 63-203, § 5(a)(1), 38 Stat. 717, 719-21 (1914) (codified as amended at 15 U.S.C. § 45(a)(1) (2006)).

252. Turner, *Definition*, *supra* note 1, at 682.

not be reachable under its letter, and even if courts would be unwilling to create a substantive basis for liability for private plaintiffs.

Importantly, when the Commission brings a case based solely on its unfair-methods authority, it does not create a definitive precedent for private plaintiffs.[253] As the Supreme Court has repeatedly emphasized, the FTC Act's prohibitions are broader than those of the Sherman Act.[254]

This point is important when a Sherman Act-type case could yield legal standards that might, if available to private plaintiffs, yield unacceptable levels of litigation, strike suits, or monetary remedies under the treble damage provisions of the Sherman Act. The statutory and prudential logic that compels an Article III court to narrow its enforcement of the Sherman Act does not apply to an independent commission with limited remedies enforcing a different law. The enforcement could be accomplished through FTC challenges in individual cases, or alternatively through rulemaking.[255]

Over its history, the FTC has shown some willingness to challenge unilateral exclusionary conduct in cases where the conduct is considered to lack any legitimate basis. Examples include bribery,[256] sham litigation,[257] fraud on the Patent Office,[258] or manipulation of the standard-setting process.[259] Some

253. 15 U.S.C. § 16(a) (2006); *see also* C. Scott Hemphill & Mark A. Lemley, *Earning Exclusivity: Generic Drug Incentives and the Hatch-Waxman Act*, 77 ANTITRUST L.J. 947, 972-75 (2011) (advocating broader liability under section 5 in light of its lesser consequences).

254. *See, e.g.*, FTC v. Ind. Fed'n of Dentists, 476 U.S. 447, 454 (1986) (holding that section 5 covers "not only practices that violate the Sherman Act and the other antitrust laws, but also practices that the Commission determines are against public policy for other reasons" (citations omitted)); FTC v. Brown Shoe Co., 384 U.S. 316, 321 (1966) (holding that section 5 reaches "practices which conflict with the basic policies" underlying antitrust law, as well as incipient violations of antitrust law); *see also* FTC v. Sperry & Hutchinson Co., 405 U.S. 233, 244 (1972) (noting that the FTC must "consider[] public values beyond simply those enshrined in the letter or encompassed in the spirit of the antitrust laws").

255. For evaluations of the feasibility and desirability of FTC rulemaking authority, see Baker, *supra* note 67, at 207-19; and C. Scott Hemphill, *An Aggregate Approach to Antitrust: Using New Data and Rulemaking To Preserve Drug Competition*, 109 COLUM. L. REV. 629, 673-82 (2009).

256. *E.g.*, McDonnell Douglas Corp, 92 F.T.C. 976 (1978); Boeing Co., 92 F.T.C. 972 (1978); Lockheed, 92 F.T.C. 968 (1978).

257. *E.g.*, Amerco, 109 F.T.C. 135 (1987).

258. *E.g.*, U.S. DEP'T OF JUSTICE & FED. TRADE COMM'N, ANTITRUST GUIDELINES FOR THE LICENSING OF INTELLECTUAL PROPERTY § 6, at 32 (1995), http://www.usdoj.gov/atr/public/guidelines/0558.htm.

259. *E.g.*, Negotiated Data Solutions LLC, No. 051-0094, 2008 WL 258308 (Fed. Trade Comm'n Jan. 22, 2008); Rambus, Inc., No. 9302, 2006 WL 2330118 (Fed. Trade Comm'n Aug. 2, of these cases are against a single firm and would readily satisfy section 2—for example, when a fraudulently obtained patent conveys a monopoly over a given market. There is no bar to bringing a similar action against oligopolists acting in parallel. The FTC has sometimes challenged each member of an oligopoly for unilateral exclusionary conduct. For example, in 1978, the Commission filed separate complaints against three of the major American airplane manufacturers, alleging exclusionary bribery.[260]

The FTC's history of shared monopoly cases, however, is also grounds for caution. In the 1970s, its cases in the oil and breakfast cereal industries lacked clear theories of anticompetitive conduct or harm. After years of litigation, the suits were abandoned. Other efforts in the 1980s by the Commission to challenge joint industry practices have similarly floundered for want of either a good theory of harm or evidence of anticompetitive conduct.[261]

However, despite some of the setbacks it has faced, the Commission should use its section 5 power in a case where it is clearly effectuating the policy of the Sherman Act, but where the agreement requirement cannot be satisfied. The clearest case for such a section 5 action is one of independently incentivized but nonetheless harmful exclusionary tactics, where the methods used lack a plausible or cognizable efficiency justification. Such a case may fail to satisfy the letter of the Sherman Act, due to the absence of a monopoly, an agreement, or evidence from which a tacit agreement can be inferred. However, as we have suggested, the harm from such practices may be great, and the scheme may be long lasting. Such cases may not be common, but as our case studies suggest, they exist.

B. Aggregation of Contracts in Restraint of Trade

A second means of addressing parallel exclusion looks primarily to section 1, rather than section 2, of the Sherman Act. Parallel contracts reached by the excluders with other parties satisfy the requirement of concerted action under section 1.[262] This route has a significant limitation, in that it requires the use of

2006) (Leibowitz, Comm'r, concurring); Union Oil Co. of Cal., No. 9305, 2005 WL 1541537 (Fed. Trade Comm'n June 10, 2005); Dell Computer Corp., 121 F.T.C. 616 (1996).

260. *See McDonnell Douglas*, 92 F.T.C. 976; *Boeing*, 92 F.T.C. 972 *Lockheed*, 92 F.T.C. 968.

261. *See* E.I. du Pont de Nemours & Co. v. FTC, 729 F.2d 128 (2d Cir. 1984).

262. For example, in an exclusive dealing case, the relevant contract is between the manufacturer and the distributor. In a tying case, agreement may be established by the contract between the seller and the purchaser. For an explanation and critique of this approach to tying, see Christopher R. Leslie, *Unilaterally Imposed Tying Arrangements and Antitrust's Concerted Action Requirement*, 60 OHIO ST. L.J. 1773, 1783 (1999).

contracts. It therefore does not reach simple exclusion schemes that do not rely on agreement.[263] But a solution that covered parallel exclusion accomplished through contracts would still be an important step forward.

As an example, consider recent suits alleging exclusion by producers of innovative surgical instruments.[264] Taking the allegations as true, two manufacturers, with a collective ninety-five percent market share, dominated the market for instruments used in minimally invasive "keyhole" surgery. Each reached agreements with downstream organizations, so-called "group purchasing organizations" (GPOs), that negotiate purchases on behalf of hospitals. Under these agreements, according to plaintiffs, the GPOs were induced to reject competing instrument makers with superior technology through various tactics.[265] In evaluating these claims on a motion to dismiss, courts considered the *aggregate* foreclosure of the agreements taken as a whole.[266] If the conduct was not aggregated, a small firm would not be liable for its part in the conduct, because its market power or amount of foreclosure was considered too small to satisfy the standards of exclusive dealing usually applicable to a single firm. In the extreme case, no firm would be liable.

The basic approach is to determine liability under section 1 by adding up the effects of an industry-wide contracting practice.[267] This approach finds support in Supreme Court doctrine. In the *Standard Stations* case discussed in Part II, the Court recognized that parallel exclusion through exclusive dealing

263. The limitation does not apply to predatory pricing by oligopolists, which can be pursued without finding any agreement under the Robinson-Patman Act. *See Brooke Group*, 509 U.S. 209 (1993).

264. *E.g.*, Daniels Sharpsmart, Inc. v. Tyco Int'l, No. 5:05-CV-169, 2006 U.S. Dist. LEXIS 100158 (E.D. Tex. Oct. 18, 2006); Genico, Inc. v. Ethicon, Inc., No. 5:04-CV-229, 2006 U.S. Dist. LEXIS 96909 (E.D. Tex. Mar. 23, 2006).

265. *Daniels Sharpsmart*, 2006 U.S. Dist. LEXIS 100158; *Genico*, 2006 U.S. Dist. LEXIS 96909.

266. *E.g.*, *Genico*, 2006 U.S. Dist. LEXIS 96909 (denying motion to dismiss). *See generally* Elhauge, *supra* note 133 (examining antitrust treatment of parallel exclusion of device makers). For a critique, see Frank M. Hinman & Brian C. Rocca, *The "Aggregation Theory": A Recent Series of Decisions in Bundled Discounting Cases Threatens To Expand Section One into Uncharted Territory*, ANTITRUST SOURCE, Feb. 2007, at 1.

267. *See, e.g.*, 9 AREEDA & HOVENKAMP, *supra* note 67, ¶ 1709a, at 89 (3d ed. 2011) ("[T]he relevant foreclosure aggregates those of the defendant and of its rivals."); 11 AREEDA & HOVENKAMP, *supra* note 67, ¶ 1821c, at 191 (3d ed. 2011) ("When exclusive dealing is used to facilitate collusion, the percentage foreclosure by any single firm might be less, but then the relevant issue becomes the aggregate foreclosure imposed by the upstream firms in the collusive group."); ELHAUGE, *supra* note 22, at 343-46 (reviewing doctrine and policy under a rubric of "cumulative foreclosure"); Elhauge, *GPO*, *supra* note 22, at 3 ("[I]t is the cumulative effect of all those exclusionary agreements that determines the marketwide foreclosure.").

is actionable, even without an agreement among the excluders.[268] The Court emphasized the industry-wide nature of the practice, which (in the Court's view) allowed the incumbents to act "collectively, even though not collusively," to prevent new entry.[269] Although the case has been criticized, the critiques have focused on the absence of anticompetitive effect on the particular facts at issue, not aggregation.[270] Later Supreme Court cases have emphasized the use of aggregation in *Standard Stations*,[271] and the Court has employed aggregation in a second case.[272]

Our analysis supports the use of aggregation in exclusive contracting cases. We would apply the same approach to parallel tying cases.[273] Such a case would proceed under a rule-of-reason analysis that considers the collective effect of

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268. 337 U.S. 293 (1949).

269. *Id.* at 309.

270. *See, e.g.*, POSNER, *supra* note 8, at 229, 264. Indeed, critics of the opinion often ignore the collective nature of the conduct. *See supra* note 156 and accompanying text.

271. *E.g.*, Tampa Elec. Co. v. Nashville Coal Co., 365 U.S. 320, 334 (1961) (noting the lack in that case of "myriad outlets with substantial sales volume, coupled with an industry-wide practice of relying upon exclusive contracts"); *see also* United States v. Phila. Nat'l Bank, 374 U.S. 321, 365-66 (1963) (reciting information on the collective market share and collective control of distribution in *Standard Stations*).

272. FTC v. Motion Picture Adver. Serv. Co., 344 U.S. 392 (1953). In *Motion Picture Advertising*, four film distributors had agreements with theater operators, making each distributor the exclusive provider of advertisements accompanying films. Together, about seventy-five percent of the operators in the United States were subject to the agreements. As in *Standard Stations*, the Court again aggregated shares and concluded that aggregation was appropriate.

Neither case squarely holds that aggregation is appropriate in a Sherman Act case. *Standard Stations* was brought under the Clayton Act and Sherman Act, but the Court did not reach the Sherman Act claim, and indeed emphasized the Clayton Act setting as a reason not to insist on a showing of anticompetitive effect. *Motion Picture Advertising* was brought under the FTC Act, and the Court found liability as an interpretation of both the Sherman Act and the FTC Act. *See also Phila. Nat'l Bank*, 374 U.S. at 366 (stating that *Motion Picture Advertising* is a holding under both the Sherman Act and the FTC Act). In dicta, Judge Easterbrook has rejected the proposition that *Motion Picture Advertising* contains a Sherman Act holding as a "bald and unreasoned assertion" by the Supreme Court. Paddock Publ'ns, Inc. v. Chi. Tribune Co., 103 F.3d 42, 46 (7th Cir. 1996). As discussed *supra*, aggregation has been applied in Sherman Act cases by lower courts.

273. *See, e.g.*, *In re* Wireless Tel. Servs. Antitrust Litig., 385 F. Supp. 2d 403, 426 (S.D.N.Y. 2005) (dismissing allegation that wireless telecommunications carriers tied wireless service and handsets, where no individual carrier had sufficient market power to trigger the modified per se rule applicable to tying, and no conspiracy among the carriers was alleged). A fortiori, we disagree with the series of lower-court cases that fail to aggregate even where conspiracy was alleged. For an analysis of these cases, see Leslie, *supra* note 22, at 2252-56.

the tying.[274] This approach is far from a free pass, because the plaintiffs would be obliged to demonstrate an anticompetitive effect.

A robust aggregation doctrine makes it unnecessary to inquire into horizontal agreement in cases that do not require it. For example, in the debit cards case, an important and (because of settlement) unresolved doctrinal question was whether the aggregate effect of Visa and MasterCard's conduct could be considered, if the court had concluded that there was no horizontal agreement between the two networks to tie credit and signature debit cards.[275] Under aggregation, the answer is clearly yes.

Aggregation also avoids strange and incorrect outcomes premised on the differential size of parallel excluders, in which a large excluder attracts antitrust liability but a small firm engaged in the same scheme does not. For example, in the debit cards case, the district court concluded as a matter of law that Visa possessed market power, but denied a similar motion as to MasterCard.[276] This raised the prospect that liability for the smaller network might depend on the presence or lack thereof of horizontal agreement, rather than on the economic effects of the scheme in which it was alleged to be engaged. From the standpoints of deterrence and compensation to those harmed by exclusion, it is preferable to assign liability to smaller members of the scheme, as well as the larger defendants.

Our claim is not that industry-wide exclusive dealing or tying, when it occurs, is usually an anticompetitive act. In particular, many ties are procompetitive, and industry-wide tying is common. Our point is that the inquiry should focus on evidence of harm, rather than evidence of agreement.

C. Mergers

Our examination has implications not only for direct prohibitions on exclusionary conduct, but also for merger policy. One goal of horizontal merger control is to prevent reductions of competition through "coordinated effects."[277] The basic idea is that if a merger leaves fewer competitors remaining, it will be easier for them to coordinate in a manner that reduces

274. 10 AREEDA & HOVENKAMP, *supra* note 67, ¶¶ 1734b, 1734e (3d ed. 2011) (advocating that industry-wide tying by oligopolists should be evaluated under the rule of reason).

275. *See* Declaration of Professor Harry First, *In re* Visa Check/Mastermoney Antitrust Litig., 297 F. Supp. 2d 503 (E.D.N.Y. 2003) (No. 96-CV-5238), 2003 WL 25656951.

276. *In re* Visa Check/Mastermoney Antitrust Litig., No. 96-CV-5238, 2003 WL 1712568, at *3-4 (E.D.N.Y. Apr. 1, 2003).

277. *See* U.S. DEP'T OF JUSTICE & FED. TRADE COMM'N, HORIZONTAL MERGER GUIDELINES § 7, at 24-27 (2010) [hereinafter HORIZONTAL MERGER GUIDELINES].

competition. The risk of future, post-transaction coordination is a reason to prohibit a merger, even if the coordinated effects are not themselves actionable as concerted activity. Indeed, it is a prophylactic concern about future coordinated effects, not themselves directly reachable under the Sherman Act, that partly motivates merger control.

Attention to parallel exclusion expands the domain of coordinated effects. The most familiar form of reduced competition is a coordinated price increase. But parallel exclusion is a coordinated effect as well. For example, in 2011, two leading providers of wireless services, AT&T and T-Mobile, announced a $39 billion proposed merger of their wireless operations.[278] The transaction raised antitrust concerns from regulators, who took the view that the merger would reduce the number of major carriers from four to three. The increased concentration would, it was argued, make it easier for the remaining three players to coordinate their activity, reducing competition among them.[279]

The Department of Justice and FCC each opposed the merger, based in part on concerns about coordinated effects.[280] FCC staff expressed concern about an increased capacity for parallel exclusion—in particular, that the two largest postmerger firms, AT&T and Verizon Wireless, in the past had exhibited a pattern of "parallel decisions making expansion by smaller competitors or entry by new providers more difficult."[281]

The FCC's examples of exclusionary conduct included the carriers' refusal, in parallel, to offer roaming or wholesale services to smaller carriers or providers that might need such services to compete effectively.[282] That history gave rise to a prediction that after a merger, the problem of parallel exclusion would be worse.[283] The report also expressed concern about a second form of parallel exclusion, namely that AT&T and Verizon Wireless would have the

278. Andrew Ross Sorkin, Michael J. de la Merced & Jenna Wortham, *AT&T Makes Deal To Buy T-Mobile for $39 Billion*, N.Y. TIMES, Mar. 21, 2011, at A1.

279. *See* HORIZONTAL MERGER GUIDELINES, *supra* note 277, § 7, at 24-27 (discussing "coordinated effects").

280. Complaint, United States v. AT&T Inc., No. 1:11-cv-01560, 2011 WL 3823252 (D.D.C. Aug. 31, 2011); *Staff Analysis and Findings*, FED. COMM. COMMISSION (2011), http://hraunfoss.fcc.gov/edocs_public/attachmatch/DA-11-1955A2.pdf.

281. *Staff Analysis and Findings*, *supra* note 280, at 43. The report noted that this question was not "directly at issue" in the Department of Justice challenge, but was raised in several private challenges to the transaction. *Id.* at 50.

282. *Id.* at 43 n.247. The other two major carriers, T-Mobile and Sprint, were relatively more willing to offer roaming and wholesale services. *Id.* FCC staff concluded that "[t]he elimination of T-Mobile from the marketplace would reduce the number of potential partners . . . which could hinder the development of innovative new offerings." *Id.* at 56.

283. *Id.* at 56-57.

increased incentive and ability to exclude competitors from access to new handsets and devices.[284]

Our analysis identifies parallel exclusion as a potential coordinated effect that should be evaluated in any horizontal merger. At present, the increased opportunity for parallel exclusion is missing from the Horizontal Merger Guidelines, the enforcement agencies' detailed explanation of how they evaluate mergers of competitors.[285] However, given the Guidelines' explicit attention to anticompetitive exclusion by a single dominant firm and to lost innovation,[286] parallel exclusion is an appropriate expansion of the existing analysis.

D. The Insufficiency of Horizontal Agreement

As discussed at length above, a horizontal agreement among excluders is not necessary for an anticompetitive effect from parallel exclusion. Seeking out such an agreement is an unhelpful distraction. We therefore recommend that any horizontal agreement requirement, as a doctrinal requirement for parallel exclusion, be jettisoned or weakened.

If horizontal agreement is not necessary, should it be sufficient? A line of Supreme Court authority suggests that a horizontal agreement to exclude gives rise to per se antitrust liability. For example, in *United States v. General Motors Corp.*,[287] a group of Chevrolet dealers acted in concert to persuade General Motors to cut off discounters who were acting in violation of "location clauses" between GM and its dealers that protected the dealers from such competition. The Court found the arrangement per se illegal, declaring it irrelevant whether the business practices at stake—both the location clause and the franchise system more generally—were desirable.[288] As the Court explained, "where businessmen concert their actions in order to deprive others of access to merchandise which the latter wish to sell to the public, we need not inquire

284. *Id.* at 43 n.247; *see also id.* at 59 (noting the merger "could make it more difficult for providers other than the newly merged AT&T and Verizon Wireless to access as sufficient a range of cutting-edge handsets in the future as would be available absent the proposed transaction").

285. HORIZONTAL MERGER GUIDELINES, *supra* note 277, § 7, at 24-27 (limiting discussion of coordinated effects to relaxation of competition among the remaining firms).

286. *Id.* § 1, at 1, § 8, at 27.

287. United States v. Gen. Motors Corp., 384 U.S. 127 (1966).

288. *Id.* at 142, 145 ("Elimination, by joint collaborative action, of discounters from access to the market is a *per se* violation of the Act.").

into the economic motivation underlying their conduct."[289]

We reject this line of cases. The mere fact that firms have banded together is not particularly informative; the key question is what effect results from their conduct. As we have explained, not all exclusion is anticompetitive exclusion. For one thing, much exclusion has no effect on competition, as when an intrabrand restraint is kept in check by the presence of interbrand competition. Put another way, the dealers, considered collectively, may have lacked market power. Second, there are procompetitive explanations even for certain conduct that has an exclusionary effect. For example, the excluding dealers were apparently forced to service, for free, the cars sold by discounters.[290] The Court erred in ignoring these issues.

It follows, then, that horizontal agreement is not a sufficient condition for parallel exclusion liability, just as it is not a necessary condition.[291] This point is consistent with commentators' criticism of the Court's imposition of per se liability in cases where exclusive territories are allocated for the effective marketing of a single brand.[292] Once again, the point is that horizontal agreement among the excluders tells us relatively little about the conduct of concern.

CONCLUSION

Parallel exclusion is a neglected category in antitrust analysis. That neglect is unfortunate, because the harms of parallel exclusion can exceed those of the more frequently discussed and litigated problem of parallel pricing. Parallel exclusion persists either as a repeated prisoner's dilemma or because exclusion

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289. *Id.* at 146.

290. *Id.* at 133.

291. For critiques of *General Motors*, see, for example, Harry S. Gerla, *A Micro-Microeconomic Approach to Antitrust Law: Games Managers Play*, 86 MICH. L. REV. 892, 912 (1988), which emphasizes the protection of the franchise system; Glazer, *supra* note 15, at 44-45, which rejects per se treatment in light of the free-rider problem created by discounters; and Richard A. Posner, *The Next Step in the Antitrust Treatment of Restricted Distribution: Per Se Legality*, 48 U. CHI. L. REV. 6, 24-25 (1981), which emphasizes the anti-free-riding justification, while cautioning that liability might be appropriate if the arrangement supported a dealer cartel.

292. *See, e.g.*, Herbert Hovenkamp & Christopher R. Leslie, *The Firm as Cartel Manager*, 64 VAND. L. REV. 813, 864 (2011) (collecting and endorsing previous critiques of the "overly aggressive per se rule [applied] to restraints that were ancillary to legitimate, efficiency-enhancing joint ventures by firms that lacked significant market power" in *United States v. Topco Associates, Inc.*, 405 U.S. 596 (1972), and *United States v. Sealy, Inc.*, 388 U.S. 350 (1967)).

is a dominant strategy for each firm. Current antitrust doctrine is poorly suited to address the problem of parallel exclusion, in part due to its overemphasis on horizontal agreement as a necessary or sufficient condition for anticompetitive exclusion (though we do not think horizontal agreement is entirely irrelevant[293]). We have suggested several changes that would remedy the problem.

Our analysis contributes to the increased recognition that monopolists should not be singled out for uniquely harsh treatment under antitrust law. In an earlier time, a monopolist was understood to have an unusual, special responsibility in the conduct of its affairs, including the avoidance of overly aggressive competition.[294] That view has steadily eroded, as courts recognize that a monopolist, just like other firms, should be free to compete aggressively on the merits.[295] Our analysis reinforces the similar treatment of oligopolists and monopolists from another angle, by emphasizing the conditions under which oligopolists can engage in exclusion, just like monopolists.

Our analysis also raises doubts about the claim, sometimes made about parallel conduct, that the marketwide nature of conduct is a defense against antitrust liability.[296] The fact that a practice is marketwide is not, in itself, necessarily reassuring. It might be a marketwide exclusionary device.[297] Similarly, a device's persistence over time tends to demonstrate its effectiveness, but that is not the same thing as a demonstration of its efficiency.

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293. In some instances, an observed horizontal agreement might indicate the existence of a price-fixing cartel, or suggest an effect that is hard to explain except as anticompetitive exclusion. For an argument of the latter type, see Leslie, *supra* note 22, at 2289.

294. *See, e.g.*, United States v. Aluminum Co. of Am., 148 F.2d 416, 430-31 (2d Cir. 1945) (Hand, J.) (finding a section 2 violation where a monopolist aggressively expanded production in anticipation of increased demand).

295. Verizon Commc'ns Inc. v. Law Offices of Curtis V. Trinko, L.L.P., 540 U.S. 398, 407 (2004) (stating that a monopoly is not a status offense); Atl. Richfield Co. v. USA Petrol. Co., 495 U.S. 328, 341 (1990) ("It is in the interest of competition to permit dominant firms to engage in vigorous competition . . . ." (quoting Cargill, Inc. v. Monfort of Colo., Inc., 479 U.S. 104, 116 (1986))); Olympia Equip. Leasing Co. v. W. Union Tel. Co., 797 F.2d 370, 375 (7th Cir. 1986) (Posner, J.) ("Today it is clear that a firm with lawful monopoly power has no general duty to help its competitors . . . ."); Foremost Pro Color, Inc. v. Eastman Kodak Co., 703 F.2d 534, 544 (9th Cir. 1983) ("A monopolist, no less than any other competitor, is permitted and indeed encouraged to compete aggressively on the merits . . . .").

296. *See, e.g.*, United States v. Microsoft Corp., 253 F.3d 34, 88 (D.C. Cir. 2001) (en banc) (per curiam) ("[B]undling by all competitive firms implies strong net efficiencies.").

297. For an example of the ambiguity, see *Beltone Elecs. Corp.*, 100 F.T.C. 68, 97 (1982), which observed that "[a]t one time, exclusive dealing was arguably practiced by the major firms in [the hearing aid] market, a fact suggesting either that the practice involved efficiencies or that it was collusively adopted to block entry."

Our analysis points to a broad agenda for both academics and enforcers. There is an extensive academic literature about the adoption and stability of parallel pricing and related instruments for reducing competition among oligopolists. But we lack a similarly robust understanding of parallel exclusion. When is exclusion initiated, and by whom? Are the exclusion decisions simultaneous or sequential? To what extent do these differences affect the timing and likelihood of defection and collapse?

As for antitrust enforcers, we believe they have sometimes been reluctant to even consider parallel conduct cases, based on the premise that Turner "won" the debate with Posner, demonstrating that such cases are impracticable unless there is clear evidence of agreement. Turner thought no such thing, and we have shown here that this misunderstanding misses much, including the crucial distinction between pricing cases and exclusion cases, and the relative irrelevance of horizontal agreement. We hope that enforcers take our analysis as a call to arms—a mandate to investigate allegations of parallel exclusion with the same intensity and discipline brought to the examinations of solitary dominant firms.