

TACIT AGREEMENT UNDER SECTION 1 OF THE SHERMAN ACT

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In perhaps the most frequent confrontation in modern antitrust litigation, plaintiffs allege that oligopolists have agreed to fix prices,¹ allocate markets,² or exclude rivals,³ all per se violations of Section 1 of the Sherman Act.⁴ The defendants respond that, even if they are coordinating their competitive ac-

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¹ In 2015 alone, the courts of appeals decided *In re Dairy Farmers of America, Inc. Cheese Antitrust Litigation*, 801 F.3d 758, 762–65 (7th Cir. 2015); *In re Chocolate Confectionary Antitrust Litigation*, 801 F.3d 383, 395–412 (3d Cir. 2015); and *In re Text Messaging Antitrust Litigation*, 782 F.3d 867, 872–79 (7th Cir. 2015) (Posner, J.), all concluding the plaintiffs produced insufficient evidence of an agreement on prices to avoid summary judgment. Three circuit court cases considered the sufficiency of allegations of agreement on motions to dismiss, with varying outcomes. *In re Musical Instruments & Equip. Antitrust Litig.*, 798 F.3d 1186, 1193–98 (9th Cir. 2015) (affirming district court’s dismissal); *Osborn v. Visa Inc.*, 797 F.3d 1057, 1066–69 (D.C. Cir. 2015) (reversing district court’s dismissal); *Name.Space, Inc. v. Interstate Corp. for Assigned Names & Nos.*, 795 F.3d 1124, 1129–31 (9th Cir. 2015) (affirming district court’s dismissal). Another, *United States v. Apple, Inc.*, 791 F.3d 290, 321–25 (2d Cir. 2015), affirmed a trial court’s decision that Apple had conspired with book publishers to facilitate the adoption of an agency model of ebook distribution that allowed publishers to raise retail prices. And *Ross v. Citigroup, Inc.*, 630 F. App’x 79, 82–83 (7th Cir. 2015), affirmed a decision after a bench trial that banks had not conspired to adopt class-action-barring clauses in credit card agreements.

² See *Stanislaus Food Prods. Co. v. USS-POSCO Indus.*, 803 F.3d 1084, 1088–95 (9th Cir. 2015) (finding insufficient evidence that tin can manufacturers had agreed to allocate territories).

³ See *Abraham & Veneklasen Joint Venture v. Am. Quarter Horse Ass’n*, 776 F.3d 321, 330–34 (5th Cir. 2015) (reversing a jury verdict that defendants conspired to exclude cloned horses from breed registry); *SD3, LLC v. Black & Decker (U.S.) Inc.*, 801 F.3d 412, 429–35 (5th Cir. 2015) (holding the complaint sufficiently alleged that table saw manufacturers conspired to exclude plaintiff’s safety technology); *MM Steel, L.P. v. JSW Steel (USA) Inc.*, 806 F.3d 835, 844–47 (5th Cir. 2015) (reversing a jury verdict that one steel manufacturer joined a conspiracy of distributors to exclude a rival, but affirming the verdict against a second manufacturer).

⁴ 15 U.S.C. § 1 (2006). On the development and current scope of the per se rule, see 2 JOSEPH BAUER, WILLIAM H. PAGE & JOHN LOPATKA, *FEDERAL ANTITRUST LAW* § 12 (3d ed. 2013).

tions, they have not formed an agreement within the meaning of Section 1;⁵ they are only engaging in lawful oligopolistic behavior. When the service stations on Martha's Vineyard were accused of fixing prices of gasoline, for example, they pointed out that, because of their isolated location, relatively small number, and transparent pricing, they could "engage in 'cooperative pricing' without any secret meetings or any explicit agreements that would violate the nation's antitrust laws. The defendants are each rationally taking account of their competitors' likely responses to their actions and would be foolish not to do so."⁶ Courts usually resolve this confrontation in a casuistic process⁷ on pretrial motions to dismiss or for summary judgment, applying the standards of pleading and evidentiary sufficiency to hundreds of patterns of conduct.⁸

The outcomes on these motions depend in large part on what the courts think a Section 1 agreement is. Even after 125 years of Section 1 litigation, however, the meaning of that fundamental concept remains uncertain. We do know some things. It is now clear that what the service stations on Martha's

⁵ Section 1 requires a "contract, combination . . . , or conspiracy," terms that courts have read collectively to mean agreement. RICHARD A. POSNER, *ANTITRUST LAW* 262 (2d ed. 2001) ("[T]he courts sensibly have not worried about whether the terms 'contract,' 'combination,' and 'conspiracy,' in section 1, have nonoverlapping meanings.").

⁶ Defendants-Appellees' Brief at *31, *White v. R.M. Packer Co.*, 635 F.3d 571 (1st Cir. 2011) (No. 10-1130), 2010 WL 3213231. The brief then asked rhetorically "[w]ould the plaintiffs prefer that the defendants not post their prices? Should the defendants not reasonably anticipate the results of their pricing actions?" *Id.* at *31-32. The appellate court agreed with the implicit answer. *White*, 635 F.3d at 585 ("Plaintiffs' ambiguous evidence is entirely consistent with permissible conscious parallelism."). Economists often analyze a similar scenario of gas stations located on opposite corners of the same intersection in a remote area as an instance of tacit collusion. See LOUIS KAPLOW, *COMPETITION POLICY AND PRICE FIXING* 23-24 (2013); ROBERT C. MARSHALL & LESLIE M. MARX, *THE ECONOMICS OF COLLUSION* 11-12 (2012); DENNIS W. CARLTON, ROBERT H. GERTNER & ANDREW M. ROSENFELD, *Communication Among Competitors: Game Theory and Antitrust*, 5 *GEO. MASON L. REV.* 423, 428-29 (1997).

⁷ For a discussion of the advantages and disadvantages of casuistic over rule-based decision-making, see Cass R. Sunstein, *Problems with Rules*, 83 *CALIF. L. REV.* 953, 958 (1995) ("In the casuistic enterprise, judgments are based not on a preexisting rule, but on comparisons between the case at hand and other cases, especially those that are unambiguously within a generally accepted norm.").

⁸ The decisions on the motions are frequently decisive of the entire litigation. Cases that survive motions to dismiss on the pleadings may still fail on summary judgment. See, e.g., *In re Text Messaging Antitrust Litig.*, 782 F.3d 867, 873-79 (7th Cir. 2015) (affirming summary judgment four years after the same court of appeals had affirmed the denial of a motion to dismiss in *In re Text Messaging Antitrust Litigation*, 630 F.3d 622 (7th Cir. 2011)). If a case survives summary judgment, it is frequently settled. The net effect has been substantially (and controversially) to narrow the range of issues resolved as matters of fact. See *Laumann v. NHL*, 56 F. Supp. 3d 280, 307 (S.D.N.Y. 2014) ("It is an unfortunate trend that judges increasingly resolve trial-worthy disputed fact issues or characterize cases as implausible, thereby disposing of them on motion rather than allowing them to proceed to trial.") (citation and internal quotation marks omitted).

Vineyard claimed to be doing—“mere interdependence,”⁹ a process the courts¹⁰ and economists¹¹ call tacit collusion¹²—is not an agreement at all; no matter how much it restricts output and raises prices, it is per se legal. The Supreme Court explained in 2007 in *Bell Atlantic Corp. v. Twombly*¹³ that the “inadequacy of showing parallel conduct or interdependence, without more, mirrors the ambiguity of the behavior: consistent with conspiracy, but just as much in line with a wide swath of rational and competitive business strategy unilaterally prompted by common perceptions of the market.”¹⁴ Although

⁹ *Bell Atl. Corp. v. Twombly*, 550 U.S. 544, 557 n.4 (2007) (quoting 6 PHILLIP AREEDA & HERBERT HOVENKAMP, *ANTITRUST LAW* ¶ 1425, at 167–85 (2d ed. 2003)).

¹⁰ *Brooke Grp. Ltd. v. Brown & Williamson Tobacco Corp.*, 509 U.S. 209, 227 (1993) (“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.”). *See also* *Motorola Mobility LLC v. AU Optronics Corp.*, 775 F.3d 816, 822 (7th Cir. 2014) (dictum) (Posner, J.) (stating if rivals were to match a slight price increase, it would “be an example of tacit collusion, which is not an antitrust violation”); *White*, 635 F.3d at 576 n.3 (“Conscious parallelism has also been called ‘tacit collusion’ or ‘oligopolistic price coordination.’” (citing *Brooke Group*, 509 U.S. at 227)); *In re Insurance Brokerage Antitrust Litig.*, 618 F.3d 300, 339 n.19 (3d Cir. 2010) (equating conscious parallelism and tacit collusion and observing that courts have “found that it is not, without more, sufficient evidence of a § 1 violation, both because it is not an agreement within the meaning of the Sherman Act, and because it is resistant to judicial remedies”); *Bailey v. Allgas, Inc.*, 284 F.3d 1237, 1251 (11th Cir. 2002) (“The hallmark of an oligopoly is tacit collusion among competitors.”).

¹¹ *See, e.g.*, Edward J. Green et al., *Tacit Collusion in Oligopoly*, in 2 *OXFORD HANDBOOK OF INTERNATIONAL ANTITRUST ECONOMICS* 464, 467–68 (Roger D. Blair & D. Daniel Sokol eds., 2015); Richard A. Posner, *Review of Kaplow, Competition Policy and Price Fixing*, 79 *ANTI-TRUST L.J.* 761, 765 (2014) [hereinafter Posner, *Kaplow Review*] (“What [Donald F.] Turner called oligopolistic interdependence . . . I called and continue to call tacit collusion . . .”). Posner cited Donald F. Turner, *The Definition of Agreement Under the Sherman Act: Conscious Parallelism and Refusals to Deal*, 75 *HARV. L. REV.* 655 (1962), which did not actually use the term “oligopolistic interdependence” but expressed the same idea as “conscious parallelism.” *See, e.g., id.* at 671 (“[O]ligopolists who take into account the probable reactions of competitors in setting their basic prices, without more in the way of ‘agreement’ than is found in ‘conscious parallelism,’ should not be held unlawful conspirators under the Sherman Act even though . . . they refrain from competing in price.”).

¹² *But cf.* Patrick Andreoli-Versbach & Jens-Uwe Franck, *Econometric Evidence to Target Tacit Collusion in Oligopolistic Markets*, 11 *COMPETITION L. & ECON.* 463, 467 (2015) (distinguishing “[t]acit collusion[, which] arises from decisions endogenous to the market by one or several firms that aim to reduce or eliminate competition” from “oligopolistic interdependence[, which] stems from best response to market conditions, including other firms’ behavior, that favor non-competitive performance”). American antitrust law makes no such distinction.

¹³ 550 U.S. 544 (2007).

¹⁴ *Id.* at 554.

some scholars, notably Richard Posner¹⁵ (until 2014)¹⁶ and Louis Kaplow,¹⁷ have argued that this sort of coordination should be considered a Section 1 agreement in some circumstances, the courts have rejected that position. Although courts recognize that tacit collusion harms consumers, they view it as unavoidable for rational oligopolists and impossible for courts to remedy without doing more harm than good.¹⁸

It is far less clear just what, beyond “interdependence, without more,” constitutes an agreement.¹⁹ *Twombly* itself said that a sufficient complaint must allege “an agreement, tacit or express,”²⁰ a phrase the lower courts have quoted dozens of times since 2007. Here, the Court included within Section 1 not only express agreement but something called tacit agreement. But how is including tacit *agreement* consistent with excluding tacit *collusion*? Pointing out this puzzle, Judge Cecilia Altonaga wrote recently that the Court’s reference to tacit agreement was simply a mistake:

It is curious that “tacit agreement” snuck its way into the *Twombly* decision. Tacit agreement in an oligopoly is simply conscious parallelism, which the Supreme Court spent much of the *Twombly* decision describing as perfectly normal and not a violation of section 1. Section 1 of the Sherman Act does not reach “tacit agreement”; there must be an express preceding agreement in order for there to be a contract, combination, or conspiracy in restraint of trade.²¹

¹⁵ See, e.g., POSNER, *supra* note 5, at 51–100; Richard A. Posner, *Oligopoly and the Antitrust Laws: A Suggested Approach*, 21 STAN. L. REV. 1562, 1563–93 (1968).

¹⁶ Posner, *Kaplow Review*, *supra* note 11, at 763 (“Yet I now think that I didn’t sufficiently appreciate the force of Turner’s doubts about the feasibility of an antitrust remedy for tacit collusion.”) (citing Turner, *supra* note 11).

¹⁷ KAPLOW, *supra* note 6, at 14, 16. Kaplow advocates a “direct approach,” (*id.* at 1) to oligopolistic interdependence that studies the “nature of the problem, how to detect its presence, and what remedies to apply” (*id.* at 13), but declines to advocate a single, optimal rule, which necessarily would depend on “empirical evidence in realms where existing understanding is incomplete.” *Id.* at 16. See also Reza Dibadj, *Conscious Parallelism Revisited*, 47 SAN DIEGO L. REV. 589, 592–93 (2010) (calling for “a more robust, less anemic conception of antitrust that is willing to confront conscious parallelism”); Thomas A. Piraino, Jr., *Regulating Oligopoly Conduct Under the Antitrust Laws*, 89 MINN. L. REV. 9, 23 (2004) (“Tacit collusion, like express price-fixing, should be illegal on its face under section 1 of the Sherman Act.”).

¹⁸ See, e.g., *In re Chocolate Confectionary Antitrust Litig.*, 801 F.3d 383, 397–98 (3d Cir. 2015) (describing interdependent pricing as a “fact of life in oligopolies” and “courts have no effective remedy for the problem”) (citations and internal quotation marks omitted); *Clamp-All Corp. v. Cast Iron Soil Pipe Inst.*, 851 F.2d 478, 484 (1st Cir. 1988) (interdependent pricing is lawful “not because such pricing is desirable (it is not), but because it is close to impossible to devise a judicially enforceable remedy for ‘interdependent’ pricing. How does one order a firm to set its prices without regard to the likely reactions of its competitors?”).

¹⁹ KAPLOW, *supra* note 6, at 149–50 (considering the necessary relationship between definition and inference).

²⁰ *Bell Atl. Corp. v. Twombly*, 550 U.S. 544, 553 (2007) (emphasis added) (quoting *Theatre Enters., Inc. v. Paramount Film Distrib. Corp.*, 346 U.S. 537, 540 (1954)).

²¹ *In re Florida Cement & Concrete Antitrust Litig.*, 746 F. Supp. 2d 1291, 1308 n.13 (S.D. Fla. 2010). *Cf. In re Travel Agent Comm’n Antitrust Litig.*, 583 F.3d 896, 915 (6th Cir. 2009)

Others agree with this account of the law.²² For example, the service station operators on Martha's Vineyard, in the passage I quoted earlier, contrasted their behavior with "secret meetings or any explicit agreements that would violate the nation's antitrust laws."²³ Courts often require that plaintiffs' allegations²⁴ or evidence include "plus factors"²⁵ to justify an inference of agreement.²⁶ But most plus factors only "restate the phenomenon of interdependence"²⁷ by identifying markets in which oligopolistic coordination is possible, not those in which there is a Section 1 agreement.²⁸ Consequently, the most important plus factor, according to some courts, is noneconomic evidence of "'traditional conspiracy,' or 'proof that the defendants got together and exchanged assurances of common action or otherwise adopted a common

(Merritt, J., dissenting) (criticizing the perceived interpretation of *Twombly* "to require either an express written agreement among competitors or a transcribed oral agreement to fix prices").

²² See, e.g., *E.I. du Pont de Nemours & Co. v. FTC*, 729 F.2d 128, 143 (2d Cir. 1984) (Lumbard, J., concurring) (lamenting the law's frequent use of "that accommodating word, 'tacit,' which has created a hole in the agreement requirement large enough at times to swallow it entirely"); Barak Orbach, *The Durability of Formalism in Antitrust*, 100 IOWA L. REV. 2197, 2205 (2015) ("The distinction between concerted action and independent or interdependent conduct is . . . somewhat confusing and counterintuitive [because] [a]ctual collusions are often tacit, but antitrust law requires plaintiffs to prove that the conspirators had an explicit agreement.").

²³ Defendants-Appellees' Brief at *31, *White v. R.M. Packer Co.*, 635 F.3d 571 (1st Cir. 2011), No. 10-1130, 2010 WL 3213231. The court responded that the defendants' assertion that "'[a] merely tacit agreement is not an antitrust violation' conflates the concepts of 'tacit collusion,' referring to bare conscious parallelism, and 'tacit agreement,' which can be reached under § 1, and which plaintiffs allege is in play in this case." *White*, 635 F.3d at 576 n.3 (citation omitted).

²⁴ After *Twombly*, most courts require allegations of plus factors on motions to dismiss for failure to state a claim. See, e.g., *In re Musical Instruments & Equip. Antitrust Litig.*, 798 F.3d 1186, 1194 n.7 (9th Cir. 2015) (observing that just as circumstantial evidence of plus factors can "raise a genuine issue of material fact to defeat a defendant's motion for summary judgment, . . . [allegations of plus factors] coupled with parallel conduct can take a complaint from merely possible to plausible."). Courts still disagree about how specifically *Twombly* requires plaintiffs to plead agreement. See, e.g., *Oxbow Carbon & Minerals LLC v. Union Pac. R.R.*, 81 F. Supp. 3d 1, 12 (D.D.C. 2015) (acknowledging that while "some courts have interpreted [*Twombly*] to require . . . heightened specificity for antitrust conspiracies . . . [t]his Court . . . is not persuaded").

²⁵ For a comprehensive account of plus factors, see William E. Kovacic et al., *Plus Factors and Agreement in Antitrust Law*, 110 MICH. L. REV. 393 (2011).

²⁶ See, e.g., *In re Flat Glass Antitrust Litig.*, 385 F.3d 350, 360 (3d Cir. 2004) (observing that "no exhaustive list [of plus factors] exists," but identifying three: "(1) evidence that the defendant had a motive to enter into a price fixing conspiracy; (2) evidence that the defendant acted contrary to its interests; and (3) 'evidence implying a traditional conspiracy'" (quoting *Petruzzi's IGA v. Darling-Del.*, 998 F.2d 1224, 1244 (3d Cir. 1993)).

²⁷ *Flat Glass*, 385 F.3d at 360.

²⁸ For example, evidence that defendants (1) had a motive to fix prices or (2) acted against their individual interest is as consistent with interdependence as it is with agreement. *Id.* at 360–61. See also *In re Chocolate Confectionary Antitrust Litig.*, 801 F.3d 383, 398 (3d Cir. 2015) ("[T]hese factors are neither necessary nor sufficient to preclude summary judgment, at least where the claim is price fixing among oligopolists.").

plan even though no meetings, conversations, or exchanged documents are shown.’”²⁹

Other scholars, while not ruling out the continued existence of some non-express agreements, have repudiated the term tacit agreement either because of its inherent ambiguity or its inconsistent usage in the cases. Gregory Werden notes that “it is counterintuitive that ‘tacit collusion’ should mean something quite different from ‘tacit agreement.’”³⁰ Louis Kaplow observes that “[m]any, including the U.S. Supreme Court in both earlier decisions and its most recent . . . state that tacit agreements are sufficient, yet it is hard to know what to make of these proclamations given the great ambiguity of the terms.”³¹ The Areeda and Hovenkamp treatise “attempt[s] to avoid the ambiguity of ‘tacit agreement’” by not using the term at all.³²

Despite these criticisms of substance and terminology, I will show here that tacit agreement, properly understood, identifies a necessary category of Sherman Act agreement that is distinguishable from both simple interdependence and express agreement.³³ I further suggest that a clearer account of tacit agree-

²⁹ *Flat Glass*, 385 F.3d at 361 (quoting AREEDA & HOVENKAMP, *supra* note 9, ¶ 1434b, at 243). See also *Chocolate Confectionary*, 801 F.3d at 398; *In re Titanium Dioxide Antitrust Litig.*, 959 F. Supp. 2d 799, 823, 829–30 (D. Md. 2013); Kovacic et al., *supra* note 25, at 396–97 (characterizing as “super plus factors” those that raise “a strong inference of explicit collusion”).

³⁰ Gregory J. Werden, *Economic Evidence on the Existence of Collusion: Reconciling Antitrust Law with Oligopoly Theory*, 71 ANTITRUST L.J. 719, 736 (2004). He adds:

Case law and commentary contrast “tacit” agreements with those that are “express” or “explicit.” It is doubtful, however, that the distinction between the contrasting terms has been consistent across cases, or that it was ever the same as that drawn here between “unspoken” and “spoken” agreements. In the interest of clarity, the descriptors “tacit,” “express,” and “explicit” all are avoided.

Id. at 735–36 (citations omitted). Some jurists (such as Judge Altonaga) and commentators still use the terms synonymously. See, e.g., *In re High Fructose Corn Syrup Antitrust Litig.*, 295 F.3d 651, 654 (7th Cir. 2002) (Posner, J.) (“This statutory language [of Section 1] is broad enough . . . to encompass a purely tacit agreement to fix prices, that is, an agreement made without any actual communication among the parties to the agreement.”); Julia Shamir & Noam Shamir, *Colluding Under the Radar: Achieving Collusion Through Vertical Exchange of Information*, 63 CLEV. ST. L. REV. 621, 637–38 (2015) (referring both to “illegal tacit collusion” and “illegal tacit agreement”).

³¹ KAPLOW, *supra* note 6, at 45. See also Kovacic et al., *supra* note 25, at 405 (“The line that distinguishes tacit agreements (which are subject to section 1 scrutiny) from mere tacit coordination stemming from oligopolistic interdependence (which eludes section 1’s reach) is indistinct.”).

³² 6 PHILLIP AREEDA & HERBERT HOVENKAMP, ANTITRUST LAW ¶ 1420d, at 157 n.26 (3d ed. 2010) (observing that tacit agreement “is sometimes used for the legal conclusion that an unlawful agreement is present” and “sometimes used to describe oligopolistic coordination through recognized interdependence alone”; the authors instead “speak of ‘coordination’ or ‘tacit coordination’” for the economic condition and “‘agreement’ in this context for the legal conclusion”).

³³ See also George A. Hay, *Horizontal Agreements: Concepts and Proof*, 51 ANTITRUST BULL. 877, 894 (2006) (“[I]f there is to be substance to the concept of a tacit agreement, it must be defined in such a way that it does not extend to supra-competitive pricing arising purely from oligopolistic interdependence.”). Hay argues that certain facilitating practices can fill the gap,

ment can reduce the acknowledged efficiency losses from the Supreme Court's immunization of tacit collusion. Courts recognize that simple interdependence is a form of collusion, but one that oligopolists cannot rationally avoid and that courts cannot profitably penalize or enjoin. By contrast, tacit agreement, I will show here, requires rivals consciously to communicate by means that do not benefit consumers and that courts can practically identify and deter in litigation. Tacit agreement is also more likely to be successful in coordinating output and prices than simple interdependence.

The term is admittedly ambiguous, but it is the one the courts use. And it is no more ambiguous than any other shorthand designation of non-express agreements we might propose—such as “concerted action.”³⁴ Nor is its ambiguity or inconsistency in usage cause for despair: courts have, by necessity³⁵ and design,³⁶ given content to equally ambiguous antitrust terms throughout the Sherman Act's history, often with the aid of legal and economic scholar-

because “successful coordination would not be possible (or would be much less likely) without these extra steps—the facilitating practices.” *Id.* at 900. *But cf.* William H. Page, *Facilitating Practices and Concerted Action Under Section 1 of the Sherman Act*, in ANTITRUST LAW AND ECONOMICS 23, 34 (Keith Hylton ed., 2009) (“[I]ndustry-wide adoption of [a facilitating] practice alone would likely not justify an inference of a horizontal agreement, because the pattern would be consistent with lawful oligopolistic interdependence.”).

³⁴ I have elsewhere examined non-express coordination as concerted action. *See, e.g.*, William H. Page, *Objective and Subjective Theories of Concerted Action*, 79 ANTITRUST L.J. 215 (2013); William H. Page, *Communication and Concerted Action*, 38 LOY. U. CHI. L.J. 405 (2007). This is a term I propose as an analogy to concerted *practices* under Article 101 of the EU Treaty. Consolidated Version of the Treaty on the Functioning of the European Union art. 101, May 9, 2008, 2008 O.J. (C 115) 47. *See* Federico Ghezzi & Mariateresa Maggiolino, *Bridging EU Concerted Practices with U.S. Concerted Actions*, 10 J. COMPETITION L. & ECON. 647 (2014) (developing the analogy further). But the term is also ambiguous in that context because courts use it to embrace all forms of Sherman Act agreement. *See, e.g.*, *Am. Needle, Inc. v. NFL*, 560 U.S. 183, 190 (2010) (“Section 1 applies only to concerted action that restrains trade.”); *Chocolate Confectionary*, 801 F.3d at 395 (“Without proof of concerted action, the plaintiff's claim fails because the very essence of a section 1 claim . . . is the existence of an agreement.”) (citations and internal quotation marks omitted).

³⁵ Larry Kramer, *The Lawmaking Power of the Federal Courts*, 12 PACE L. REV. 263, 269 (1992) (“[C]ourts must make a certain amount of common law simply because there is no clear line between ‘making’ and ‘applying’ law, between commands that are clear on the face of a statute and those made through an exercise of judgment and creativity.”).

³⁶ The drafters of the Sherman Act assumed that ambiguous terms and categories can gain clarity by a process of reconceptualization and application. Senator Sherman said that the meaning of the vague categories of the proposed Sherman Act itself “must be left for the courts to determine in each particular case.” *See* 21 CONG. REC. 2460 (1890); *see also* Frank H. Easterbrook, *Statutes' Domains*, 50 U. CHI. L. REV. 533, 544 (1983) (the Sherman Act “effectively authorize[s] courts to create new lines of common law”).

ship.³⁷ Think, for example, of “predatory pricing,”³⁸ “essential facilities,”³⁹ or “antitrust injury.”⁴⁰ The task for tacit agreement is no different: to frame an economically justified and legally administrable standard.

The next Part begins by drawing from *Twombly* four categories of parallel oligopolistic behavior: independent conduct, interdependent conduct, tacit agreement, and express agreement. I argue that tacit agreement differs from simple interdependence or tacit collusion in that rivals coordinate their interdependent conduct by economically inefficient communication of their intentions on critical competitive choices facing the firms; it differs from express agreement in that the communications do not involve mutual assurances that amount to a completed agreement that precedes any interdependent conduct. Although it may seem paradoxical to call coordination that involves communication a *tacit* agreement, the idea is that rivals demonstrate their accord with a communicated proposal or expression of intention not by a verbal acceptance, but by subsequent interdependent conduct. There is no “preceding agreement”; the combination of communications and conduct form the tacit agreement. In Parts III through VI, I will consider what sorts of communications that coordinate interdependent behavior can form a tacit agreement. I examine cases that illustrate four categories of communications with varying degrees of probative value in the inference of tacit agreement, depending upon whether the communications are private or public and whether they relate to present or future choices. I also explain the relationship of these categories of communication to “signaling” a term that often appears in the cases I am considering.⁴¹ With a clarified understanding of tacit agreement, courts will be

³⁷ The Supreme Court has even “felt relatively free to revise our legal analysis as economic understanding evolves and . . . to reverse antitrust precedents that misperceived a practice’s competitive consequences.” *Kimble v. Marvel Entm’t, LLC*, 135 S. Ct. 2401, 2412–13 (2015). Even when precedents remain nominally in place, changing theory can change their meaning. See generally William H. Page, *The Chicago School and the Evolution of Antitrust: Characterization, Antitrust Injury, and Evidentiary Sufficiency*, 75 VA. L. REV. 1221, 1228 (1989) (“The Court’s use of [Chicago School] models permits it to reflect prevailing economic understanding, while sharing responsibility for the large-scale estimates of legislative fact on which substantive rules are based. Moreover, it allows the courts to resolve important factual issues in individual cases, and permits knowledge about antitrust practices to develop through the ongoing process of litigation.”).

³⁸ For example, in *Brooke Group Ltd. v. Brown & Williamson Tobacco Corp.*, 509 U.S. 209, 225 (1993), the Supreme Court adopted elements of the Areeda-Turner test for predatory pricing. Phillip Areeda & Donald F. Turner, *Predatory Pricing and Related Practice Under Section 2 of the Sherman Act*, 88 HARV. L. REV. 697, 698 (1975).

³⁹ See, e.g., Phillip Areeda, *Essential Facilities: An Epithet in Need of Limiting Principles*, 58 ANTITRUST L.J. 841 (1990).

⁴⁰ See, e.g., Ronald W. Davis, *Standing on Shaky Ground: The Strangely Elusive Doctrine of Antitrust Injury*, 70 ANTITRUST L.J. 697, 750 (2003); William H. Page, *The Scope of Liability for Antitrust Violations*, 37 STAN. L. REV. 1445, 1459–83 (1985).

⁴¹ Michael E. Porter defines a signal as an “action by a competitor that provides a direct or indirect indication of its intentions, motives, goals, or internal situation.” MICHAEL E. PORTER,

better able to evaluate patterns of evidence in resolving issues of agreement in every procedural setting.⁴²

I. DEFINING AND INFERRING TACIT AGREEMENT

Twombly recognized tacit agreement as a form of coordination somewhere between interdependence and express agreement. Unfortunately, the Court confused matters both by what it said and did not say about these categories in its discussion of the relationship between the agreement requirement and the pleading standard. In this Part, I examine the Court's presentation of its categories of coordination, then reconstruct and try to justify a more coherent definition of tacit agreement. In the last section of this Part, I suggest that the relevance of particular communications to tacit agreement depends, first, on whether the communications relate to present or future competitive conditions, and second on whether the communications are addressed to multiple audiences or only to rivals.

A. TWOMBLY'S CONCEPT(S) OF AGREEMENT

In *Twombly*, the Supreme Court told us that the “‘crucial question’ is whether the challenged anticompetitive conduct ‘stem[s] from independent decision or from an agreement, *tacit* or express.’”⁴³ It added in the same paragraph that “[e]ven ‘conscious parallelism,’ a common reaction of ‘firms in a concentrated market [that] recogniz[e] their shared economic interests and their interdependence with respect to price and output decisions is ‘not in itself unlawful.’”⁴⁴ The Court quoted scholars who emphasize that “mere interdependent parallelism”⁴⁵ and “mere interdependence of basic price decisions”⁴⁶ are not agreements. In this passage, the Court recognized a spectrum of four categories of parallel oligopolistic behavior: (1) independent conduct, in which rivals act in the same way regardless of one another's actions; (2) mere interdependent conduct, in which rivals act in the same way only be-

COMPETITIVE STRATEGY: TECHNIQUES FOR ANALYZING INDUSTRIES AND COMPETITORS 75 (1980). See also Oliver Heil & Thomas S. Robertson, *Toward a Theory of Competitive Market Signaling: A Research Agenda*, 12 STRATEGIC MGMT. J. 403, 403 (1991) (“[C]ompetitive reactions are frequently based on signals which precede actual actions in the marketplace.”).

⁴² See Hay, *supra* note 33, at 895 (“Without a working definition of a tacit agreement and an understanding of how it differs from pure oligopolistic interdependence, there is no basis on which a jury can decide whether or not a tacit agreement has occurred or why the hypothesis of a tacit agreement is more plausible than the hypothesis of pure oligopolistic interdependence.”). The same concerns arise in the evaluation of allegations on a motion to dismiss and the evaluation of evidence on a motion for summary judgment.

⁴³ *Bell Atl. Corp. v. Twombly*, 550 U.S. 544, 553 (2007) (emphasis added) (quoting *Theatre Enters., Inc. v. Paramount Film Distrib. Corp.*, 346 U.S. 537, 540 (1954)).

⁴⁴ *Id.* at 553–54 (citing *Brooke Group*, 509 U.S. at 227).

⁴⁵ *Id.* at 554 (quoting AREEDA & HOVENKAMP, *supra* note 9, ¶ 1433a, at 236).

⁴⁶ *Id.* (quoting Turner, *supra* note 11, at 672).

cause each expects the others to do so; (3) tacit agreement; and (4) express agreement. The first two categories of conduct are not agreements under Section 1; the latter two are.

Twombly also stressed the need to avoid “false inferences from identical behavior,” and so required the complaint to allege “enough factual matter (taken as true) to suggest that an agreement was made.”⁴⁷ The conduct alleged in *Twombly* itself—parallel efforts to disadvantage new entrants⁴⁸ and parallel choices not to enter one another’s territory⁴⁹—could easily be explained as independent or simply interdependent choices, so the complaint was insufficient to raise an inference of either kind of agreement.

In this formulation, the plaintiff must allege facts about the defendants’ conduct that suggest coordination by something more than mere interdependence. Oddly, however, the Court did little to explain what more, beyond interdependence, would minimally justify the inference of a tacit agreement. We can infer from the distinction between *mere* interdependence and tacit *agreement* that the latter category requires rivals to coordinate their actions by distinctive means, presumably involving a different kind of communication, but the Court offered no indication of what means of coordination might be enough. It did suggest that allegations of parallel conduct are insufficient “without that further circumstance pointing toward a meeting of the minds,”⁵⁰ but that tells us nothing useful, because rivals can reach a “meeting of the minds” by simple interdependence. Kaplow points out that the term meeting of the minds “readily covers behavior that is interdependent . . . , such as the standard scenario in which firms in an oligopoly are able to coordinate their prices by understanding each other’s thought processes, which forms the basis for predicting their reactions to different prices that each firm may charge.”⁵¹

⁴⁷ *Id.* at 556.

⁴⁸ *Id.* at 566 (reasoning that parallel actions by the incumbent carriers to hinder rivals’ entry raised no plausible inference of agreement because the conduct could well have been “the natural, unilateral reaction of each ILEC intent on keeping its regional dominance”).

⁴⁹ *Id.* at 567–68 (reasoning that, because of the defendants’ history as regulated monopolies, a “natural explanation” for their failure to enter one another’s territories was that they “were sitting tight, expecting their neighbors to do the same thing”). Compare the allegations of territorial allocation in *Twombly* with those in *Northstar Energy LLC v. Encana Corp.*, No. 1:13-CV-200, 2014 WL 5343423, at *5 (W.D. Mich. Mar. 10, 2014) (denying motion to dismiss where emails between the defendants “attached to the complaint reveal their discussions on how to avoid ‘bidding each other up’ in many prospective lease deals and at a public land auction” and “discussed extensively how to divide up the counties”).

⁵⁰ *Twombly*, 550 U.S. at 557. Lower courts continue to refer to the meeting of the minds formulation as if it distinguishes agreement from interdependent action. *See, e.g.*, *GSI Tech. Inc. v. Cypress Semiconductor Corp.*, No. 11-CV-03613, 2015 WL 365491, at *5 (N.D. Cal. Jan. 27, 2015) (“So long as the parties, in a meeting of the minds, coordinated horizontal behavior with the purpose of committing a violation, they remain exposed.”).

⁵¹ KAPLOW, *supra* note 6, at 34. *See* Jonathan B. Baker, *Two Sherman Act Section 1 Dilemmas: Parallel Pricing, the Oligopoly Problem, and Contemporary Economic Theory*, 38 ANTI-

We can also infer from *Twombly*'s reference to "an agreement, tacit or express" that the former kind of agreement is different from the latter. The term "express agreement" presumably means in this usage what it usually means in law—a completed, specified agreement formed by promises in language or equivalent signifiers.⁵² As I mentioned in the introduction, courts on summary judgment motions often look for evidence tending to show "traditional conspiracy," an agreement "in which the defendants got together and exchanged assurances of common action."⁵³ By implication, a tacit agreement is one that does not involve those sorts of assurances. But the Court confused matters here as well by stating, in a frequently quoted passage, that "when allegations of parallel conduct are set out in order to make a § 1 claim, they must be placed in a context that raises a suggestion of a *preceding* agreement."⁵⁴ But a "preceding" agreement implies that the parties have already formed an express, verbal agreement, which they then implemented by acting interdependently.⁵⁵ To require a preceding agreement seems to require an exchange of promises and to exclude the possibility of a tacit agreement formed in part by the conduct itself.

One reading of these perplexing passages is that the Court's references to tacit agreement were careless oversights (or perhaps anachronisms),⁵⁶ and

TRUST BULL. 143, 178 (1993) ("[I]f an agreement is defined as a meeting of the minds, a court conscientiously applying the definition would likely infer an agreement from the consciously parallel interaction among oligopolists. When firm 1 raises price, expecting firm 2 to do the same, and firm 2 rises price expecting firm 1 to [do] likewise, the firms have reached a common understanding by communicating solely through their pricing actions.")

⁵² See, e.g., BLACK'S LAW DICTIONARY 303 & 701 (10th ed. 2014) (defining "express contract" as "[a] contract whose terms the parties have explicitly set out," and "express" as "[c]learly and unmistakably communicated; stated with directness and clarity"); *Rosenfeld v. Brooks*, 895 S.W.2d 132, 135 (Mo. Ct. App. 1995) (observing that an "express contract requires the showing of explicit promises made by the parties"); *Twombly* itself quoted the district court's reference to *Theatre Enterprises*'s statement that "[c]ircumstantial evidence of consciously parallel behavior may have made heavy inroads into the traditional judicial attitude toward conspiracy; but 'conscious parallelism' has not yet read conspiracy out of the Sherman Act entirely." *Twombly*, 550 U.S. at 552 (quoting *Theatre Enters., Inc. v. Paramount Film Distrib. Corp.*, 346 U.S. 537, 259–60 (1954)). For this statement, *Theatre Enterprises* cited a law review article that described "traditional conspiracy requirements" that "[t]he big cases of the first fifty years of the Sherman Act readily met," because they involved formal associations that adopted explicit cartel measures as rules. James A. Rahl, *Conspiracy and the Anti-Trust Laws*, 44 ILL. L. REV. 743, 752 (1950).

⁵³ *In re Flat Glass Antitrust Litig.*, 385 F.3d 350, 361 (3d Cir. 2004) (quoting AREEDA & HOVENKAMP, *supra* note 9, ¶ 1434b, at 243). See also *Baker*, *supra* note 51, at 179 (observing that agreement is a "process to which the law objects: a negotiation that concludes when the firms convey mutual assurances that the understanding they reached will be carried out").

⁵⁴ *Twombly*, 550 U.S. at 557 (emphasis added). See, e.g., *In re Musical Instruments & Equip. Antitrust Litig.*, 796 F.3d 1186, 1194 (9th Cir. 2015).

⁵⁵ See, e.g., *In re Florida Cement & Concrete Antitrust Litig.*, 746 F. Supp. 2d 1291, 1308 n.13 (S.D. Fla. 2010) (Altonaga, J.).

⁵⁶ The Court's phrase "agreement, tacit or express" was a quotation from *Theatre Enterprises*, 346 U.S. at 540. *Theatre Enterprises*, in turn, approvingly cited *American Tobacco Co. v. United States*, 328 U.S. 781 (1946), which had inferred an unlawful agreement solely from identical

there is no longer such a category of agreement. In his summary judgment decision in *Text Messaging*, Judge Posner wrote that “[e]xpress collusion violates antitrust law; tacit collusion does not,”⁵⁷ apparently not admitting any intermediate category of tacit agreement.⁵⁸ As I noted in the introduction, Judge Altonaga took tacit agreement to mean mere interdependent conduct. This view assumes that the exclusion of mere interdependence from tacit agreement left the term with no content and that all that remains in the agreement category are express agreements.

Many other courts, however, have assumed that *Twombly* intentionally included tacit agreements within Section 1 and meant to distinguish a category of conduct from both express agreement and mere interdependence. For example, in *White v. R.M. Packer Co.*,⁵⁹ the court insisted that *Twombly* “reiterated that tacit agreements are still agreements under the Sherman Act.”⁶⁰ The court rejected the defendants’ contrary contention because it “conflated the concepts of ‘tacit collusion,’ referring to bare conscious parallelism, and ‘tacit agreement,’ which can be reached under § 1.”⁶¹ Many post-*Twombly* courts still quote a 1987 decision of the Second Circuit that defined “mere interdependent behavior” as “actions taken by market actors who are aware of and

price changes that were unjustified by demand and cost conditions, *id.* at 810, conduct modern courts would characterize as mere interdependence. As Turner later wrote, the “facts in *American Tobacco* were consistent with [the] hypothesis” of interdependent oligopoly pricing “without overt communication or agreement, but solely through a rational calculation by each seller of what the consequences of his price decision would be, taking into account the probable or virtually certain reactions of his competitors.” Turner, *supra* note 11, at 661. Where pricing is interdependent and “each seller is fully aware of the interdependence and the consequences of his taking advantage of it” (as in *American Tobacco*, but not *Theatre Enterprises* itself), “it is not at all preposterous . . . to classify what transpires as a ‘tacit agreement.’” *Id.* at 663. It is conceivable, then, that *Theatre Enterprises* eight years later meant to include that sort of conduct in tacit agreement. Regardless, *Twombly* has made clear that, now, mere interdependence is lawful oligopoly behavior.

⁵⁷ *In re Text Messaging Antitrust Litig.*, 782 F.3d 867, 872 (7th Cir. 2015).

⁵⁸ In an earlier case, he assumed a distinction between a lawful “purely tacit agreement” and an unlawful “express, manifested agreement.” *In re High Fructose Corn Syrup Antitrust Litig.*, 295 F.3d 651, 654 (7th Cir. 2002). Courts continue to quote Posner’s statement after *Twombly*. See, e.g., *Fleischman v. Albany Med. Ctr.*, 728 F. Supp. 2d 130, 157 (N.D.N.Y. 2010); *In re Ethylene Propylene Diene Monomer (EPDM) Antitrust Litig.*, 681 F. Supp. 2d 141, 166 (D. Conn. 2009).

⁵⁹ 635 F.3d 571 (1st Cir. 2011).

⁶⁰ *Id.* at 576.

⁶¹ *Id.* at 576 n.3 (citing *Twombly*’s quotation of *Theatre Enterprises*); see also *Beltran v. InterExchange, Inc.*, No. 14-cv-03074-CMA-KMT, 2016 WL 1253622, at *3 n.7 (D. Colo. Mar. 31, 2016) (quoting *White*’s “helpful explanation of the difference between a tacit agreement, which is prohibited under the Sherman Act, and . . . ‘conscious parallelism’”); *In re Text Messaging Antitrust Litig.*, No. 08 C 7082, 2009 WL 5066652, at *5 (N.D. Ill. Dec. 10, 2009) (quoting Judge Posner’s statement that defendants must have formed “an actual, manifest agreement not to compete,” but noting that *Twombly* “allows for the possibility of a ‘tacit agreement’”).

anticipate similar actions taken by competitors, but which fall short of a tacit agreement.”⁶² So, again, what is a tacit agreement?

B. TACIT AGREEMENT AND PRIVATE COMMUNICATION

Post-*Twombly* cases that recognize the category of tacit agreement have usually not tried to define it. In some cases, they do not need to define it because the plaintiff alleged or offered evidence of only independent or unilateral conduct⁶³ or because the plaintiff provided sufficient allegations or evidence of express agreement.⁶⁴ In some cases, courts hold that the evidence is sufficient to infer an agreement without ever making clear what sort of agreement they mean.⁶⁵ Courts have instructed juries, unhelpfully, that meetings and discussions among rivals are neither necessary nor sufficient to prove a conspiracy; what matters is whether “the alleged members of the conspiracy in some way came to an agreement to accomplish a common purpose.”⁶⁶ This

⁶² *Apex Oil Co. v. DiMauro*, 822 F.2d 246, 254 (2d Cir. 1987). The court in *Apex* evidently thought that tacit agreement involved some form of communication. *See id.* at 257 (finding an agreement “in light of all of the circumstances, including communications among the defendants and their parallel conduct” and reversing lower court’s grant of summary judgment in favor of a single defendant).

⁶³ *See, e.g., Mayor & City Council of Balt. v. Citigroup, Inc.*, 709 F.3d 129, 139–40 (2d Cir. 2013) (citing *Apex*, but concluding that defendants’ “en masse flight from a collapsing market in which they had significant downside exposure—made perfect business sense”); *Kendall v. Visa U.S.A., Inc.*, 518 F.3d 1042, 1047–48 (9th Cir. 2008) (citing *Twombly*’s reference to tacit agreement, but holding that complaint “failed to plead any evidentiary facts beyond parallel conduct to prove their allegation of a conspiracy”).

⁶⁴ *See, e.g., SD3, LLC v. Black & Decker (U.S.) Inc.*, 801 F.3d 412, 430 (4th Cir. 2015) (holding that complaint’s “detailed story” of defendant’s boycott of plaintiff’s technology sufficiently alleged an express agreement); *Arapahoe Surgery Ctr. v. Cigna Healthcare, Inc.*, 80 F. Supp. 3d 1257, 1264 (D. Colo. 2015) (finding allegations sufficient to withstand a motion to dismiss where plaintiff alleged that “Cigna representatives joined conspiratorial meetings on [two specified dates], at which the agreement was confirmed and actions were planned, and that Cigna’s participation in the agreement and acts in furtherance thereof were mentioned in e-mails exchanged between co-conspirators” between those dates).

⁶⁵ *See, e.g., City of Tuscaloosa v. Harcros Chems., Inc.*, 158 F.3d 548 (11th Cir. 1998). The court there held that “[o]ligopolists behaving in a legal, consciously parallel fashion could achieve high and rising prices, even as costs remained stable, by engaging in price leadership, [but the] odds that they could achieve a price and profit increase and maintain incredibly high incumbency rates—that is, maintain the very same distribution of municipal contracts year after year—are minuscule . . . unless the oligopolists were communicating with one another.” *Id.* at 572. Consequently, “It would be permissible for a jury to find . . . that the defendants were not in fact competing for contracts but were concertedly protecting each other’s incumbencies and pushing up prices.” *Id.* at 573. At no point did the court specify what sorts of communications or the nature of the agreement that the jury could infer.

⁶⁶ *Toledo Mack Sales & Serv., Inc. v. Mack Trucks, Inc.*, 386 F. App’x 214, 221 (3d Cir. 2010). This instruction is drawn from ABA SECTION OF ANTITRUST LAW, MODEL JURY INSTRUCTIONS IN CIVIL ANTITRUST CASES, B-2–B-3 (2005 ed.).

circular formulation never clarifies what communications can form an agreement and, of course, fails to distinguish express and tacit agreements.⁶⁷

Other courts seem to think that a non-express agreement is one formed by nonverbal signals. According to one court, “The law forbids nonverbal agreements in restraint of trade, as well as express ones; otherwise, the law would be emasculated as competitors accomplished the forbidden goal with a wink and a nod.”⁶⁸ The court here appears to use “express” to mean oral or written; that would seem to imply that one formed by gestures rather than words is not express, but only tacit. But an agreement formed by the intentional use of a well-understood conventional signal like a nod can express assent and complete an agreement in the same way as words.⁶⁹ Courts have affirmed drug conspiracy convictions on the basis of testimony that a defendant nodded during a conspiratorial meeting.⁷⁰ There are apparently no antitrust cases to the same effect,⁷¹ perhaps because antitrust conspiracies are more complex than the typical drug deal and conventional signals usually cannot convey much more information than assent or dissent. But, conceptually, any conventional signifier that unmistakably conveys the necessary assurance, like a nod or a handshake, can form an express, completed agreement. Similarly, conspirators may develop a jargon that allows them to communicate express assent by

⁶⁷ For related criticism of the model instructions, see Louis Kaplow, *On the Meaning of Horizontal Agreements in Competition Law*, 99 CALIF. L. REV. 683, 752–54 (2011); Page, *Communication and Concerted Action*, *supra* note 34, at 420–23.

⁶⁸ *Blomkest Fertilizer, Inc. v. Potash Corp. of Sask.*, 176 F.3d 1055, 1063 (8th Cir. 1992), *superseded en banc on other grounds*, 203 F.3d 1028, 1037 (8th Cir. 2000). *Esco* recognized that “[a] knowing wink can mean more than words.” *Esco Corp. v. United States*, 340 F.2d 1000, 1007 (9th Cir. 1965). *Cf. Evans v. United States*, 504 U.S. 255, 274 (1992) (Kennedy, J., concurring) (parties to a bribe “need not state the quid pro quo in express terms, for otherwise the law’s effect could be frustrated by knowing winks and nods”); *Meyer v. Kalanick*, 15 Civ. 9796, 2016 WL 1266801, at *5 (S.D.N.Y. Mar. 31, 2016) (“Sophisticated conspirators often reach their agreements as much by the wink and the nod as by explicit agreement, and the implicit agreement may be far more potent, and sinister, just by virtue of being implicit.”).

⁶⁹ See ADAM KENDON, *GESTURE: VISIBLE ACTION AS UTTERANCE 2* (2004) (“[D]etailed studies . . . have shown that” gesture and speech “are so intimately connected that they appear to be governed by a single process.”); KAPLOW, *supra* note 6, at 67 (hypothesizing the use of a thumbs-up signal to form an agreement).

⁷⁰ *United States v. Grajeda-Encinas*, 474 F. App’x 506, 508 (9th Cir. 2012) (holding that where defendant “was observed giving an authoritative nod to a co-conspirator regarding the amount of cocaine in their possession . . . [t]he jury was entitled to conclude that he exercised dominion or control over the cocaine or that he participated in a ‘joint venture’ to possess the drugs”); *United States v. Torres*, 114 F. 3d 520, 525 (5th Cir. 1997) (holding that evidence that defendant was present at a meeting and “nodded his head during the discussion of transporting drugs” was “barely” sufficient to support a conviction).

⁷¹ One found that some of the realtors at a meeting “gave the impression that his firm would adopt a similar” commission increase. *United States v. Foley*, 598 F.2d 1323, 1332 (4th Cir. 1979). The court may have been suggesting that those realtors gave that impression by a nonverbal signal.

different and fewer words than they would in ordinary language.⁷² In all of these cases, the agreements are as express as any.

A tacit agreement is better understood as one in which rivals communicate their intentions in language without forming a complete agreement, but then indicate their assent to the suggested course of action by subsequent interdependent pricing or other competitive actions. The First Circuit in *White v. R.M. Packer Co.*,⁷³ offered a good starting point for such a definition of tacit agreement: “‘uniform behavior among competitors, preceded by conversations implying that later uniformity might prove desirable or accompanied by other conduct that in context suggests that each competitor failed to make an independent decision.’”⁷⁴ The passage is admittedly problematic in a couple of ways. First, it is a quotation from the Supreme Court’s decision *Brown v. Pro Football, Inc.*,⁷⁵ which dealt with antitrust’s labor exemption and never used the term tacit agreement.⁷⁶ Moreover, the second clause in the passage—conduct that suggests the rivals did not act independently—seems to include simple interdependent conduct. *White*, in quoting this passage, obviously did not mean to include mere interdependence in tacit agreement because it ultimately rejected the plaintiff’s claim that the interdependent conduct of the gas stations on Martha’s Vineyard was unlawful.

But the first clause in the passage is more helpful: “uniform behavior among competitors, preceded by conversations implying that later uniformity

⁷² See, e.g., *In re High Fructose Corn Syrup Antitrust Litig.*, 295 F.3d 651, 662 (7th Cir. 2002) (“A director . . . was reported to have said that ‘every business I’m in is an organization’ (emphasis added)—which sounds innocuous enough, but he said it in reference to the conspiracy to fix the price of lysine (‘lysine is an organization’) and so in context it appears that ‘organization’ meant price-fixing conspiracy.”); *United States v. David E. Thompson, Inc.*, 621 F.2d 1147, 1152 (1st Cir. 1980) (referring to an “unchanging jargon” in the conspiracy); *United States v. Rodgers*, 624 F.2d 1303, 1308 (5th Cir. 1980) (describing how conspirators other than the designated winning bidders were “given prices ‘to clear’ or ‘to protect’ and either submitted complementary bids or did not bid at all); *United States v. Consol. Packaging Corp.*, 575 F.2d 117, 121 (7th Cir. 1978) (“Conspirators had their own helpful jargon. Those conspirators who were mutually cooperative during any particular period were referred to as being ‘on the phone,’ and those who were not conspirators, or were at least not active for a particular period were referred to as ‘off the phone.’”).

⁷³ 635 F.3d 571 (1st Cir. 2011).

⁷⁴ *Id.* at 576 (quoting *Brown v. Pro Football, Inc.*, 518 U.S. 231, 241 (1996)). A number of courts have quoted this definition. See *In re Nexium (Esomeprazole) Antitrust Litig.*, 42 F. Supp. 3d 231, 250 (D. Mass. 2014) (quoting *White*’s tacit agreement standard); *In re Online Travel Co. (OTC) Hotel Booking Antitrust Litig.*, 997 F. Supp. 2d 526, 535 & n.10 (N.D. Tex. 2014) (quoting *White*’s distinction between interdependence and tacit agreement and quoting its reference to *Interstate Circuit* as an illustration of the latter).

⁷⁵ 518 U.S. at 241.

⁷⁶ In the passage, the Court was describing, not endorsing, some theories of antitrust liability that might threaten labor unions. It introduced the passage with the grudging observation that antitrust “sometimes permits judges or juries to premise antitrust liability upon little more than” the described conduct, without spelling out what “more” courts actually require. *Id.*

might prove desirable.” This passage contemplates a scenario in which rivals agree by acting uniformly in response to earlier communications that do not themselves form a verbal agreement.⁷⁷ Implicit in the passage are the assumptions that, first, the uniform behavior is interdependent and, second, the antecedent “conversations” consist of communications that convey the rivals’ intent, without an express exchange of assurances. The Supreme Court in *Brown* cited *United States v. Foley*⁷⁸ as an example of the sort of agreement described in the quoted passage. In that case, rivals met privately, discussed the need for a price increase, and each stated or indicated his intent to raise his price. Although the rivals in *Foley* never exchanged promises to raise prices, the court affirmed criminal convictions. I discuss *Foley* further in Part III, but the crucial point here is its recognition of a category of non-express agreement, in which rivals clarify their expectations about one another’s intentions by communication, then act consistently with the communications. In *Esco Corp. v. United States*,⁷⁹ the court hypothesized essentially the same scenario⁸⁰ and held that it could amount to sufficient evidence of an agreement in a criminal case. The court added that an “express agreement” with written or oral assurances is not required “if a course of conduct, or a price schedule, once suggested or outlined by a competitor in the presence of other competitors, is followed by all—generally and customarily—and continuously for all practical purposes, even though there be slight variations.”⁸¹ The prior communications in *Foley* and *Esco*’s definition involve a conscious choice by participating rivals to communicate intentions by means that lack efficiency justifications. These indicia of culpability distinguish their means of coordination from simple interdependence in ways courts can identify.⁸²

⁷⁷ See, e.g., *Jacobs v. Tempur-Pedic Int’l*, 626 F.3d 1327, 1343 (11th Cir. 2010) (suggesting the plaintiff must allege “that, in addition to tacitly colluding, [rivals] signaled each other on how and when to maintain or adjust prices”).

⁷⁸ 598 F.2d 1323 (4th Cir. 1979).

⁷⁹ 340 F.2d 1000 (9th Cir. 1965).

⁸⁰ *Id.* at 1007.

⁸¹ *Id.* at 1008. Cf. *AREEDA & HOVENKAMP*, *supra* note 32, ¶ 1418b3, at 131–32 (describing the series of statements in *Foley* as “either (a) a commitment to a common course of action or (b) a prediction of each’s probable reaction to another’s probable reaction to another’s price increase”; in either case the scenario is “close enough to a commitment to be deemed a traditional agreement” or at least a “facilitating practice”). Tacit agreement, I suggest, is a more accurate explanation of *Foley*, and a better basis for understanding *Foley* as a precedent, than these characterizations.

⁸² In the vertical context, the *Colgate* doctrine permits a firm to announce a “suggested resale price” without forming an agreement with retailers who comply. *United States v. Colgate & Co.*, 250 U.S. 300, 307 (1919). The buyer’s compliance is, in principle, tacit agreement to the announced resale price condition, with the same effects as if the buyer and seller had expressly agreed. *Leegin Creative Leather Prods., Inc. v. PSKS, Inc.*, 551 U.S. 877, 902–03 (2007) (“The economic effects of unilateral and concerted price setting [under *Colgate*] are in general the same.”) It is artificially characterized as “unilateral” to protect the seller’s right to refuse to sell to dealers for its own business reasons, a policy concern that does not apply in the horizontal context.

These examples demonstrate the importance of recognizing and defining the category of tacit agreement. Mere interdependence is lawful “not because such pricing is desirable (it is not), but because it is close to impossible to devise a judicially enforceable remedy for ‘interdependent’ pricing. How does one order a firm to set its prices without regard to the likely reactions of its competitors?”⁸³ A Section 1 agreement, then, should minimally be a form of coordination brought about by means that have no significant efficiency justification (in the sense of an intent to achieve an efficiency goal) and that courts can practically regulate. An express agreement fits the description: it represents a “process of reaching supracompetitive marketplace outcomes—what may be termed the ‘forbidden process’ of negotiation and exchange of assurances. The forbidden process consists of behavior that can be enjoined.”⁸⁴

Tacit agreement also satisfies these conditions. Herbert Hovenkamp argues that whether plus factors suggest agreement is “not so much whether a ‘meeting of the minds’ in the common-law contract sense existed as whether these are types of behavior that the law should suppress,” like “communications among rivals about planned output changes.”⁸⁵ The idea of tacit agreement captures this last insight that communications about future competitive choices can bring about a Section 1 agreement. Private expressions of intention are inefficient actions that may result in noncompetitive equilibria. Experiments have shown that these sorts of communications can help effectively coordinate collusive equilibria by limiting the uncertainty facing rivals, with-

⁸³ *Clamp-All Corp. v. Cast Iron Soil Pipe Inst.*, 851 F.2d 478, 484 (1st Cir. 1988).

⁸⁴ Jonathan B. Baker, *Identifying Horizontal Price Fixing in the Electronic Marketplace*, 65 ANTITRUST L.J. 41, 48 (1996). Indeed, when it can be proven by direct evidence, an exchange of assurances completes a Sherman Act agreement and can be per se unlawful without independent conduct (or any kind of acts in furtherance of the agreement), even if they do not restrict output in particular cases. *United States v. Socony-Vacuum Oil Co.*, 310 U.S. 150, 224 n.59 (1940) (observing “that conspiracies under the Sherman Act are not dependent on any overt act other than the act of conspiring” and that “[i]t is the ‘contract, combination . . . or conspiracy, in restraint of trade or commerce’ which [§] 1 of the Act strikes down, whether the concerted activity be wholly nascent or abortive on the one hand, or successful on the other”) (citations omitted). Express agreements are considered potentially dangerous, even if they are unenforceable cheap talk. Joseph Farrell & Matthew Rabin, *Cheap Talk*, 10 J. ECON. PERSP., Summer 1996, at 103, 107 (“Sometimes there is no incentive to lie, and cheap talk will fully convey private information.”).

⁸⁵ Herbert J. Hovenkamp, *The Pleading Problem in Antitrust Cases and Beyond*, 95 IOWA L. REV. 55, 62 (2010). In my account of tacit agreement, the behavior (if not an express agreement) must coordinate interdependent conduct.

out providing any substantial benefits to consumers.⁸⁶ When they do, courts can enjoin or penalize the actions without unacceptable error costs.⁸⁷

Twombly insisted on the need to “limit the range of permissible inferences” from parallel, interdependent conduct. Recognition of tacit agreement requires courts *not* to limit the range of permissible inferences to those that permit an inference only of express agreement or a narrowly understood “traditional conspiracy.” There will undoubtedly be cases in which circumstantial evidence of communications and subsequent interdependent behavior may permit a reasonable inference of either an express agreement or a tacit agreement.⁸⁸ In cases like *Foley*, however, the evidence of communications and interdependent action may make it reasonable for a fact-finder to infer only that rivals had communicated their intentions sufficiently to coordinate a tacit agreement. In that range of cases, recognizing tacit agreement (appropriately defined) does matter. The definition is also important in cases in which there is evidence of repeated communications, but with few specifics about their con-

⁸⁶ On the role of even limited communication in reducing strategic uncertainty and facilitating coordination, see Miguel A. Fonseca & Hans-Theo Normann, *Explicit vs. Tacit Collusion—The Impact of Communication in Oligopoly Experiments*, 56 EUR. ECON. REV. 1759, 1760 (2012) (reporting “clear evidence that talking leads to higher profits in markets with any number of firms,” with disproportionately greater benefits in markets with a medium number; the benefits also persist, even after communication ceases); Andreas Blume & Andreas Ortmann, *The Effects of Costless Pre-Play Communication: Experimental Evidence from Games with Pareto-Ranked Equilibria*, 132 J. ECON. THEORY 274, 288 (2007) (“[W]ith repeated interaction costless messages [of the sender’s intent to play an equilibrium] preceding games with Pareto-ranked equilibria can dramatically facilitate participants’ coordination on the Pareto-dominant equilibrium [and] help overcome well-documented problems of strategic uncertainty, equilibrium selection, and coordination failure.”); Anthony Burton & Martin Sefton, *Risk, Pre-Play Communication and Equilibrium*, 46 GAMES & ECON. BEHAV. 23, 35 (2004) (finding that under strategic uncertainty, “equilibrium is much more likely to obtain when subjects have opportunities to send messages to one another prior to making choices”); Michihiro Kandori & Hitoshi Matsushima, *Private Observation, Communication and Collusion*, 66 ECONOMETRICA 627, 647 (1998) (“[C]ommunication is an important means to resolve possible confusion among players in the course of collusion during repeated play.”).

⁸⁷ Where the evidence shows that rivals continue to act independently, there is no tacit agreement. See, e.g., *In re Dairy Farmers of Am., Inc. Cheese Antitrust Litig.*, 801 F.3d 758, 763 (7th Cir. 2015) (finding that, despite communications among defendants, there was “voluminous evidence” that the defendant’s purchases on a commodities exchange “were the result of its own interest in restoring a certain spread between the prices of block and barrel cheese,” which precluded inference of agreement).

⁸⁸ For example, participation in trade association meetings, with the attendant opportunity to communicate about prices, is generally an insufficient basis by itself for inferring that a subsequent parallel price increase was collusive. *In re Graphics Processing Units Antitrust Litig.*, 527 F. Supp. 2d 1011, 1023 (N.D. Cal. 2007) (“Attendance at industry trade shows and events is presumed legitimate . . .”). But if there are direct pricing discussions at those meetings followed by an unusual pattern of price increases, the inference of agreement, either tacit or express, is stronger. See, e.g., *In re Pressure Sensitive Labelstock Antitrust Litig.*, 566 F. Supp. 2d 363, 372 (M.D. Pa. 2008) (finding sufficient inference of agreement where firms allegedly held “direct discussions about the need to collaborate on price increases during” a trade association meeting and, one month later, a firm that was usually a price follower led a price increase).

tent. In cases like these, a more inclusive definition of agreement can determine whether the evidence communication and coordination is sufficient to raise a reasonable inference of agreement.

C. COMMUNICATIONS THAT COORDINATE INTERDEPENDENT CONDUCT

The legal treatment of oligopolistic coordination depends in large part on the communications the rivals use as means of coordination. As the rest of this article will suggest, the two most critical variables in identifying agreement in these circumstances are the audiences and the subject matter of the communications. The court is more likely to find an agreement where the communications are private rather than public and where they relate to future rather than present competitive conditions. If a communication is private—solely among the rivals—it is less likely to benefit consumers than a public announcement, and more likely to be surreptitious and focused on the concerns of the rivals themselves.⁸⁹ As one court put it, a “direct and secret price discussion between competitors is more probative of a conspiracy than are indirect and public communications, ostensibly undertaken by the conspiring competitors to ‘signal’ to one another.”⁹⁰ Communications by individuals with pricing or other relevant decisionmaking authority are, of course, most probative.⁹¹ And the communication (again, particularly by upper management) is about future

⁸⁹ Carlton et al., *supra* note 6, at 432 (observing that “whether or not the communication is public is important because consumers may benefit from the information externalized,” but also noting that “private exchange of information is not certain to be anticompetitive and, furthermore, consumers may be uninterested in the information”). See also *In re Ethylene Propylene Diene Monomer (EPDM) Antitrust Litig.*, 681 F. Supp. 2d 141, 176 (D. Conn. 2009) (finding “evidence of the frequent and friendly communications between the defendants and the secrecy of their meetings” raised an inference of agreement); *Standard Iron Works v. ArcelorMittal*, 639 F. Supp. 2d 877, 894 (N.D. Ill. 2009) (“Public statements about output reduction, in the form of press releases or SEC filings, are fundamentally distinct from statements made at trade meetings directly to competing executives, and Defendants proffered non-collusive purpose for the former does not, in all instances, account for the latter.”).

⁹⁰ *In re Polyurethane Foam Antitrust Litig.*, No. 1:10 MD 2196, 2015 WL 520930, at *10 (N.D. Ohio Feb. 9, 2015). See also AREEDA & HOVENKAMP, *supra* note 32, ¶ 1435c, at 280–81 (observing that public speech can coordinate competitive behavior, but often has plausible benefits).

⁹¹ See *In re Flat Glass Antitrust Litig.*, 385 F.3d 350, 358–59 (3d Cir. 2004) (observing that “price discussion among low level sales people has little probative weight,” but that it is a “far different situation where upper level executives have secret conversations about price”); *In re Baby Food Antitrust Litig.*, 166 F.3d 112, 124–26 (3d Cir. 1999) (“Evidence of sporadic exchanges of shop talk among field sales representatives who lack pricing authority is insufficient to survive summary judgment.”); *Polyurethane Foam Antitrust Litigation*, 2015 WL 520930, at *21 (finding “substantial evidence of senior Defendant employees engaging in price discussions, sometimes providing one another advance notice of [price increase announcements or PIAs], sometimes sharing PIA information during the implementation period when a proposed price increase was being tested in the market, and sometimes discussing the progress of past PIAs”); *In re Currency Conversion Fee Antitrust Litig.*, 773 F. Supp. 2d 351, 370 (S.D.N.Y. 2011) (“[H]ere, senior in-house counsel attended the May 25 Meeting and engaged in discussions on a far higher plane than mere ‘shop talk’ among low-level employees.”).

competitive conditions it is more likely to be aimed at limiting strategic uncertainty and thus contributing to the coordination of competitive behavior. If the communications that coordinate interdependent conduct share both of these characteristics, they are almost certain to amount to an agreement.

By contrast, if firms communicate publicly with both consumers and competitors, the communication is very likely to promote efficient market functions by enhancing consumer choice and is less likely to be an effective means of coordination. If they communicate only about present pricing (or some other competitive variable), they will be less able to coordinate their strategic choices. If communications are both fully public and relate only to present pricing, courts are certain to treat the rivals' conduct as independent or at most simply interdependent pricing.

The categories of communications can be arranged in a grid with cells corresponding to the four combinations of audience and temporal focus:

TABLE 1: CATEGORIES OF COMMUNICATIONS

		<i>Temporal Focus</i>	
		Future	Present
<i>Audience</i>	Private	1	2
	Public	3	4

The numbers in the cells correspond to the relative probative value of the communications in the proof of agreement, other things equal, with one being the most probative and four the least.⁹² Private communications about future competitive choices concerning a factor salient to consumers, particularly prices, are most likely to justify an inference of agreement.⁹³ *Foley* is a para-

⁹² The probative value of any piece of evidence varies depending upon other evidence of the circumstances. *In re High Fructose Corn Syrup Antitrust Litig.*, 295 F.3d 651, 655 (7th Cir. 2002) (warning of the "trap" in evaluating evidence of conspiracy "to suppose that if no single item of evidence presented by the plaintiff points unequivocally to conspiracy, the evidence as a whole cannot defeat summary judgment" because "evidence can be susceptible of different interpretations, only one of which supports the party sponsoring it, without being wholly devoid of probative value for that party").

⁹³ See Kai-Uwe Kühn et al., *Fighting Collusion by Regulating Communication Between Firms*, 16 *ECON. POL'Y* 167, 186 (2001) ("Our analysis of theory, experimental evidence and case material suggests that any private communication between firms about planned future conduct including suggestions for future conduct, even unilateral communication, should be consid-

digmatic instance that I will discuss further in the next Part, along with other examples. I will also discuss a related pattern of communications, in which communications by upstream or downstream firms with the rivals (rather than communications among the rivals themselves) coordinate a tacit horizontal agreement. Private communications about present prices, which I discuss in Part III, are less probative of per se illegal agreement to fix prices, but may permit an inference of an agreement to exchange prices, which the court will evaluate under the rule of reason.

Public communications about present prices, like the price announcements by service stations, are not probative of tacit agreement, even if they succeed in coordinating noncompetitive pricing. As I show in Part IV, courts view them as inseparable from simple interdependent pricing, unless they include some encoded private message. I show in Part V that public communications about future prices (or other competitive choices) are usually thought to benefit consumers, and so are not a basis for inferring tacit agreement, unless the communication is functionally private because of its context or mechanism and is designed to coordinate competitive behavior.⁹⁴

Courts sometimes interpret communications as *signals* conveying something more than their literal or superficial meaning. Firms may use signals, in this sense, to coordinate interdependent conduct and even tacit agreement. In earlier work, I have distinguished conventional signals, prearranged signals, and implicit signals.⁹⁵ Conventional signals, as I have already suggested,⁹⁶ are arbitrary actions, like nodding, that a members of a culture recognize as having a specific meaning;⁹⁷ prearranged signals are outwardly benign actions, statements, or events that parties have agreed to treat as having special significance for them.⁹⁸ Both conventional and prearranged signals are mainly means

ered a competition reducing restriction in the sense of Art. 81(1) of the Treaty of Rome.”). To complete a tacit agreement under the Sherman Act under the proposal in the following pages, the communications must later lead to coordinated oligopolistic behavior.

⁹⁴ *Id.* at 186 (“[W]e should consider any communication private if there are no plausible direct positive effects on consumers.”).

⁹⁵ William H. Page, *Signaling and Agreement Under Section 1 of the Sherman Act*, 5 CONCURRENTS: COMPETITION L.J., No. 3 (2015).

⁹⁶ See *supra* Part I.B.

⁹⁷ See, e.g., *Blomkest Fertilizer, Inc. v. Potash Corp. of Sask.*, 176 F.3d 1055, 1063 (8th Cir. 1999) (“The law forbids nonverbal agreements in restraint of trade, as well as express ones; otherwise, the law would be emasculated as competitors accomplished the forbidden goal with a wink and a nod.”), *superseded en banc on other grounds*, 203 F.3d 1028, 1037 (8th Cir. 2000).

⁹⁸ For example, in *Eastern States Retail Lumber Dealers Association v. United States*, 234 U.S. 600, 608–09 (1914), an association of retailers circulated a list of wholesalers that were selling directly to consumers. These so-called blacklists predictably led retailers to refuse to buy from listed suppliers. The government conceded that “there is no agreement among the retailers to refrain from dealing with listed wholesalers,” but argued that “he is blind indeed who does not see the purpose in the predetermined and periodical circulation of this report to put the ban upon wholesale dealers whose names appear in the list.” *Id.* The Supreme Court concluded that “when

of forming or implementing an express agreement essentially in the same way as words, but with the advantage of greater secrecy.⁹⁹ More important for the present analysis of tacit agreement are *implicit* signals—actions or words with general, often benign meanings for more than one audience, but that also include information that conveys a special meaning for rivals. These sorts of signals will be most significant in public communications about future competitive conduct.¹⁰⁰

II. PRIVATE COMMUNICATIONS ABOUT FUTURE ACTIONS

In the last Part, we saw that tacit agreement means interdependent actions coordinated by prior communications of competitive intentions, in circumstances in which the communications do not provide any benefit to other audiences, especially consumers. In the paradigmatic case, rivals privately and directly state pricing intentions, then act consistently with the stated intentions. In this Part, I examine *Foley* and other historical and recent examples, under different states of evidence. I also discuss a variant that courts also view as involving tacit agreement—the so-called hub-and-spoke agreement—in which rivals tacitly accede to a proposal, usually from upstream or downstream firms.

A. COMMUNICATIONS AMONG RIVALS

Communications that convey pricing intentions are most probative of agreement generally; if the communications have no procompetitive justification and have “an impact on [interdependent] pricing decisions,”¹⁰¹ they justify an inference of a tacit agreement. Substantial private communications among rivals about their future competitive choices, are most likely to be (or to allow the inference of) nakedly causal communications or “conversations implying that later uniformity might prove desirable.”¹⁰² *United States v. Foley*,¹⁰³ which I quoted in the last Part, warrants closer examination on this issue. The court there affirmed criminal price-fixing convictions, despite the absence of evidence of a verbal agreement. The defendants were realtors who

. . . by concerted action the names of wholesalers who were reported as having made sales to consumers were periodically reported to the other members of the associations, the conspiracy to accomplish that which was the natural consequence of such action may be readily inferred.” *Id.* at 612. In our terms, the association prearranged the use of a blacklist to signal which suppliers to boycott.

⁹⁹ See, e.g., R. Austin Smith, *The Incredible Electrical Conspiracy* (Part II), *FORTUNE*, May 1961, at 161, 164, 210 (describing the electrical equipment conspirators’ use of the phases of the moon as a mechanism for rotation of winning bidders in public auctions).

¹⁰⁰ See Part V *infra*.

¹⁰¹ *In re Baby Food Antitrust Litig.*, 166 F.3d 112, 125 (3d Cir. 1999).

¹⁰² *White v. R.M. Packer Co.*, 635 F.3d 571, 576 (1st Cir. 2011) (quoting *Brown v. Pro Football, Inc.*, 518 U.S. 231, 241 (1996)).

¹⁰³ 598 F.2d 1323 (4th Cir. 1979).

wanted to increase their commission rate from 6 to 7 percent in a depressed housing market, but “were concededly afraid to undertake such a move for fear that they would be unable successfully to compete with firms still at six percent.”¹⁰⁴ One had already attempted such an increase and withdrew it when others did not follow.¹⁰⁵ At this point, one of the brokers named Foley called a meeting, to be held over dinner:

At the dinner Foley rose, made some prefatory remarks and then stated that his firm was in dire financial condition. Saying that he did not care what the others did, he then announced that his firm was changing its commission rate from six percent to seven percent. Testimony as to what was said by various persons in the ensuing discussion is greatly in conflict, but there was evidence from which the jury could find that each of the individual defendants and a representative of each corporate defendant not represented by one of the individual defendants expressed an intention or gave the impression that his firm would adopt a similar change. The discussion also included reference to the earlier unsuccessful effort by [one realtor] to adopt a seven percent policy, from which the jury could conclude that defendants knew that their cooperation was essential.¹⁰⁶

There was evidence that, following the meeting, “each defendant did in fact begin to take substantial numbers of seven percent listings” and in some instances rivals tried “to hold their fellows to the ‘agreement.’”¹⁰⁷

The guests at that dinner were careful to avoid an express verbal agreement. They did not make promises and limited themselves to statements or less direct indication of intention; they knew, based on experience and on what they said at the meeting, that they had to stand or fall together; and they then tacitly completed the agreement by acting consistently with those statements, albeit in some instances after some further coaxing. The statements had no credible efficiency justification or purpose; they conveyed no information to consum-

¹⁰⁴ *Id.* at 1331.

¹⁰⁵ *Id.*

¹⁰⁶ *Id.* at 1332.

¹⁰⁷ *Id.*; see also *Esco Corp. v. United States*, 340 F.2d 1000, 1007 (9th Cir. 1965) (hypothesizing a meeting of four rivals at which three state that they plan to set a price of X dollars; all four then set just that price). Other cases cite *Foley* or *Esco* or both for this idea of agreement. See *Standard Iron Works v. ArcelorMittal*, 639 F. Supp. 2d 877, 895–96 (N.D. Ill. 2009) (denying a motion to dismiss, where “trade meeting statements made directly to competing executives [that] encourage[ed] industry production restraint . . . were followed closely by unprecedented industry-wide production cuts, exactly as encouraged and represented by Defendant executives.”); *In re TFT-LCD (Flat Panel) Antitrust Litig.*, 586 F. Supp. 2d 1109, 1116 (N.D. Cal. 2008) (“Courts have held that a conspiracy to fix prices can be inferred from an invitation followed by responsive assurances and conduct.”); *Wall Prods. Co. v. Nat’l Gypsum Co.*, 326 F. Supp. 295, 324–25 (N.D. Cal. 1971) (“It was enough that, knowing that concerted action was contemplated and invited, the distributors gave their adherence to the scheme and participated in it. Each distributor was advised that the others were asked to participate; each knew that cooperation was essential to successful operation of the plan.”).

ers or other audiences because only competitors were present; their naked purpose was to permit rivals to coordinate future conduct. In these circumstances, the court properly concluded that a jury could reasonably infer that the subsequent interdependent moves to the 7 percent rate completed a Section 1 agreement.¹⁰⁸

Another paradigmatic instance of this sort of arrangement was the Gary Dinners system, conceived and supervised by Judge Elbert Gary, the chairman of U.S. Steel, in the early 20th century.¹⁰⁹ Formed by merger in 1901, U.S. Steel was a holding company composed of 12 operating companies,¹¹⁰ some of which had participated in highly organized pools and cartels for many years before the merger.¹¹¹ In an effort to comply formally with the antitrust laws,¹¹² Judge Gary ordered U.S. Steel's constituent corporations not to participate in

¹⁰⁸ See also *Havens v. Maritime Commc'ns/Land Mobile, LLC*, No. 11-993, 2014 WL 4352300 (D.N.J. Sept. 2, 2014) (distinguishing *Foley* on the ground that the defendants, unlike the brokers in *Foley*, did not act consistently with the alleged statements). But see *Market Force, Inc. v. Wauwatosa Realty Co.*, 906 F.2d 1167, 1172-73 (7th Cir. 1990), which characterized as mere "conscious parallelism" a scenario in which (1) a real estate agency mailed rivals "copies of its policy expressing its intention to pay 20% of the selling agent's commission to buyers' brokers" and (2) the rivals "subsequently adopted similar policies." The fact that only a single rival announced its intentions to the others was enough to distinguish *Foley*, but the court went further. In a footnote, it said *Foley* did "not rely on the dinner party and announcement to find a conspiracy"; it only affirmed the convictions because there was evidence of later "letters and phone calls among the realtors exhorting each other to charge the higher rate and fearing that deviation would ruin the plan." *Id.* at 1172 n.7. Certainly the court in *Foley* did not rely solely on *Foley's* statement at the dinner party; all of the rivals' statements then and their subsequent, eventual consistent price increases were also essential. *Foley* did point to evidence of later "instances in which members of the conspiracy sought after the September 5 dinner to hold their fellows to the 'agreement,'" 598 F.2d at 1332, but it did not say those kinds of communications would have been necessary to a finding of agreement if the rivals had acted consistently with the statements at the meeting without any further communications. The inference of tacit agreement would have been equally strong, if not stronger, had the rivals, after the meeting, perfectly followed their stated intentions without cajolery. The later communications were significant in *Foley* mainly because some of the rivals deviated and needed some prodding. The court affirmed the conviction of one of the defendants based solely on his statements at the meeting and subsequent consistent pricing. *Id.* at 1334.

¹⁰⁹ See generally William H. Page, *The Gary Dinners and the Meaning of Concerted Action*, 62 SMU L. REV. 597 (2009).

¹¹⁰ Donald O. Parsons & Edward John Ray, *The United States Steel Consolidation: The Creation of Market Control*, 18 J.L. & ECON. 181, 182 (1975).

¹¹¹ Transcript of Record on Appeal from the District of New Jersey, vol. 2, at 816-24 (John C. Langan), *United States v. U.S. Steel Corp.*, 251 U.S. 417 (1920) [hereinafter Transcript of Record].

¹¹² See also UNITED STATES BUREAU OF CORPORATIONS, TRUST LAWS AND UNFAIR COMPETITION 15 (1916) (observing that, because "[l]egal difficulties had at an earlier date . . . discouraged the use of written price and pooling agreements as means of combination," firms adopted the form of the "gentlemen's agreement," which aimed to "procure substantial harmony in policy among competitors regarding volume of output and prices, without specific written or oral agreements, but rather by tacit understandings and the communication of information regarding the production and price of the various cooperating interests in order to insure good faith").

the usual forms of price fixing.¹¹³ At the same time, Gary adopted what he believed to be a lawful but effective alternate way of limiting competition: dinners and meetings of producers of various lines of fabricated steel at which the rivals would, by turns, state the prices they intended to charge. Participants were to make no promises,¹¹⁴ but would adhere to the announced prices until they decided to change them, in which case they would notify their rivals.¹¹⁵ In the course of deciding the government's monopolization suit against U.S. Steel in 1915, the district court held that, by the dinners and meetings, U.S. Steel and its rivals had achieved "action with a common object" and "an understanding concerning the maintenance of price"¹¹⁶ that was "equivalent to an agreement."¹¹⁷

In earlier work, I discuss the Gary Dinners as "concerted action,"¹¹⁸ but they are also appropriately classified as a tacit agreement, as defined in the last Part: interdependent conduct coordinated by causal, direct prior communications. Judge Gary thought his arrangement would escape the Sherman Act because the rivals did not form express verbal agreements; they only innocently announced their intent about pricing, then acted honorably by pricing consistently with their statements. But the courts properly recognized that the announcements functioned as proposals to which the rivals in each product line tacitly agreed by adopting noncompetitive prices. In cases like *Foley* and *U.S. Steel*, the words of the rivals communicated more than their literal meaning. When a firm tells its rivals that it plans to raise prices, it is stating its own

¹¹³ Brief of Appellee at 206–07, *United States v. U.S. Steel Corp.*, 251 U.S. 417 (1920).

¹¹⁴ Transcript of Record, *supra* note 111, vol. 11, at 4196 (Charles M. Schwab); *id.* vol. 5, at 1777 (Crawford); *id.* vol. 5, at 1836–37 (James Anson Campbell) (stating that, as chairman, he would "always [make] the statement . . . that there could be no agreements among us" but that he "called on each [member] to state what their policy would be in the future with reference to the sale of their products and with reference to the price"; there would usually, though not always, be a "general understanding; that is, we had the statement of the different representatives that their policy would be to market their product at the then prevailing price until they notified their competitors that they wanted to change their price").

¹¹⁵ *Id.* vol. 6, at 2104 (Willis L. King) (stating that he "would undoubtedly have felt that I should notify [rivals] if I cut the price," but only out of common decency, not because of an agreement).

¹¹⁶ *United States v. U.S. Steel Corp.*, 223 F. 55, 159 (D.N.J. 1915), *aff'd*, 251 U.S. 417, 444–45 (1920).

¹¹⁷ *Id.* at 160. In affirming on direct review after World War I, the Supreme Court agreed that the various means of price control, including the "social form of dinners," were unlawful. *U.S. Steel*, 251 U.S. at 440. It concluded, however, it was "unable to see that the public interest will be served" by dissolving the company. *Id.* at 457.

In the market for Bessemer steel rails, fabricators maintained a price of \$28 for years without any meetings or communications comparable to the Gary Dinners system. *U.S. Steel*, 223 F. at 154. The district court found that the price was "tacitly accepted and continued by the sales managers of different rail companies" who "simply followed that basic price to prevent the ruinous rail wars of the past." *Id.* Without the prior coordinating communications, this sort of tacit collusion was not an agreement.

¹¹⁸ Page, *supra* note 109, at 614–18.

intention and simultaneously “implying that later uniformity might prove desirable.”

In both *Foley* and *U.S. Steel* the rivals met to share their pricing intentions,¹¹⁹ but private communications need not involve a physical meeting. The same result should follow where there is circumstantial evidence of direct written communications,¹²⁰ particularly of intention¹²¹ and the rivals act inter-

¹¹⁹ Another example is *United States v. Champion International Corp.*, Cr. No. 74-183, 1975 WL 920 (D. Or. July 16, 1975), in which timber company representatives met to discuss future auctions of timber; at the meetings each “told the others in which upcoming sale or sales his company was interested. Sometimes one of them would go into the reasons for this interest.” *Id.* at *2. “No one really committed himself not to bid but in sale after sale over a four year period, the one who had expressed the highest interest in a sale was the one who took the sale without opposition.” *Id.* at *3. The court of appeals affirmed criminal convictions, 557 F.2d 1270 (9th Cir. 1977), observing that:

In a general way, the extent of an individual operator’s interest in a future sale could have been predicted by anyone familiar with the operator’s hauling distances, his product mix, his manufacturing capacity, and the other factors that determine a sale’s relative desirability to that operator. However, the defendants did not leave the exchange of this information to chance. During the time covered by the indictment the defendants advised each other about the future sales upon which they were most likely to bid.

Whether or not anyone ever agreed at those meetings to bid or to refrain from bidding in any way, there was no doubt that the defendants “had an understanding” about bidding.

Id. at 1273. The court agreed with the government that, even though there was no “direct evidence of an express agreement . . . the circumstantial evidence proved the existence of the tacit agreement found by the judge.” *Id.* In this scenario, the parties stated their intention by their expressions of the intensity of their interest, then completed the tacit agreement by acting consistently with those statements. Although, as the court of appeals observed, the parties might have been able to coordinate similar auction outcomes based on public information about rivals’ likely interest, the private exchanges of information reduced the uncertainty of the coordination process.

Areeda and Hovenkamp argue that “[i]n *Champion*, we are entitled to find a bid rotation conspiracy even though we do not know what assurances, if any, the parties exchanged at the meetings [because] permitting parties to meet under the circumstances and for the discussions at issue should be discouraged, given the inherent dangers to competition and the lack of any obvious social virtue.” AREEDA & HOVENKAMP, *supra* note 32, ¶ 1418b4, at 134. This article’s proposed definition of tacit agreement supports the convictions in *Champion* more directly: the rivals need not have exchanged assurances at all, because they stated their intentions in private communications that resulted in a consistent pattern of bid rotation.

¹²⁰ See, e.g., *E.W. French & Sons, Inc. v. Gen. Portland, Inc.*, No. 94-55525, 1995 WL 470825, at *4 (9th Cir. Aug. 8, 1995) (finding evidence that a rival maintained a “plain white envelope” mailing list to exchange prices with rivals before distributing the prices to consumers raised an inference of price fixing); *In re Foreign Exch. Benchmark Rates Antitrust Litig.*, 74 F. Supp. 3d 581, 591–92 (S.D.N.Y. 2015) (foreign exchange traders “used various electronic communications platforms, particularly chat rooms and instant messaging, to share ‘market-sensitive information with rivals’” before setting the published closing exchange rate); *Sun Microsystems, Inc. v. Hynix Semiconductor, Inc.*, 622 F. Supp. 2d 890, 904–07 (N.D. Cal. 2009) (finding frequent exchanges of detailed pricing information including “price targets” and “price forecasts” and “competitive feedback” raised an inference agreement).

¹²¹ Courts emphasize the importance of communications about future pricing. See, e.g., *In re Flash Memory Antitrust Litig.*, 643 F. Supp. 2d 1133, 1143–44 (N.D. Cal. 2009) (identifying communications about planned price increases and the need not to reduce prices); *In re Medical X-Ray Film Antitrust Litig.*, 946 F. Supp. 209, 218–21 (E.D.N.Y. 1996) (holding that evidence

dependently and consistently with these sorts of communications. Consider the court’s summary of the evidence of communications in *Flat Glass*:

[T]he exchanges of information are . . . tightly linked with concerted behavior and therefore they appear more purposive. Several of the key documents emphasize that the relevant price increases were not economically justified or supportable, but required competitors to hold the line. Others suggest not just foreknowledge of a single competitor’s pricing plans, but of the plans of multiple competitors. Predictions of price behavior were followed by actual price changes.¹²²

Here, the court identifies all of the critical elements of tacit agreement, although it did not use that term: the communication of pricing intent; interdependent pricing; and a basis for an inference of a causal relationship. Communications through an intermediary, although more cumbersome, are also private and can serve the same function as direct communication.¹²³

In some instances, the court may infer the existence of the requisite communications from other evidence or allegations.¹²⁴ In one case, the complaint alleged that an employee of one manufacturer sent an email to a rival’s em-

that rivals exchanged internal memoranda concerning plans to increase prices and otherwise learned privately of upcoming price increases supported an inference of agreement).

¹²² *In re Flat Glass Antitrust Litig.*, 385 F.3d 350, 369 (3d Cir. 2004). *See also In re Static Random Access Memory (SRAM) Antitrust Litig.*, No. 07-md-01819 CW, 2010 WL 5138859, at *8 (N.D. Cal. Dec. 10, 2010) (describing evidence of “exchange of critical business information, including price” with some rivals that allowed rivals to better control supply and could lead to a finding of collusion by a trier of fact).

¹²³ *In re Domestic Drywall Antitrust Litigation*, M.D.L. No. 2437, 13-MD-2437, slip op. at 118 & 131 (E.D. Pa. Feb. 18, 2016), the court held evidence that firms provided information to research analysts knowing that the analysts would share the information with rivals suggested that the firms “used the research analysts as a conduit to signal to the other manufacturers during the class period,” although it was “insufficient to permit the inference that Defendants actually reached an agreement by communicating through analysts.” *Id.* at 118–19. The *Drywall* court cited *In re Insurance Brokerage Antitrust Litigation*, 618 F.3d 300, 337 (3d Cir. 2010); *In re Titanium Dioxide Antitrust Litigation*, 959 F. Supp. 2d 799, 829 (D. Md. 2013); and *In re Polyurethane Foam Antitrust Litigation*, No. 1:10 MD 2196, 2015 WL 520930, at *41 (N.D. Ohio Feb. 9, 2015), all of which suggest that communications through an intermediary “could be indicia of a price fixing agreement.” *Id.* at 122.

¹²⁴ *Twombly* itself suggested that, in “a traditionally unregulated industry with low barriers to entry, sparse competition among large firms dominating separate geographical segments of the market could very well signify illegal agreement.” *Bell Atl. Corp. v. Twombly*, 550 U.S. 544, 567 (2007). *See also In re Potash Antitrust Litig.*, 667 F. Supp. 2d 907, 937 (N.D. Ill. 2009) (finding plaintiffs’ allegations sufficient to withstand a motion to dismiss where they alleged “parallel production cuts which at least for some Defendants represented a ‘radical change’ in behavior; overlapping business ventures; specific meetings attended by Defendants which precipitated production cuts and price increases; and a ‘joint sales suspension’ that was contrary to Defendants’ economic interests”), *aff’d sub nom. Minn-Chem, Inc. v. Agrium, Inc.*, 683 F.3d 845 (7th Cir. 2012). Sham or “complementary” bidding is often mentioned as an example of strong circumstantial evidence of express agreement. AREEDA & HOVENKAMP, *supra* note 32, ¶ 1420b, at 154 (“A strong inference of coordinated behavior arises when a participant actively seeks to lose a bid.”).

ployee asking: “Are you willing to exchange product roadmaps again?”¹²⁵ The firms argued that the email suggested that they had no agreement to share confidential information, but the court found it plausible, on a motion to dismiss, to infer “that the companies had an agreement to exchange the information from time to time and [the sender] was inquiring whether it was time for the next exchange.”¹²⁶ Internal emails discussing “information obtained from other Defendants” suggested “that Defendants were aware that the purpose of sharing this information was to ‘stabilize or raise the price of SRAM sold in the United States and elsewhere.’”¹²⁷ The term “roadmap” implied that the information related to future prices and demand conditions.

An inference of tacit agreement is, of course, most reasonable when the communications have to do with terms central to competition, particularly price or output.¹²⁸ The correlation between present communication among rivals about their future behavior and interdependence is less clear-cut if the communications relate to a variable less salient to consumer choice and more likely to have plausible independent motivations.¹²⁹ For example, one court recently concluded after a bench trial that banks’ parallel adoptions of class-action-barring arbitration clauses were not interdependent, despite extensive evidence of dozens of meetings of counsel over several years in which they shared information, “tried to determine their competitors’ plans and experiences regarding arbitration,” and pursued “collective efforts to establish [the clauses] as an industry norm.”¹³⁰ Although these communications undoubtedly formed a benign (in the court’s view) agreement to share information and “to establish class-action-barring arbitration as an industry norm,” the court was unwilling to infer “a separate, illegal agreement to collusively adopt and

¹²⁵ *In re Static Random Access Memory (SRAM) Antitrust Litig.*, 580 F. Supp. 2d 896, 901 (N.D. Cal. 2008).

¹²⁶ *Id.* (citing *United States v. Container Corp. of Am.*, 393 U.S. 333, 335 (1969)).

¹²⁷ *Id.* at 902 (citing *Container*, 393 U.S. at 335). *See also id.* at 898, 903 (observing that, because of its concentration and product homogeneity, “the SRAM market was one in which such information exchanges would lead to price stabilization or increases.”)

¹²⁸ *See, e.g., Toys “R” Us, Inc. v. FTC*, 221 F.3d 928, 936 (7th Cir. 2000) (finding sufficient evidence, under *Interstate Circuit*, that Toys “R” Us had induced toy manufacturers to boycott retail warehouse clubs; acceding to the dominant retailer’s demand, the manufacturers acted interdependently, because each “was afraid to curb its sales to the warehouse clubs alone, because it was afraid its rivals would cheat and gain a special advantage in that popular new market niche”).

¹²⁹ *See, e.g., Burch v. Millberg Factors, Inc.*, 662 F.3d 212, 223 (3d Cir. 2011) (exchanging even “forward-looking” credit information about customers, unlike price information, does not suggest conspiracy, because the information “protect[s] competitors from insolvent customers”).

¹³⁰ *Ross v. Am. Express Co.*, 35 F. Supp. 3d 407, 452–53 (S.D.N.Y. 2014) (“[T]he final decision to adopt class-action-barring arbitration clauses was something the Issuing Banks hashed out individually and internally.”), *aff’d sub nom. Ross v. Citigroup, Inc.*, 630 F. App’x 79 (2d Cir. 2015).

maintain class-action-barring arbitration clauses,”¹³¹ because “avoiding class actions through arbitration was in each Issuing Banks’ independent self interest, regardless of whether its competitors also adopted such a provision.”¹³² This reasoning assumes that cardholders do not care whether they have a right to sue their issuer in a class action, so the issuer can safely include a waiver provision in their card agreement regardless of whether its rivals do so.

B. VERTICAL COMMUNICATIONS THAT COORDINATE HORIZONTAL INTERDEPENDENCE: HUB-AND-SPOKE AGREEMENTS

In *Interstate Circuit*,¹³³ a representative of related circuits of first-run movie exhibitors wrote a letter to movie distributors, naming all of them as addressees and demanding that they require second-run exhibitors to raise their admission prices and stop showing double features.¹³⁴ The distributors largely acceded to the demands of one of the circuits and uniformly rejected the demands of the other circuit.¹³⁵ The Supreme Court found it proper to infer that the distributors had expressly conspired, even though there was no testimony describing direct communications among them.¹³⁶ More important for our pur-

¹³¹ *Id.* at 452. The inference of an agreement to exchange present pricing information is discussed in Part IV.B. below.

¹³² *Id.* at 453. The court found that these legitimate “communications resembled those of trade associations or lobbying groups.” *Id.* at 452. The court went on to say in dicta (to aid appellate review, as the court put it) that, had the plaintiffs carried their burden on the issue of agreement, the court would have concluded under a quick-look version of the rule of reason that the agreement was a violation of Section 1. *Id.* at 453–56. Because the court of appeals affirmed the principal holding, it did not reach this issue. *Ross*, 630 F. App’x at 82 n.4.

¹³³ *Interstate Circuit, Inc. v. United States*, 306 U.S. 208 (1939). Both of the cases quoted in *Twombly* that refer to tacit agreements cited *Interstate Circuit* as an illustration. *Theatre Enterprises* cited the case alongside *American Tobacco* as one in which the courts properly inferred an agreement from parallel business conduct. *Theater Enters. v. Paramount Film Distrib. Corp.*, 346 U.S. 537, 540 (1954). *White* cited only *Interstate Circuit* as an illustration of tacit agreement, calling it a “seminal case.” *White v. R.M. Packer Co.*, 635 F.3d 571, 576 (1st Cir. 2011). For other cases linking *Interstate Circuit* to tacit agreement, see *DM Research, Inc. v. College of Am. Pathologists*, 170 F.3d 53, 56 (1st Cir. 1999); *Barry v. Blue Cross of Cal.*, 805 F.2d 866, 869 (9th Cir. 1986); *Opticon, Inc. v. Zazzu*, No. 94 CR 6256, 1995 WL 67656 at *1 n.2 (S.D.N.Y. Feb. 17, 1995), and *In re Mid-Atlantic Toyota Antitrust Litig.*, 560 F. Supp. 760, 772–73 (D. Md. 1983).

¹³⁴ *Interstate Circuit*, 306 U.S. at 221 (finding that the trial court properly inferred an express “agreement from the nature of the proposals made on behalf of Interstate and Consolidated; from the manner in which they were made; from the substantial unanimity of action taken upon them by the distributors; and from the fact that appellants did not call as witnesses any of the superior officials who negotiated the contracts with Interstate or any official who, in the normal course of business, would have had knowledge of the existence or non-existence of such an agreement among the distributors”)

¹³⁵ *Id.* at 218–19.

¹³⁶ The form of the letter assured that each distributor knew that all of the others had received the same proposal, and there was “strong motive for such unanimity of action.” *Id.* at 225. The pattern of uniform acceptance and rejection of the proposals to change established marketing practices supported the inference of an express agreement, particularly “when uncontradicted and with no more explanation than the record affords.” *Id.* The distributors offered only testimony

poses, the Court held that, even if distributors did not communicate directly, their uniform, interdependent actions in response to the exhibitors' invitation to participate in the arrangement was sufficient to satisfy the agreement requirement: "It was enough that, knowing that concerted action was contemplated and invited, the distributors gave their adherence to the scheme and participated in it. Each distributor was advised that the others were asked to participate; each knew that cooperation was essential to successful operation of the plan."¹³⁷

The Court later described this scenario as "a tacit agreement to restrain competition between the distributors."¹³⁸ The distributors, confronted by the first-run exhibitors' ultimatum, "all had the same motive to enter into a tacit agreement [that] would enable them to increase their royalties by forcing a rise in admission prices without the danger of competitors enlarging their share of the subsequent-run market by refusing to impose similar restrictions."¹³⁹ Similarly, the First Circuit in *White* described *Interstate Circuit* as an exemplar of tacit agreement because

the distributors, who never communicated directly with one another, nonetheless had entered into a tacit agreement with one another by acting in accordance with the letter's demands, because the letter made it clear that all eight had received the letter, the economic context made it clear that all eight needed to act uniformly or all would lose business, and all eight did in fact impose the conditions.¹⁴⁰

In this variant of tacit agreement, in other words, the rivals interdependently accept a common proposal by a trading partner, thereby reducing competition

from lower-level managers, not ones with decision-making authority: "The production of weak evidence when strong is available can lead only to the conclusion that the strong would have been adverse." *Id.* at 226.

¹³⁷ *Id.* Cf. Shamir & Shamir, *supra* note 30, at 656 (discussing the possibility of inferring collusion where "the private information of one retailer, which is shared with the manufacturer, [is] leaked unintentionally to the retailer's competition through the pricing mechanism."). The authors suggest that "when the manufacturer determines the price based on the private information he receives from the retailer, a competing retailer can observe this price and infer the private information of the competitor from this price; since the price of the manufacturer is a function of the private information of the retailer, observing the manufacturer's price can be equivalent to observing the private information itself." *Id.* In the text, I am concerned with the inverse case of a proposal from a common source to upstream firms as a means of forming a tacit agreement among the recipients of the information.

¹³⁸ *First Nat'l Bank of Ariz. v. Cities Serv. Co.*, 391 U.S. 253, 287 (1968).

¹³⁹ *Id.* The plaintiff in *Cities Service* itself, by contrast, failed to show that the defendant oil company had any incentive to participate in an alleged boycott, so the same inference from parallel conduct was not appropriate. See also *United States v. Citizens & S. Nat'l Bank*, 422 U.S. 86, 113 (1975) (describing plaintiff's argument that a bank's "correspondent associate programs have actually encompassed at least a tacit agreement of [sic] fix interest rates and service charges" and citing *Interstate Circuit*, *Masonite*, and *Bausch & Lomb*).

¹⁴⁰ *White v. R.M. Packer Co.*, 635 F.3d 571, 576 (1st Cir. 2011).

to their joint benefit.¹⁴¹ The decisive issue in cases like this is whether the rivals act interdependently because of the vertical agreements; it is insufficient that they act in the same way if they had independent reasons for doing so.¹⁴²

¹⁴¹ See, e.g., *Toys “R” Us, Inc., v. FTC*, 221 F.3d 928, 936 (7th Cir. 2000) (finding sufficient evidence to infer conspiracy of toy manufacturers arranged by Toys “R” Us (TRU); the FTC “was not required to disbelieve the testimony of the different toy company executives and TRU itself to the effect that the only condition on which each toy manufacturer would agree to TRU’s demands was if it could be sure its competitors were doing the same thing”); *Meyer v. Kalanick*, 15 Civ. 9796, 2016 WL 1266801, at *4 (S.D.N.Y. Mar. 31, 2016) (finding plaintiff sufficiently alleged a hub-and-spoke agreement in which “drivers agree with Uber to charge certain fares with the clear understanding that all other Uber drivers are agreeing to charge the same fares”); *In re Nexium (Esomeprazole) Antitrust Litig.*, 42 F. Supp. 3d 231, 254 (D. Mass. 2014) (“Like the agreements at issue in *Interstate Circuit* . . . AstraZeneca’s agreements with the Generic Defendants demonstrate a degree of interdependence suggesting a single agreement, even if no such agreement was expressly made between the Generic Defendants.”); *Laumann v. NHL*, 907 F. Supp. 2d 465, 486–87 (S.D.N.Y. 2012) (“Plaintiffs do not plausibly allege that the [regional sports networks, or RSNs] entered into actual agreements with one another to enforce the territorial market divisions established by the League defendants, but it is not necessary that they do so in order to implicate the RSNs in the conspiracy to divide the market.”); *Columbus Drywall & Insulation, Inc. v. Masco Corp.*, No. 04–CV–3066, 2009 WL 856306, at *12–13 (N.D. Ga. Feb. 9, 2009) (finding sufficient evidence to support a claim that an insulation contractor “orchestrated and facilitated an agreement between [insulation] manufacturers to maintain and increase [the contractor’s price advantage over its rivals] in exchange for [the contractor’s] agreement to support industry-wide price increases”; the contractor “communicat[ed] directly with the manufacturers, and sometimes demand[ed] price adjustments, when it received reports” of violations, sometimes from the manufacturers themselves).

Similarly, in *United States v. Apple, Inc.*, 791 F.3d 290, 316 (2d Cir. 2015), cert. denied, 136 S. Ct. 1376 (2016), the court found sufficient evidence that “Apple consciously orchestrated a conspiracy among” ebook publishers to increase the retail price of ebooks by interdependently switching to an agency model of distribution with a most-favored-nation clause, requiring publishers to set a retail price on Apple’s bookstore no higher than its price to other retailers. In this case, however, the court found that Apple went beyond the *Interstate Circuit* scenario by “consciously play[ing] a key role in organizing [the publisher’s] express collusion,” (*id.* at 318) to the point of “coordinat[ing] phone calls between the publishers who had agreed and those who remained on the fence.” *Id.* at 319.

¹⁴² *In re Ins. Brokerage Antitrust Litig.*, 618 F.3d 300, 331 (3d Cir. 2010) (rejecting plaintiffs’ reliance on *Interstate Circuit* and a hub-and-spoke theory because the defendants had not acted interdependently in response to the common proposal); *Barry v. Blue Cross of Cal.*, 805 F.2d 866, 869 (9th Cir. 1986) (finding no “tacit conspiracy” under *Interstate Circuit* because that there was no showing that the [defendants] were economically interdependent—that ‘cooperation was essential to successful operation of the plan’”) (citation omitted); *Radio Music License Comm., Inc. v. SESAC, Inc.*, 29 F. Supp. 3d 487, 497–98 (E.D. Pa. 2014) (holding that pattern of licensing of public performance rights to radio stations did not establish a hub-and-spoke conspiracy among the stations because each station had an independent reason to accept the licensing terms). In *In re Musical Instruments & Equipment Antitrust Litigation*, 798 F.3d 1186 (9th Cir. 2015), however, the court dismissed insufficient allegations of a hub-and-spoke conspiracy, even though the defendants responded interdependently to a powerful retailer’s demand for adoption of “minimum advertised price” policies on all retailers, reasoning that “[m]anufacturers’ decisions to heed similar demands made by a common, important customer do not suggest conspiracy or collusion. They support a different conclusion: self-interested independent parallel conduct in an interdependent market.” *Id.* at 1195. In essence, the majority in *Musical Instruments* treated the common proposals from a common downstream firm no differently than any other market event, so an interdependent response was not concerted. It did not cite *Interstate Circuit*. Even at that, a dissent found sufficient allegations to make an agreement plausible. *Id.* at 1198–99 (Preferson, J.,

Interstate Circuit is usually cited as an instance of a hub-and-spoke conspiracy: the arrangement involves both express vertical agreements to form the spoke and a tacit horizontal agreement to form the rim. In cases like this, a single party, usually (although not always)¹⁴³ one in a vertical relationship to the rivals, makes a simultaneous proposal to all rivals, which the rivals accept explicitly, uniformly, and interdependently, to their joint benefit.¹⁴⁴ Nevertheless, it makes sense to treat at least some hub-and-spoke conspiracies as a species of tacit agreement because express vertical agreements may serve a function similar to a direct communication of intention among rivals; the agreements coordinate the interdependent responses of the rivals by providing strategic information that each recipient knows its rivals are also receiving. The pattern of responses differs from simple interdependence because the form of the communication to each of the upstream suppliers, identifying all of the recipients, serves a function similar to a horizontal communication of the same proposal.

III. PUBLIC COMMUNICATIONS ABOUT PRESENT ACTIONS

Public announcements of present prices, even if they coordinate noncompetitive pricing, are insufficient to satisfy the conditions for a tacit agreement.¹⁴⁵ The Supreme Court pointed to one reason in *Brooke Group* when it noted that coordinating a price increase “through the conscious parallelism of oligopoly must rely on uncertain and ambiguous signals to achieve concerted action,” a “minuet” that is “difficult to compose and to perform, even for a

dissenting) (“When truly analyzed together, the six plus factors strongly suggest that the manufacturer defendants reached an illegal horizontal agreement, which ‘nudge’ plaintiffs’ allegations ‘from conceivable to plausible.’”).

¹⁴³ *In re Nexium* (Esomeprazole) Antitrust Litig., 42 F. Supp. 3d 231, 253 (D. Mass. 2014), held that *Interstate Circuit*’s logic applied to a series of proposed pay-for-delay settlements between a branded drug manufacturer and its generic rivals. *Interstate Circuit* required only that “the parties acquiescing to the proposed arrangement . . . be direct competitors.” *Id.* One of the rivals was found to have acquiesced by “sign[ing] an agreement to stay out of the generic Nexium market as long as its competitors did the same.” *Id.* at 259. That was “compelling evidence of acquiescence to a common scheme to delay generic competition” even though its “acquiescence may not have had any effect on the state of generic competition.” *Id.*

¹⁴⁴ If the agreement is purely for the benefit of the party making the proposal, then there is little basis for inferring an agreement. Turner, *supra* note 11, at 701 (“It would seem somewhat strange to call this a horizontal agreement [because] each ended up worse off than before. An agreement among competitors on a course of conduct with such unhappy consequences would be an odd sort of agreement.”). Such a scenario would be better evaluated under Section 2 of the Sherman Act. *See id.* at 700–03 (discussing *Lorain Journal Co. v. United States*, 342 U.S. 143 (1951)).

¹⁴⁵ *See, e.g., Rigby v. Philip Morris USA, Inc.*, No. CV 513–110, 2015 WL 1275412, at *6 (S.D. Ga. Mar. 19, 2015) (dismissing allegations as insufficient to infer collusive conduct where the defendants published a price sheet in early 2009 and then later re-issued a price sheet with lower prices that were “in line” with those offered by defendants’ competitor).

disciplined oligopoly.¹⁴⁶ In a one-shot game, a price increase is unlikely to convey enough information about the sender's conciliatory intent for rivals to coordinate such a price increase. But oligopolists in real-world markets do not play one-shot games. In repeated games, it is possible that rivals can indicate their intention by patterns of price movements and responses and eventually achieve tacit collusion.¹⁴⁷ The pattern of price announcements by gas stations on Martha's Vineyard, described in *White*, is one real-world example among many: the stations admitted that they communicated indirectly by posting their prices and were able to engage in cooperative pricing by "rationally" predicting what rivals would do in response.¹⁴⁸

Even if rivals succeed in coordinating prices solely by public announcements of their present prices, however, the result is not a tacit agreement. Courts view the public announcement of prices by itself as a necessary part of oligopoly pricing,¹⁴⁹ and within its safe harbor, because it provides the infor-

¹⁴⁶ *Brooke Grp. Ltd. v. Brown & Williamson Tobacco Corp.*, 509 U.S. 209, 227–28 (1993). Justice Stevens objected that "professional performers who had danced the minuet for 40 to 50 years would be better able to predict whether their favorite partners would follow them in the future than would an outsider, who might not know the difference between Haydn and Mozart." *Id.* at 257.

¹⁴⁷ Experiments suggest that if there are very few rivals, many buyers, visible pricing, and homogeneous products, and firms compete over many time periods, each firm may be able to predict whether its rivals will likely reciprocate a price increase and coordinate a collusive price. See, e.g., Damien J. Neven, "Collusion" Under Article 81 and the Merger Regulation, in KONKURRENSVERKET, SWEDISH COMPETITION AUTHORITY, FIGHTING CARTELS—WHY AND HOW? 56, 65 (2001) (summarizing experimental results suggesting that, without direct communications, successful collusion only appears frequently "in very simple market environments . . . with only two firms and a lot of experience," but if "the number of players is increased, or the environment is made more complicated (for instance with different costs or different demands across firms), firms appear to be unable to sustain collusive outcomes"). This result is consistent with the Folk Theorem, which states that "if firms can observe each other's actions and interact with one another sufficiently frequently, then the firms can maximize their joint payoffs . . . without communication or transfers." MARSHALL & MARX, *supra* note 6, at 9. See also Green et al., *supra* note 11, at 469 ("[A] standard folk theorem characterizes the set of equilibria of a repeated oligopoly game and shows that for sufficiently patient firms (or for sufficiently short delay between repetitions of the game), the set of equilibria includes strategy profiles that generate the monopoly outcome.").

¹⁴⁸ Defendants-Appellees' Brief at *31–32, *White v. R.M. Packer Co.*, 635 F.3d 571 (1st Cir. 2012), No. 10-1130, 2010 WL 3213231. An econometric study of Italian gasoline pricing also found a pattern of price announcements for gasoline can facilitate "sticky," less competitive pricing. Patrick Andreoli-Versbach & Jens-Uwe Franck, *Endogenous Price Commitment, Sticky and Leadership Pricing: Evidence from the Italian Petrol Market*, 40 INT'L J. INDUS. ORG. 32, 35 (2015) (describing how when the largest Italian gasoline refiner announced a policy of making fewer and larger price changes, regardless of cost, others eventually followed suit and market prices increased; an antitrust investigation ended with no evidence of communication).

¹⁴⁹ See also *Blomkest Fertilizer, Inc. v. Potash Corp. of Sask.*, 203 F.3d 1028, 1036 (8th Cir. 2000) ("[E]vidence that the alleged conspirators were aware of each other's prices, before announcing their own prices, is nothing more than a restatement of conscious parallelism, which is not enough to show an antitrust conspiracy.") (internal quotation marks omitted); Joseph Kattan, *Beyond Facilitating Practices Price Signaling and Price Protection Clauses in the New Antitrust Environment*, 63 ANTITRUST L.J. 133, 139 (1994) (observing that "[f]irms must be able to react

mation sellers and buyers need to make essential choices.¹⁵⁰ To hold otherwise, they reason, would limit necessary information in the market and require courts to engage in an inquiry approximating price regulation in order to determine liability.¹⁵¹ Economists (and the Supreme Court in the passage I quoted earlier from *Brooke Group*) sometimes describe these sorts of announcements of prices as signaling.¹⁵² Calling them signaling, however, does not change the legal characterization of the conduct. As one court put it, “[P]ublic announcement of a pricing decision cannot be twisted into an invitation or signal to conspire; it is instead an economic reality to which all other competitors must react.”¹⁵³ A sufficiently complex pattern of announcements and price increases may support an inference that rivals coordinated the price increases by private communication, particularly if there is evidence of meetings,¹⁵⁴ but a series of identical announced price increases is normally explic-

to market conditions, including the prices charged by rivals”; a firm cannot “put blinders on and pretend that it does not know what its rivals are charging”; consequently “the interdependent outcome may be unavoidable”).

¹⁵⁰ See Kattan, *supra* note 149, at 138–39 (explaining that a simple price increase, without more, cannot “be viewed predominantly as a signal to competitors rather than as a notice to customers”).

¹⁵¹ *Kaplow Review*, *supra* note 11, at 762–63.

¹⁵² See, e.g., George J. Mailath, *Simultaneous Signaling in an Oligopoly Model*, 104 Q.J. ECON. 417, 417 (1989) (presenting “a dynamic model of differentiated oligopoly in which all firms have private information about their costs and *simultaneously* signal their information by their pricing decisions”) (emphasis in original); Austin C. Hoggatt et al., *Price Signaling in Experimental Oligopoly*, 66 AM. ECON. REV. 261, 262 (1976) (“Signals are special [i.e., unusual or noteworthy] price choices which are chosen to substitute for verbal communication when the latter is impossible.”).

¹⁵³ *United States v. Gen. Motors Corp.*, No. 38219, 1974 WL 926, at *21 (E.D. Mich. Sept. 26, 1974). See also *Williamson Oil Co., Inc. v. Philip Morris USA*, 346 F.3d 1287, 1310 (11th Cir. 2003) (“None of the [price changes] that appellants label ‘signals’ tend to exclude the possibility that the primary players in the tobacco industry were engaged in rational, lawful, parallel pricing behavior that is typical of an oligopoly.”); *Valspar Corp. v. E.I. du Pont de Nemours*, No. 14–527–RGA, 2016 WL 304404, at *10 (D. Del. Jan. 25, 2016) (“[P]arallel price increases, or ‘signals,’ would perhaps describe how a conspiracy practically functioned, but only if there were there some indication of an agreement to begin with, rather than conduct that could just as well be explained by independent action. In short, nothing about these announcements tends to exclude the possibility of independent action.”); *Hall v. United Air Lines, Inc.*, 296 F. Supp. 2d 652, 670 & n.23 (E.D.N.C. 2003) (evidence that airlines cut base commissions to travel agents “assum[ing] the contemplated cut would not be sustainable without competitor matching” and “hop[ing] that others would match the cut” did not “mean that the defendants agreed to cut commissions by ‘offer and acceptance’ as plaintiffs contend”) (citing *General Motors*). But cf. *In re Titanium Dioxide Antitrust Litig.*, 959 F. Supp. 2d 799, 828 (D. Md. 2013) (“Frequent price increase announcements could have served as ‘signals,’ making further exchange of actual price information superfluous.”); *In re Currency Conversion Fee Antitrust Litig.*, 773 F. Supp. 2d 351, 356–58, 371 (S.D.N.Y. 2011) (denying summary judgment where “price announcements may have served as price beacons to competitors for the purpose of gauging their willingness to raise prices” but there [also] was evidence of a relevant meeting among competitors’ in-house counsel).

¹⁵⁴ See *Titanium Dioxide*, 959 F. Supp. at 825 (“The sheer number of parallel price increases, when coupled with the other evidence in this case, could lead a jury to reasonably infer a conspiracy.”); *In re Ethylene Propylene Diene Monomer (EPDM) Antitrust Litig.*, 681 F. Supp. 2d

ble as simple interdependence and insufficient to raise the necessary inference of agreement.¹⁵⁵

Courts might find agreement based on public announcements of present prices if the particular announcement includes information that conveys a different, unique meaning useful to rivals. Bidders in open-price, ascending spectrum auctions of regional licenses, for example, have signaled their collusive intent to rivals using codes in bids.¹⁵⁶ The bids are present offers to buy the available blocks of spectrum at the stated price per unit, but the bidders in a few instances “use[d] the early rounds when prices are still low to signal their views about who should win which objects, and then, when consensus ha[d] been reached, tacitly agree[d] to stop pushing prices up.”¹⁵⁷ In one in-

141, 169, 176 (D. Conn. 2009) (denying summary judgment where plaintiffs offered evidence of “six ‘lockstep,’ industry-wide price increases” and “frequent and friendly” communications and secret meetings among the defendants”).

¹⁵⁵ See, e.g., *In re Chocolate Confectionery Antitrust Litig.*, 801 F.3d 383, 400–01 (3d Cir. 2015) (“[E]vidence of a price increase disconnected from changes in costs or demand only raises the question: was the anticompetitive price increase the result of lawful, rational interdependence or of an unlawful price-fixing conspiracy?”); *In re Text Messaging Antitrust Litig.*, 782 F.3d 867, 871 (7th Cir. 2015) (“It is true that if a small number of competitors dominates a market, they will find it safer and easier to fix prices than if there are many competitors of more or less equal size. . . . But the other side of this coin is that the fewer the firms, the easier it is for them to engage in ‘follow the leader’ pricing . . . which means coordinating their pricing without an actual agreement to do so.”).

¹⁵⁶ See *United States v. Mercury PCS II, L.L.C.*, No. 98–2751 (PLF), 1999 WL 1425379, at *6 (D.D.C. April 29, 1999):

A bidder’s purpose in making a bid might, depending on the circumstances, be ambiguous to its rivals. Where ambiguity remains, it can be difficult to use a bid or bidding pattern alone to send clear messages or invitations to collude. To eliminate or reduce any ambiguity, Mercury sometimes placed bids during the DEF auction in which the final three digits intentionally corresponded to the number for a BTA (a “BTA end code”). Knowing that other bidders could see the bids and hence the BTA end codes, Mercury used the codes to better explain the real purpose of certain bids it made—to reach an agreement with a rival. In particular, Mercury used the BTA end codes to link the bidding of licenses in two (or more) specific BTA markets, highlight the licenses Mercury wanted, and convey to the competing bidders offers to agree with Mercury not to bid against each other for the linked licenses.

The consent decree prevented “Mercury from using BTA end codes or any similar signaling mechanism to solicit anticompetitive agreements in future FCC auctions.” *Id.* at *8; see also Peter Cramton & Jesse Schwartz, *Collusive Bidding: Lessons from the FCC Spectrum Auctions*, 17 J. REG. ECON. 229 (2000). For an analysis of bid rigging generally, see Robert C. Marshall & Michael Meurer, *Bidder Collusion and Antitrust Law: Refining the Analysis of Price Fixing to Account for the Special Features of Auction Markets*, 72 ANTITRUST L.J. 83 (2004). See also *Dahl v. Bain Capital Partners, LLC*, 937 F. Supp. 2d 119, 130–33, 142–45 (D. Mass. 2013) (denying summary judgment based on what the court took to be a plausible fit with the *White* court’s account of tacit agreement). Private equity firms had uniformly withdrawn bids in a leveraged buyout when another firm announced a deal to buy the company. The court characterized the evidence as suggesting, among other things, that the announcement of the deal was a “request to the industry,” with which the rivals complied by abruptly “standing down.” *Id.* at 142.

¹⁵⁷ See PAUL KLEMPERER, *AUCTIONS: THEORY AND PRACTICE* 86 (2004). Cf. William G. Christie & Paul H. Schultz, *Why Do Nasdaq Market Makers Avoid Odd-Eighth Quotes?*, 49 J. FIN.

stance, rivals achieved this goal by submitting bids with “trailing digits” in the lower places of bid that corresponded to the regional market numbers of other auctions. The otherwise arbitrary numbers would allegedly signal to rivals that they would face more aggressive bidding for the designated markets if they persisted in bidding in the current auction. In effect, bids signaled offers to refrain from bidding in the other auctions in return for the rivals’ forbearance in the primary auction.¹⁵⁸ In practical effect, then the purportedly public, present bid contained private information about future actions, which took the bid out of the benign category.

In the foregoing auction, it was obvious to observers what the bidders were doing, so regulatory responses—including antitrust challenges—were predictable. (In order to thwart this strategy the FCC now constrains bidding increments and conceals the names of bidders during auctions.)¹⁵⁹ If an oligopolist were to announce a price change on its website along with comparable, easily decrypted code unmistakably suggesting a quid pro quo with rivals, presumably the court would treat it in the same way as a private communication, despite visibility to others. But that very visibility makes it far less effective in coordinating an illegal conspiracy than a truly private communication.

IV. PRIVATE COMMUNICATIONS ABOUT PRESENT ACTIONS

In *United States v. United States Gypsum Co.*¹⁶⁰ the Supreme Court recognized that private exchanges of price information may “increase economic efficiency and render markets more, rather than less, competitive,” but cautioned that “[e]xchanges of current price information . . . have the greatest

1813, 1838–39 (1994) (identifying a suspiciously consistent pattern of market makers’ spreads between bid and ask prices on the Nasdaq exchange). This article led to multidistrict antitrust litigation (eventually settled for over \$1 billion) alleging that the spreads were the result of an explicit conspiracy. *In re* NASDAQ Market-Makers Antitrust Litig., 187 F.R.D. 465, 492 (S.D.N.Y. 1998) (approving the settlement). A government investigation ended in a consent decree approved by the same court. *United States v. Alex. Brown & Sons, Inc.*, 963 F. Supp. 235, 247 (S.D.N.Y. 1997), *aff’d sub nom.* *United States v. Bleznak*, 153 F.3d 16 (2d Cir. 1998).

¹⁵⁸ Werden, *supra* note 30, at 766–67 (observing that by this sort of auction mechanism “the defendants communicated and reached an agreement on price . . . without an explicit offer or acceptance”; and that “the communication was exceptionally minimal but nevertheless effective” in the same way as a “traditional conspirac[y]”). An even clearer example occurred in a German auction of ten blocks of spectrum. By rule, each new bid had to be at least 10% higher than the previous bid. Firm A initially bid DM 20 million/MHz on blocks 1–5 and DM 18.18 million on blocks 6–10; Firm B then bid DM 20 million on blocks 6–10 and did not bid on blocks 1–5; there were no further bids. It seems evident that A’s oddly specific bid of 18.18 on blocks 6–10 was a proposal that, if B did not contest blocks 1–5, B could, under the 10% minimum rule, win blocks 6–10 at a bid at or over $18.18 \times 1.1 = 19.998$ —a proposal that B happily accepted by bidding DM 20 million on blocks 6–10 and nothing on blocks 1–5. KLEMPERER, *supra* note 157, at 104–05.

¹⁵⁹ MARSHALL & MARX, *supra* note 6, at 201–02.

¹⁶⁰ 438 U.S. 422 (1978).

potential for generating anticompetitive effects.”¹⁶¹ Courts distinguish whether evidence of the latter sort of exchange justifies the inference of (1) an agreement to fix or stabilize prices, which is per se unlawful or (2) an agreement to exchange information, which is unlawful under the rule of reason only if it actually reduces competition.¹⁶² I consider here when either sort of agreement might take the form of tacit agreement.

A. PRICE FIXING (OR OTHER PER SE ILLEGAL) AGREEMENTS

Private communications of present pricing information among rivals are less probative of agreement on prices themselves than are communications of future price information, even if they provide no direct benefit to consumers.¹⁶³ In markets in which transaction prices are not public, private exchanges of prices can provide sellers with information that serves a legitimate purpose by thwarting deception by buyers. In *Blomkest*, for example, the court refused to find that evidence of large and parallel price increases together with “nearly simultaneous price verifications” among rivals raised an inference of agreement, because the “communications only concerned charges on particular completed sales, not future market prices,” and there was “no evidence to support the inference that the verifications had an impact on price increases.”¹⁶⁴

In another recent case, hospitals repeatedly shared current (and in some instances “unmasked, competitively sensitive”) information about nurses’ compensation¹⁶⁵ and only “occasionally” exchanged information about “projected future wage increases.”¹⁶⁶ The court found, in a careful opinion that

¹⁶¹ *Id.* at 441 n.16.

¹⁶² In *Gypsum*, the Court held that evidence that the parties have agreed to exchange prices is insufficient to sustain a criminal conviction for price fixing, even if the exchange affected competition; the government must also offer independent evidence that the rivals acted with knowledge of the likely consequences. *Id.* at 441–44.

¹⁶³ See, e.g., *Omnicare, Inc. v. UnitedHealth Grp., Inc.*, 629 F.3d 697, 720 (7th Cir. 2011) (“[C]irculation of generalized and averaged high-level pricing data, policed by outside counsel, [was] more consistent with independent than collusive action.”). But see *Rosefielde v. Falcon Jet Corp.*, 701 F. Supp. 1053, 1064 (D.N.J. 1988) (finding that exchanges of current price information “facilitated a tacit agreement among business jet manufacturers to adhere to the exchanged prices,” where there was some evidence that “senior executives . . . were aware of the price information exchange and considered the data obtained by the sales engineers to set the price of business jets”).

¹⁶⁴ *Blomkest Fertilizer, Inc. v. Potash Corp. of Sask.*, 203 F.3d 1028, 1034 (8th Cir. 2000). See also *In re Baby Food Antitrust Litig.*, 166 F.3d 112, 125–26 (3d Cir. 1999) (finding that rivals’ collection of one another’s present pricing information from a variety of sources did not raise an inference of agreement).

¹⁶⁵ *Cason-Merenda v. Detroit Med. Ctr.*, 862 F. Supp. 2d 603, 641 (E.D. Mich. 2012). Rivals engaged in “fairly regular surveys augmented by direct contacts.” *Id.* at 633. Although low-level employees made the contacts, those with pricing authority used the information. *Id.*

¹⁶⁶ *Id.* at 631.

identified the competing considerations, that the evidence was barely insufficient to raise an inference of per se illegal price fixing.¹⁶⁷ The hospitals undoubtedly wanted to know rivals' wages in setting their own, but the court found insufficient evidence that they were using that information to set wages cooperatively. The hospitals had a legitimate need for comparative information in order independently to meet their "target" pay rates—individually determined percentages of the highest wage in the market. Moreover, their wage practices were not uniform, and their internal records demonstrated that each hospital used the shared information to make "a series of discrete, individualized RN compensation decisions."¹⁶⁸ The court concluded that "the evidence here simply features too wide a disparity among the Defendant hospitals' processes for determining RN compensation and the outcomes of these processes to support a reasonable inference of a conspiracy in violation of § 1."¹⁶⁹

B. INFORMATION EXCHANGE AGREEMENTS

In *Foley*, the court found that a one-time private exchange of pricing intentions, combined with evidence that the rivals later acted consistently with their stated intentions, in some instances after prodding, was sufficient to raise an inference of price fixing.¹⁷⁰ A one-time exchange of *present* pricing information is far less probative of an agreement of any kind. If the exchanges are frequent, however a court may infer an agreement to exchange information. In cases like these, the court treats the agreement to exchange information as the relevant one and evaluates it under some version of the rule of reason based on its actual effect on competition.¹⁷¹ The case then turns on whether the information allows rivals to restrict output rather than to enable efficient allocation of resources.¹⁷²

¹⁶⁷ *Id.* at 639.

¹⁶⁸ *Id.* at 640.

¹⁶⁹ *Id.* at 641. The court found, however, that the evidence was sufficient to raise a triable issue that the hospitals had formed an agreement to exchange wage information that was illegal under the rule of reason. *Id.* at 643. That part of the opinion is discussed in the next Part of this article.

¹⁷⁰ *United States v. Foley*, 598 F.2d 1323, 1332–33 (4th Cir. 1979).

¹⁷¹ *Todd v. Exxon Corp.*, 275 F.3d 191, 198 (2d Cir. 2001) (holding that in cases where "the violation lies in the information exchange itself—as opposed to merely using the information exchange as evidence upon which to infer a price-fixing agreement [—the agreement to exchange information] is not illegal per se, but can be found unlawful under a rule of reason analysis").

¹⁷² *United States v. Citizens & S. Nat'l Bank*, 422 U.S. 86, 113 (1975) (holding that "the dissemination of price information is not itself a per se violation"); *see also United States v. United States Gypsum Co.*, 438 U.S. 422, 441 n.16 (1978) (describing the "the structure of the industry involved and the nature of the information exchanged" as part of the analysis under the rule of reason).

In *United States v. Container Corp.*,¹⁷³ for example, rivals periodically asked one another for their most recent prices, and each rival “on receiving that request usually furnished the data with the expectation that it would be furnished reciprocal information when it wanted it.”¹⁷⁴ The Court unanimously held that the “concerted action” in exchanging prices was “sufficient to establish the combination or conspiracy, the initial ingredient of a violation of § 1 of the Sherman Act.”¹⁷⁵ The majority held it unlawful because the effect of the agreement was to stabilize prices “at a downward level,”¹⁷⁶ although a higher one than would have prevailed without the exchanges. A concurring opinion referred to the arrangement as a tacit agreement,¹⁷⁷ apparently because the repeated compliance with requests for information strongly suggested an intent to reciprocate; it reduced price competition because it “made it possible for individual defendants confidently to name a price equal to that which their competitors were asking.”¹⁷⁸ The dissent, however, thought “the evidence establishe[d] that the information was used by defendants as each pleased and was actually employed for the purpose of engaging in active price competition”¹⁷⁹ and had no “significant anticompetitive effect.”¹⁸⁰

More recently, as I showed in the last Part, *Cason-Merenda* found that hospitals’ extensive “on-demand” sharing of current wage information did not justify an inference of an agreement to fix prices because other evidence suggested that the hospitals used the information to make independent pricing decisions. The court did find, however, that the evidence was sufficient to infer “that the Defendant hospitals conspired among themselves to exchange wage information in a manner that harmed competition by depressing RN wages.”¹⁸¹ The court pointed to evidence of exchanges of detailed, disaggregated information; expert testimony that these sorts of exchanges can facilitate price coordination; expert testimony that wages were in fact below competitive levels; and evidence that hospital executives “expressly referenced market surveys of RN wages in explaining decisions to award smaller-than-recommended pay increases.”¹⁸² Such an agreement could be anticompetitive

¹⁷³ 393 U.S. 333 (1969).

¹⁷⁴ *Id.* at 335.

¹⁷⁵ *Id.*

¹⁷⁶ *Id.* at 336–37; *id.* at 337 (“Stabilizing prices as well as raising them is within the ban of [§] 1 of the Sherman Act.”).

¹⁷⁷ *Id.* at 340; *see also In re Coordinated Pretrial Proceedings in Petroleum Prods. Antitrust Litig.*, 906 F.2d 432, 447 (9th Cir. 1990) (citing *Container* as an instance of tacit agreement inferred from price exchanges).

¹⁷⁸ *Container*, 393 U.S. at 339–40 (Fortas, J. concurring).

¹⁷⁹ *Id.* at 344 (Marshall, J., dissenting).

¹⁸⁰ *Id.* at 346–47 (Marshall, J., dissenting).

¹⁸¹ *Cason-Merenda v. Detroit Med. Ctr.*, 862 F. Supp. 2d 603, 641 (E.D. Mich. 2012).

¹⁸² *Id.* at 645. The court also noted that the exchanges did not comply with the “safety zone” described in the enforcement agencies’ statement of policy on “provider participation in ex-

if it allowed each hospital to “hold the various elements of its RN compensation package to the minimum level needed to meet its objectives, secure in the knowledge that it did not need to outbid local competitors whose wage rates and practices were unknown.”¹⁸³ Although the tacit agreement was only to exchange the information and not to limit price competition, there was sufficient evidence reasonably to infer that the agreement in practice had anticompetitive effects and so the court denied the defendants’ motions for summary judgment on this issue.

V. PUBLIC COMMUNICATIONS ABOUT FUTURE ACTIONS

In his discussion of “prior announcements of moves,” Michael Porter observes that “an entire competitive battle can be waged through announcements before a single dollar of resources is expended,”¹⁸⁴ citing an example in which a firm persuaded its rivals not to produce a competing product by making a series of announcements of prices “to be available two years hence.”¹⁸⁵ In the same way, “trading announcements back and forth can settle the size of a price change . . . without the need to disrupt the market and risk a battle by actually introducing one scheme and then having to change or withdraw it later.”¹⁸⁶ This process may sound a lot like the realtors’ serial announcements of their intentions in *Foley*, with a similar outcome. Nevertheless, courts have rejected that characterization, either because the announcements are too ambiguous to serve the purported signaling function,¹⁸⁷ or because the announcements serve benign purposes and may benefit multiple audiences, especially consumers.¹⁸⁸ In the *DuPont (Ethyl)* case,¹⁸⁹ for example, the court recognized

changes of price and cost information.” See U.S. Dep’t of Justice & Fed. Trade Comm’n, Statements of Health Care Antitrust Enforcement Policy, Statement 6 (rev. 1996), www.justice.gov/atr/statements-antitrust-enforcement-policy-health-care#CONTNUM_49. The safety zone requires that the information be aggregated from at least five providers, gathered by a third party, and at least three months old. *Cason-Merenda*, 862 F. Supp. 2d at 612–15.

¹⁸³ *Cason-Merenda*, 862 F. Supp. 2d at 645.

¹⁸⁴ PORTER, *supra* note 41, at 76–78.

¹⁸⁵ *Id.* at 78–79.

¹⁸⁶ *Id.* at 79.

¹⁸⁷ See also *Reserve Supply Corp. v. Owens-Corning Fiberglas Corp.*, 97 F.2d 37, 54 (7th Cir. 1992) (rivals’ advance price announcements “reduce[d] the uncertainty inherent in raising prices by allowing competitors time to decide if they would follow suit” and thus “facilitated the parallel pricing that occurred in the market,” but did not permit an inference of price fixing, because they also provided customers with the information they needed to “bid on building contracts well in advance of starting construction”).

¹⁸⁸ See, e.g., *Blomkest Fertilizer, Inc. v. Potash Corp. of Sask.*, 203 F.3d 1028, 1037 (8th Cir. 2000) (characterizing these actions as simply dissemination of price information and “far too ambiguous to defeat summary judgment”).

¹⁸⁹ *E.I. du Pont de Nemours & Co. v. FTC*, 729 F.2d 128, 133–34, 140–42 (2d Cir. 1984) (finding no violation of Section 5 of the Federal Trade Commission Act when defendants’ use of advance price announcements, price protection clauses, and delivered pricing had independent justifications and benefited consumers).

that advance price announcements made it easier for rivals to coordinate their pricing decisions but also “aid[ed] buyers in their financial and purchase planning.”¹⁹⁰

In rare instances, however, the content and context of a formal public announcement may make it functionally private, without a comparable consumer benefit. First, if buyers have no use for the price information, a court may find that rivals are the only audience. If rivals announce prices in advance when their buyers are under long-term contracts, for example, the only apparent purpose and effect is to negotiate a price change.¹⁹¹ Rivals may be able to do the same thing by preannouncements in spot retail markets, but, in that case, there is an efficiency justification in the benefits to consumers of being able to plan for upcoming pricing changes. Second, if the announcement includes additional information and conditions that make it useful only to rivals, then it might be interpreted solely as a private signal of intention. If, for example, airlines serially announce proposed fares that they link by footnote designations to form a bundle, and if consumers cannot even book travel at the proposed fares, then one might infer that the purpose of the announcements was only to communicate with rivals to negotiate an agreement.¹⁹² If,

¹⁹⁰ *Id.* at 134; see also Kenneth G. Elzinga, *New Developments on the Cartel Front*, 29 ANTI-TRUST BULL. 3, 13 (1984) (“The stubborn fact remains that in product markets buyers commonly find price lists to be useful data, and many buyers will testify that their planning is facilitated and business risk is reduced when prices do not change without advance notice from sellers.”).

¹⁹¹ In *In re Coordinated Pretrial Proceedings in Petroleum Products Antitrust Litigation*, 906 F.2d 432, 448 (9th Cir. 1990), for example, refiners publicly announced new wholesale prices of gasoline, sometimes in advance, even though the information was useless to dealers, who had long-term supply contracts with individual refiners. According to the court, the refiners’ officers testified that they announced the prices “for the purpose of quickly informing competitors of the price change, in the express hope that these competitors would follow the move and restore their prices.” *Id.* at 446. Unlike announcements of retail prices, these announcements did not “foster[] the efficient or rational operation of the market inasmuch as there simply was no wholesale market to rationalize; the branded dealers were not free to shop around for their oil.” *Id.* at 448. But see *In re Citric Acid Litig.*, 191 F.3d 1090, 1096 (9th Cir. 1999) (characterizing this reasoning in *Petroleum Products Antitrust Litigation*, 906 F.2d at 448, as dicta because the result in the case was also supported by direct evidence of conspiracy).

¹⁹² The Antitrust Division alleged that airlines coordinated fares through their jointly operated computer reservation system; the airlines eventually terminated the practice under a consent decree. *United States v. Airline Tariff Publ’g Co.*, 836 F. Supp. 9, 13 (D.C. Cir. 1993) (approving consent decree and agreeing with the government that the terms of the fare announcements were of virtually no use to consumers). Indeed, the government argued that the information was sufficiently detailed to amount to assurances, and the pattern of announcements negotiated an express agreement. The Competitive Impact Statement stated that the “negotiation process continued until all significant airlines were lined up with the same proposed fare increase and the same first ticket date, thus providing each other with commitments and assurances as to the amount, scope, and timing of the proposed fare increase.” *United States v. Airline Tariff Publ’g Co.*, Proposed Final Judgment and Competitive Impact Statement, 59 Fed. Reg. 15,225, 15,230–31 (Mar. 31, 1994). See also Baker, *supra* note 84, at 51–52 (“[T]he Antitrust Division alleged that the course of conduct amounted to an illegal agreement—actually many illegal agreements over various fares and routes—and included elements that could and should be enjoined.”). For further discussion, see Werden, *supra* note 30, at 765–66; Severin Borenstein, *Rapid Price Communication*

by contrast, the airlines were simply to announce real fare increases for future travel, the same inference that the communications were functionally private would not be justified; a resulting parallel fare increase would not reflect a tacit agreement.¹⁹³

The medium or setting of an announcement can also indicate that its audience is primarily rivals. “An announcement in a specialized trade journal,” Porter notes, “is likely to be noticed only by competitors or other industry participants [and so] may carry a different connotation from an announcement made to a broad audience of security analysis or to the national business press.”¹⁹⁴ The same could be said about speeches at trade association meetings,¹⁹⁵ press releases,¹⁹⁶ pricing letters,¹⁹⁷ statements in trade journals, and

and Coordination: The Airline Tariff Publishing Case, in *THE ANTITRUST REVOLUTION* 233 (John E. Kwoka, Jr. & Lawrence J. White eds., 4th ed. 2004).

¹⁹³ The Antitrust Division explained that the decree did not prohibit announcing “bona fide fares” then withdrawing them if other airlines did not match them but maintaining them if they did because doing so was simply taking account of “publicly available information,” a term that “encompasses information concerning other airlines’ current and prior bona fide fares and fare changes, as well as any ‘pattern’ that emerges from changes in such fares.” Proposed Consent Decree and Competitive Impact Statement, 59 Fed. Reg. at 15,235–36. See Kühn et al., *supra* note 93, at 185 (explaining that, under the consent decree, “the quoted prices generally have real effects and become commitments towards consumers [and] the immediate availability of booking data does have efficiency effects in facilitating capacity planning [, so] it is probably not sensible to restrict price announcements by firms that have some degree of commitment effects towards the consumer”).

¹⁹⁴ PORTER, *supra* note 41, at 80.

¹⁹⁵ See, e.g., *In re Travel Agency Comm’n Antitrust Litig.*, 898 F. Supp. 685, 691 (D. Minn. 1995) (finding that evidence of “a set of occurrences, speeches, meetings, events, official and unofficial corporate utterances, and conferences at which information was exchanged” was sufficient to raise an inference that one airline signaled that it would cut broker commissions if others followed and the others signaled that they would follow); *Fears v. Wilhelmina Model Agency, Inc.*, No. 02 Civ. 4911(HB), 2004 WL 594396, at *8 (S.D.N.Y. Mar. 23, 2004) (finding that advance announcements of commission increases at trade association meetings, in circumstances in which other communications were occurring, may be interpreted less as taking “the lead in raising its commissions, with the blind hope that other members would follow” than as seeking “some guarantee that the other defendants would acquiesce, to ensure that its clients would not segregate against them”).

¹⁹⁶ *Travel Agency Commission*, 898 F. Supp. at 690.

¹⁹⁷ Similar considerations apply to other formally public, detailed communications that primarily address rivals. For example, “pricing letters,” ostensibly to customers, may offer rivals detailed plans for anticipated increases in prices. *McWane, Inc. & Star Pipe Prods., Ltd.*, FTC Docket No. 9351, 2012 WL 4101793, at *12 (Sept. 14, 2012) (denying summary decision for defendants and noting that the language in the pricing letters “would have been meaningless to customers”). The alleged conspiracy in *McWane* included the creation of an information exchange to monitor rivals’ pricing. *Id.* at *16–17. The Commission later split 2–2 on liability on these theories and so dismissed the counts without opinion. *McWane, Inc. & Star Pipe Prods., Ltd.*, FTC Docket No. 9351, 2014 WL 556261, at *1 (Jan. 14, 2014) (“[T]wo Commissioners find that Counts 1 and 2 alleging an unlawful conspiracy and information exchange have been proven and two Commissioners do not. In the absence of a majority decision, we dismiss these counts in the public interest.”).

earnings calls or meetings with stock analysts.¹⁹⁸ Rivals can sometimes offer far more detailed explanatory information to price announcements or other strategy choices in oral or written statements about competitive conditions and strategies. As Porter explains:

It is not uncommon for competitors to comment on industry conditions, including forecasts of demand and price, forecasts of future capacity, the significance of external changes such as material cost increases, and so on. Such commentary is laden with signals because it may expose the commenting firm's assumptions about the industry on which it is presumably building its own strategy. As such this discussion can be a conscious or unconscious attempt to . . . minimize the chances of mistaken motives and warfare. Such commentary can also contain implicit pleas for price discipline: "Price competition is still very harsh. The industry is doing a lousy job of passing along increased costs to the consumer." "The problem in this industry is that some firms do not recognize that these current prices will be detrimental to our ability to grow and produce a quality product in the long run." Or discussions of the industry may contain implicit pleas that other firms add capacity in an orderly fashion not engage in excessive advertising competition, not break ranks in dealing with large customers, or any number of other things, as well as implicit promises to cooperate if others act "properly."¹⁹⁹

Nevertheless, the statements provide legitimate information to a range of market constituencies, so courts refuse to interpret them as signals in a relevant legal sense.²⁰⁰ These communications provide critical informa-

¹⁹⁸ See, e.g., *In re Plasma-Derivative Protein Therapies Antitrust Litig.*, 764 F. Supp. 2d 991, 1001 (N.D. Ill. 2011) (finding that statements that a company is "in a very good position to see stable growth in this business going forward over the next three to five years" and that "the industry [is] now heading to a much more predictable phase of stability" were "very general statements to investors or regulators about the trajectory of the plasma therapies industry" that failed to make allegations of conspiracy plausible). Cf. Howard Rosenblatt & Tomas Nilsson, *Analyst Calls and Price Signaling Under EU Law*, ANTITRUST SOURCE 1-3 (June 2012) (discussing enforcement actions under Section 5 of the Federal Trade Commission Act against firms for anticompetitive announcements during telephone calls with analysts, but monitored by rivals), www.americanbar.org/content/dam/aba/publishing/antitrust_source/jun12_full_source.auth_checkdam.pdf.

¹⁹⁹ PORTER, *supra* note 41, at 81 (citations omitted).

²⁰⁰ See, e.g., *In re Nat'l Ass'n of Music Merchs., Musical Instruments & Equip. Antitrust Litig.*, MDL No 2121, 2012 WL 3637291, at *2 (S.D. Cal. Aug. 20, 2012) ("[U]nilateral advocacy, particularly in an open and public forum, is not itself an agreement or conspiracy [and] independent responses to public advocacy without an agreement, even if consciously parallel to other entities' activity, would simply be permissible parallel conduct."), *aff'd sub nom. In re Musical Instruments & Equip. Antitrust Litig.*, 798 F.3d 1186 (9th Cir. 2015). The district court added that "attendance at trade shows or other large meetings [does not] imply an agreement or conspiracy," especially where they are "large meetings attended by numerous other people, including press representatives" because "[t]he presence of numerous uninvolved observers at such meetings tends to dispel any specter of illegality." *Id.* Moreover, "making announcements about new practices or developments is common and doesn't imply illicit or surreptitious signaling was going on." *Id.* at *5. *But see* Jeffrey L. Kessler & Ronald C. Wheeler, *An Old Theory Gets New Life: How to Price Without Being a "Price Signaler,"* ANTITRUST, Summer 1993, at 26, 28 (arguing that press releases may be more suspicious than announcements "limited only to cus-

tion to the market that, in some instances, may be required by securities laws.²⁰¹

If they are sufficiently clear and include information of no use to consumers, however, and result in interdependent action, they may arguably form tacit agreements.²⁰² Because anyone, including rivals, can usually listen in on earnings calls or read a transcript of them on the firm website, they provide an opportunity to make far more detailed statements about competitive strategy than a bare announcement of a future price increase. They allow a rival to discuss its reasoning about future price and output decisions in a setting typically monitored by competitors and generally not by consumers. Nevertheless, cases finding that rivals formed an agreement of any kind by these means are rare. The district court opinion in *Holiday Wholesale Grocery*²⁰³ offered a typically benign view of communications in analyst calls. In a lengthy section on purported signaling, the court considered the wholesalers' allegations that cigarette manufacturers, through an intermediary, monitored one another's signals made during their presentations to analysts to coordinate specific price increases.²⁰⁴ The court was at pains to distinguish the connotation of the word signaling from the specific alleged conduct. The term insinuates, according to the court, "either that a competitor is inviting all to make a traditional price-fixing agreement," apparently using something like what I am calling an implicit signal, or "that there already exists such an agreement and it is being carried out through indirect communications"²⁰⁵—what I am calling a prearranged signal.

Despite the plaintiffs' use of terms like nods and olive branches, their evidence, according to the court, showed only that "in an oligopoly, each company is aware of the others' actions" and takes them into account in their competitive decisions.²⁰⁶ The court reasoned that "[b]ecause in competitive markets, particularly oligopolies, companies will monitor each other's communications with the market in order to make their own strategic decisions,

tomers and others with a legitimate need to know," unless there are legitimate justifications for the use of the press release format).

²⁰¹ For discussion, see Richard M. Steuer et al., *The Application of Antitrust to Public Companies' Disclosures*, 63 ADMIN. L. REV. 159, 159–60 (2011) (arguing that all but the most plainly anticompetitive statements should be immune from antitrust scrutiny).

²⁰² Statements in an earnings call may also, according to the FTC, constitute an invitation to collude in violation of Section 5. *See, e.g.*, Consent Order, Valassis Commc'ns, Inc., 2006 WL 6679058, at *9 (Apr. 19, 2006) ("In its earnings call, Valassis communicated to rival News America proposed terms of coordination for the FSI market, a longstanding duopoly, and did so with extraordinary specificity.").

²⁰³ *Holiday Wholesale Grocery Co. v. Philip Morris, Inc.*, 231 F. Supp. 2d 1253, 1276 (2002).

²⁰⁴ *Id.* at 1275.

²⁰⁵ *Id.*

²⁰⁶ *Id.*

antitrust law permits such discussions even when they relate to pricing.”²⁰⁷ For there to be an “inference of traditional agreement from indirect communications,” there must be “communications with no public purpose,”²⁰⁸ like “internal competitive memos” and “supply and demand forecasts.”²⁰⁹ Or, in my terminology, the communications must be fully or functionally private and convey information about future competitive choices.

In rare cases, however, statements in earnings calls may be specific enough and sufficiently directed solely to rivals to raise an inference of agreement. In *Delta/AirTran*, for example, rival airlines allegedly proposed in earnings calls and industry meetings to reduce output and raise fees for travelers, then acted consistently with the proposals.²¹⁰ One announced that “we strongly believe that more industry capacity needs to be removed,”²¹¹ and its rival the next day stated it wanted to remove capacity, but had “to do it in conjunction with the other carriers” and that “if the industry could achieve a 10% reduction in capacity year-over-year by the fall that we’d be in pretty good shape given today’s fuel environment.”²¹² They made similar statements concerning prices and fees in subsequent earnings calls and industry meetings, then simultaneously increased fees and reduced capacity during a recession in which oil prices were falling.²¹³ The court concluded that the complaint’s extraordinarily detailed account of the announcements and their effects on competition sufficiently alleged a Section 1 agreement.²¹⁴ The court distinguished the case from

²⁰⁷ *Id.* at 1276.

²⁰⁸ *Id.* at 1277.

²⁰⁹ *Id.* at 1276–77. The court of appeals agreed with the district court’s benign interpretation of the evidence. *Williamson Oil Co. v. Philip Morris USA*, 346 F.3d 1287, 1305–09 (11th Cir. 2003). The court recognized that the firms’ public statements and actions conveyed implicit signals that may have influenced their rivals’ pricing behavior and led to price increases; it disagreed that signaling by these means was collusive.

²¹⁰ *In re Delta/AirTran Baggage Fee Antitrust Litig.*, 733 F. Supp. 2d 1348, 1352 (N.D. Ga. 2010).

²¹¹ *Id.*

²¹² *Id.* at 1353.

²¹³ *Id.* at 1356.

²¹⁴ *Id.* at 1363. Another court summarized the remarkable detail of the *Delta/Airtran* complaint:

For example, following AirTran’s initial invitation to Delta to collude, Delta indicated during a public earnings call that it had no plans to implement a first-bag fee. Thirteen days later, during AirTran’s public earnings call (which it knew Delta monitored), AirTran stated that it was considering the viability of implementing first-bag fees. Roughly two and a half months later, Delta indicated during another public earnings call (which it knew AirTran monitored) that it was willing to impose first-bag fees. Eight days later, AirTran remarked during its public earnings call that it wanted to implement first-bag fees and had invested in the capability to do so, but that it had not yet implemented the fee because Delta had not done so. Less than two weeks later, Delta announced that it was implementing a \$15 first-bag fee, effective December 5, 2008. One week later, AirTran announced that it was implementing the exact same fee on the exact same day.

allegations of “mere price announcements” on the ground that the complaint alleged “that each Defendant signaled its willingness to cut capacity and increase prices if the other Defendant acted in concert.”²¹⁵ Although neither the parties nor the court used the term tacit agreement, the sequence of announcements and actions in the case is better understood in those terms, because of its dependence on both statement and implementation.²¹⁶

VI. CONCLUSION

Courts and scholars have understood (and misunderstood) tacit agreement in different ways, but it remains an important part of Section 1 doctrine. I propose here a clearer understanding of the category, both in concept and proof. Starting with *Twombly*, I show the place of tacit agreement in the hierarchy of means of coordination, distinguishing it especially from mere interdependence on the one hand and express agreement on the other. As a starting point, I draw from the case law a definition—interdependent conduct coordinated by prior private “conversations” about competitive intentions—then suggested some clarifications of the forms of communication implicit in that definition. For that purpose I pointed to cases that illustrate tacit agreement under the definition, identifying both standard examples (like *Foley*) and hybrid examples (like *Interstate Circuit*). Finally, I proposed a classification of communications among rivals based on their probative value in the inference of tacit agreement, depending upon whether the communications are public or

Duty Free Ams., Inc. v. Estée Lauder Cos., 946 F. Supp. 2d 1321, 1332 n.8 (S.D. Fla. 2013) (citing *Delta/AirTran*, 733 F. Supp. 2d at 1352–56). For a recent complaint identifying earnings calls as evidence of collusion, see Complaint ¶¶ 68–76, International Union of Operating Engineers Local 30 Benefits Fund v. Lannett Co., No. 16-cv-990, 2016 WL 821578 (E.D. Pa. Mar. 2, 2016) (alleging collusion in dramatic increases in prices of generic drugs; citing, among other sources, statements during earnings calls in which defendants predicted stable pricing and reduced competition for market share). *But cf.* Credit Bureau Servs. v. Experian Info. Sols., Inc., No. 12-61360-CIV, 2012 WL 6102068, at *17–18 (S.D. Fla. Dec. 7, 2012) (concluding that statements in earnings call and memoranda did not plausibly propose the alleged agreement to put small resellers out of business; instead, they suggested only the legitimate need to promote greater data security).

²¹⁵ *Delta/AirTran*, 733 F. Supp. 2d at 1362. The FTC has found that these sorts of statements can amount to an invitation to collude in violation of Section 5 of the Federal Trade Commission Act. See also Analysis of Agreement Containing Consent Order to Aid Public Comment, U-Haul Int’l, Inc., 75 Fed. Reg. 35,033, 35,034 & n.3 (June 9, 2010) (describing allegations that U-Haul announced during an earnings call that it had raised rates and suggested that Budget’s failure to match the price increases, within 3–5%, would be unfortunate and would require U-Haul to cut its rates to maintain market share). *Cf.* Liu v. Amerco, 677 F.3d 489, 494 (1st Cir. 2012) (holding the same conduct could support a private right of action for damages under a Massachusetts statute that “parallels” the Federal Trade Commission Act).

²¹⁶ See *Delta/AirTran*, 733 F. Supp. 2d at 1356 (quoting the complaint’s allegation that “instead of refraining from implementing a first-bag fee (Delta had said in July that it would not plan to implement the fee, notwithstanding the Northwest merger), Delta announced on November 5, 2008—less than two weeks after AirTran’s statement that it would prefer to be a follower’ on the first-bag fee—that Delta would begin charging passengers a \$15 first-bag fee, effective December 5, 2008.”).

private, and whether they relate to present or future conduct. Both the clarified definition and the classification of categories of evidence of communications will, I hope, assist litigants and courts in resolving issues of agreement at every stage of Section 1 litigation.

