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Communication and Concerted Action

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ABSTRACT

It is a familiar scenario in U.S. antitrust litigation: The plaintiffs allege that a pattern of identical pricing (or refusals to deal) is "concerted" and therefore per se illegal; the defendant responds that the practice is merely "consciously parallel" or "interdependent" and therefore legal. Under U.S. law, to avoid summary judgment or judgment as a matter of law, a plaintiff must produce a "plus factor," evidence that "tends to exclude the possibility" that the defendants' actions were merely interdependent. Courts have identified various plus factors—for example, evidence that the alleged conduct was against the defendant's interest unless it was pursuant to an agreement—but they have been notably vague about what exactly constitutes concerted action. Obviously, the Sherman Act does not require the plaintiff to prove that the defendants formed a legally enforceable contract—the Sherman Act, after all, makes agreements illegal and therefore unenforceable. But beyond that, the law tells us little. Courts still quote the Supreme Court's sixty-year-old formulation that a Sherman Act agreement requires only "a unity of purpose, a common design and understanding, or a meeting of the minds." Unfortunately, however, this language could easily be interpreted to condemn conscious parallelism.

In this article, I argue that concerted action should be defined to require communication among rivals. I begin by describing the development of the distinction in law and theory between consciously parallel and concerted action. I then show that the received definitions of concerted action leave courts and especially juries with inadequate guidance. Economic expert testimony does not fill the void, because

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economic theory does not distinguish concerted and interdependent conduct. I propose, building on the recent work of Oliver Black,[1] that the distinguishing characteristic of concerted action is communication among rivals, not only of intentions, but also of the firms' reliance on their rivals' actions in choosing a common course of action. I argue that the proposed definition has implications for U.S. antitrust law. First, it is at least consistent with the older Supreme Court cases. Second, it helps us evaluate whether various public announcements or private communications justify the inference that parallel conduct is concerted. Finally, courts applying the standard plus-factors analysis in recent years have implicitly required something like the communications in the proposed definition, even though they continue nominally to apply the received nebulous definitions.

Including communication in the definition of concerted action would have limited consequences. Communication is itself an ambiguous term that requires clarification. Even if it can be defined with reasonable clarity, courts will still be required to determine whether proven communications satisfy the definition. Moreover, plaintiffs would not necessarily be required to produce direct evidence of communications that meet the definition, so long as they can offer circumstantial evidence that would permit an inference that the requisite communications have occurred. Thus, the problem of inferring an agreement from ambiguous evidence, including communications of various kinds, will remain under the proposal. But at least courts, juries, and litigants will know better what they are supposed to be inferring.

1. OLIVER BLACK, CONCEPTUAL FOUNDATIONS OF ANTITRUST (2005).

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I. INTRODUCTION

For modern enforcement officials and all but a few scholars,[2] the primary goal of antitrust policy is to penalize cartels and to inhibit their formation.[3] Even as the per se rule wanes for other practices,[4] it remains in full force in cases involving garden-variety price-fixing.[5] But to fall within the per se rule, coordinated pricing must be the result of a "contract, combination . . . , or conspiracy."[6] Unlike acts of monopolization under section 2 of the Sherman Antitrust Act, which may, but need not, involve a conspiracy, restraints of trade like coordinated pricing are only illegal under section 1 if they are the product of an agreement. The most challenging issues in interpreting the agreement requirement in modern antitrust law arise in cases alleging that oligopolists' parallel price changes or refusals to deal are concerted. Courts have long recognized that parallel conduct, even if undertaken with full awareness of rivals' likely responses, does not necessarily entail an agreement.

Since the Supreme Court's decision in *Matsushita*[7] twenty years ago, courts have addressed the issue of agreement primarily in the context of

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2. LESTER TELSER, THE THEORY OF COOPERATION AND COMPETITION (1987); Donald Dewey, *Information, Entry, and Welfare: The Case for Collusion*, 69 AM. ECON. REV. 587 (1979); George Bittlingmayer, *Price-Fixing and the* Addyston Pipe *Case*, in 5 RES. L. & ECON. 57, 57–58 (1983).

3. *See* ROBERT BORK, THE ANTITRUST PARADOX 263 (1978) ("The subject of cartels lies at the center of antitrust policy."); Richard A. Posner, *A Program for the Antitrust Division*, 38 U. CHI. L. REV. 500, 529 (1971) ("The cartel . . . carries within it the seeds of its own destruction."). *See also* John E. Lopatka & William H. Page, *Posner's* Program for the Antitrust Division: *A Twenty-Five Year Perspective*, 48 SMU L. REV. 1713 (1995) (re-evaluating antitrust perspectives twenty-five years after Posner's article).

4. *See, e.g.*, Cal. Dental Ass'n v. FTC, 526 U.S. 756 (1999) (refusing to apply a quick look rule of reason analysis to a dental association's rules limiting advertising, even though the rule prevented members from engaging in certain forms of price advertising and making claims of quality).

5. *See, e.g.*, Catalano, Inc. v. Target Sales, Inc., 446 U.S. 643 (1980) (holding per se illegal an agreement among beer wholesalers to eliminate free-credit sales). Where there is testimonial evidence of a clear cartel agreement, the Department of Justice will proceed against the members criminally and those injured by the cartel may follow with civil suits seeking treble damages. United States v. Taubman, 297 F.3d 161, 166 (2d Cir. 2002); United States v. Andreas, 216 F.3d 645, 645 (7th Cir. 2000); United States v. MMR Corp., 907 F.2d 489, 495 (5th Cir. 1990).

6. Courts have not distinguished among the three statutory terms, treating all three as denoting the same concept of concerted action. *See, e.g.*, 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."); *In re* Baby Food Antitrust Litig., 166 F.3d 112, 117 n.3 (3d Cir. 1999) ("The phrase 'concerted action' is often used as shorthand for any form of activity meeting the Section I 'contract . combination or conspiracy' requirement.").

7. Matsushita Elec. Indus. Co. v. Zenith Radio Corp., 475 U.S. 574 (1986).

the plaintiff's burden of production, the obligation to produce sufficient evidence to raise a genuine issue of fact for the jury.[8] To avoid summary judgment or judgment as a matter of law at trial, plaintiffs must introduce not only evidence that the defendants' actions were consciously parallel, but also something more: a "plus factor," evidence that tends to exclude the possibility that the defendant's actions were merely interdependent. This focus on the issue of evidentiary sufficiency to create a jury issue, however, has left the more fundamental question of what actually constitutes concerted action less examined. Courts still quote definitions of agreement that long antedate *Matsushita* and that fail to distinguish interdependent and concerted action. In this article, I propose a clarified definition, one that requires communication among rivals.

In Part II, I briefly recount the development of the distinction in law and theory between consciously parallel and concerted action. In Part III, I argue that the received explanations of the distinction are unnecessarily vague, leaving courts and especially juries with inadequate guidance in their respective roles. In Part IV, I examine conceptual analyses of concerted action in hopes of extracting a usable definition. That review leads me to propose, building on the recent work of Oliver Black,[9] that the distinguishing characteristic of concerted action is communication among rivals, not only of intentions, but also of the firms' reliance on their rivals' actions in choosing a common course of action. In Part V, I clarify some aspects of the model, using examples from American law. I then show that courts applying the post-*Matsushita* plus-factors analysis have implicitly adopted a definition of concerted action that requires something like the proposed one, even though they continue to quote the received formulations.

Including communication in the definition of concerted action will not condemn communications among rivals that do not convey the requisite information; nor will it require the plaintiff to produce evidence of specific communications, so long as there is circumstantial evidence that would permit an inference that the requisite communications have occurred. Thus, the problem of inferring an agreement from ambiguous evidence, including communications of various kinds, will remain under the proposal.[10] Moreover,

8. *See infra* Part II.

9. BLACK, *supra* note 1.

10. Roger D. Blair & Jill Boylston Herndon, *Ambiguous Is Still Ambiguous*, 17 ANTITRUST 48, 48 (Spring 2003).

communication is itself an ambiguous term that requires interpretation. Nevertheless, if the term is clarified it can provide better guidance to courts, juries, and businesses in these difficult cases.

II. CONSCIOUS PARALLELISM AND CONCERTED ACTION

Courts have drawn the line between consciously parallel and concerted conduct entirely through the common law process. The Sherman Act, which requires a "contract, combination . . . or conspiracy," gives them no guidance, perhaps because Congress in 1890 could not have foreseen the possibility of tacit collusion, as conscious parallelism is sometimes called. The combinations that provoked the passage of the Sherman Act included "close-knit" entities like the trusts and holding companies as well as "loose-knit" combinations such as simple (or "gentlemen's") agreements, pools, and cartels.[11]

Whether these and similar arrangements were unlawful depended on whether they constituted restraints of trade or whether they were unreasonable, but no one would have suggested they did not constitute agreements. Many early cartels featured formal charters, spelling out the obligations of members and providing for committees to ensure enforcement.[12] According to the *laissez-faire* ideology espoused by many economists and social theorists of that era, cartels would inevitably fail regardless of the existence of a detailed agreement so long as the government did nothing to enforce them or to block entry.[13] In enacting the Sherman Act, Congress rejected the pure *laissez-faire* view by providing civil and criminal penalties as added assurance that cartels would never form or would easily dissolve.[14] But nineteenth century legislators would probably not have given much credence to the notion that firms could coordinate their prices without a detailed agreement.

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11. HANS B. THORELLI, THE FEDERAL ANTITRUST POLICY: ORIGINATION OF AN AMERICAN TRADITION 72–85 (1954). For a discussion of the inner workings of a variety of cartels, see Christopher R. Leslie, *Trust, Distrust, and Antitrust*, 82 TEX. L. REV. 515 (2004).

12. *See, e.g.*, United States v. Trans-Missouri Freight Ass'n, 166 U.S. 290, 292–97 (1897) (providing an example of a formal cartel agreement); United States v. Addyston Pipe & Steel Co., 85 F. 271, 273–75 (6th Cir. 1898), *aff'd* 175 U.S. 211 (1899) (providing the text of such an agreement).

13. *See, e.g.*, United States v. Nelson, 52 F. 646, 647 (D. Minn. 1892) ("While it may be true that some of the other dealers might attempt to induce purchasers to be governed by the price fixed in their locality by the parties to the agreement, and try to keep up prices, yet competition in the commodity would soon bring the price down, unless there were fraudulent or coercive means resorted to for the purpose of restraining other dealers."). *See generally* William H. Page, *Ideological Conflict and the Origins of Antitrust Policy*, 66 TUL. L. REV. 1 (1991).

14. Page, *supra* note 13, at 37.

Economics has recognized for decades, however, that in some circumstances oligopolists may reach or maintain prices above marginal cost by recognizing each other's likely responses to competitive moves.[15] As Edward Chamberlin put the point, "When a move by one seller evidently forces the other to make a counter move, he is very stupidly refusing to look further than his nose if he proceeds on the assumption that it will not."[16] Dennis Carlton, Robert Gertner, and Andrew Rosenfield[17] illustrate the same idea by hypothesizing two gas stations with identical facilities in a small town, located at the same intersection, and selling at prices posted on conspicuous signs. "One likely outcome of 'competition'" in such a market, according to the authors,

> is that each station will charge the price that maximizes joint profits—the same price they would charge if they could merge. Neither gasoline station has an incentive to cut price below the monopoly level. Each realizes that it cannot steal customers from its competitor before its competitor can respond. And the competitor *will* respond because it is more profitable to match the price cut and share the market at a lower price than to permit the price-cutting station to steal market share. Each station should rationally anticipate immediate matching and, therefore, not cut price in the first instance. Cooperative pricing is thus a logical outcome of the 'game' without any secret meetings or additional communication. If for some reason the joint profit-maximizing price were to rise, one station could raise price. Although the other station likes getting all the business, it should know that if it does not raise price to its competitor's level, the competitor will surely lower price very soon. Thus, it should even be possible to coordinate a price increase in this setting.[18]

This scenario assumes that the firms are safe from entry and instantly know each other's posted prices, which are invariably the transaction

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15. *See, e.g.*, EDWARD H. CHAMBERLIN, THE THEORY OF MONOPOLISTIC COMPETITION: A RE-ORIENTATION OF THE THEORY OF VALUE ch. 3 (6th ed. 1948) (discussing oligopolists' direct and indirect influences on each others' pricing decisions). *See also* DENNIS W. CARLTON & JEFFREY M. PERLOFF, MODERN INDUSTRIAL ORGANIZATION ch. 6 (3d ed. 2000) (describing game theoretic models of noncooperative oligopoly); Gregory J. Werden, *Economic Evidence on the Existence of Collusion: Reconciling Antitrust Law With Oligopoly Theory*, 71 ANTITRUST L.J. 719, 720–34 (2004) (surveying oligopoly theory).

16. CHAMBERLIN, *supra* note 15, at 46.

17. Dennis W. Carlton, Robert H. Gertner & Andrew M. Rosenfield, *Communication Among Competitors: Game Theory and Antitrust*, 5 GEO. MASON L. REV. 423 (1997).

18. *Id.* at 428–29. For discussion of a similar hypothetical, see HERBERT HOVENKAMP, THE ANTITRUST ENTERPRISE: PRINCIPLE AND EXECUTION 128 (2005). *See also* Stuart D. Gurrea & Bruce M. Owen, *Coordinated Interaction and Clayton § 7 Enforcement*, 12 GEO. MASON L. REV. 89, 97 (2003) (game theory confirms that rivals can "recognize the possibility of outcomes above the competitive level and are able to implement them without any express agreement").

prices. In real-world markets, of course, many other factors may make coordination more difficult. Product differentiation will complicate coordination on prices and outputs. Lack of information about rivals' transaction prices will foster cheating because sellers will have an incentive to chisel if they can do so without immediate detection. Power buyers will try to negotiate discounts in return for big orders. Even if rivals can control cheating, supracompetitive prices may attract unruly new entrants. These conditions might require the firms to engage in "secret meetings or additional communication" to coordinate prices. Nevertheless, even in real-world markets, firms may sometimes charge supracompetitive prices by, for example, using independently adopted practices that can facilitate parallel outcomes.[19] Conduct in these circumstances—termed oligopolistic interdependence, tacit collusion, or conscious parallelism[20]—is undoubtedly noncompetitive in economic terms. How frequently it actually occurs is not clear.

Scholars have differed over whether interdependent conduct constitutes illegal price fixing. Donald Turner argued that interdependent conduct should not be characterized as an illegal agreement[21] because oligopolists rationally take account of competitors' likely responses to their action[22] and cannot sensibly be ordered not to do so.[23] Instead, according to Turner, the law should pursue a policy of deconcentration of oligopolies that are prone to interdependent pricing.

Richard Posner argued as a law professor, however, that interdependence should be illegal in some circumstances[24] because it involves voluntary choices and is remediable by damages in the case of simple interdependence[25] and by injunction in the case of parallel use of

19. *See, e.g.*, CARLTON & PERLOFF, *supra* note 15, at 136–41.

20. Conscious parallelism, or tacit collusion, is the "process, not 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." Brooke Group, Ltd. v. Brown & Williamson Tobacco Corp., 509 U.S. 209, 227 (1993).

21. Donald F. Turner, *The Definition of Agreement Under the Sherman Act: Conscious Parallelism and Refusals to Deal*, 75 HARV. L. REV. 655, 671 (1962). *See generally* John E. Lopatka, *Solving the Oligopoly Problem: Turner's Try*, 41 ANTITRUST BULL. 843 (1996).

22. Turner, *supra* note 21, at 665. *See also* CHAMBERLIN, *supra* note 15, at 31 ("Each is forced by the situation to take into account the policy of his rival in determining his own, and this cannot be construed as a 'tacit agreement' between the two."); Werden, *supra* note 15, at 726 ("Not much is gained by trying to force a group of oligopolists to behave as if they were not aware of their individual influence on each other's policies.") (quoting WILLIAM FELLNER, COMPETITION AMONG THE FEW 309–10 (1949)).

23. Turner, *supra* note 21, at 669. Turner would have allowed injunctions against practices that facilitated coordination. *Id.* at 675–76.

24. POSNER, *supra* note 6, at 94–95.

25. *Id.* at 97–98.

facilitating devices.[26] Posner drew on George Stigler's theory of oligopoly, which treats oligopoly as a special case of the theory of cartels.[27] Under that theory, rivals maximize industry profit by jointly charging a monopoly price, but individual firms have strong incentives to cheat by expanding output and shading price in order to increase their share of sales. Under this view, the same instabilities that confront cartels also confront firms seeking to maintain prices by tacit means. Thus, in many instances, even oligopolists will be unable to maintain noncompetitive prices without mechanisms that permit enforcement. Where a court can identify and enjoin these enforcement and detection mechanisms, it can thwart the operation of the cartel. In other cases, it can penalize rivals' decisions not to cheat.

Since *Matsushita*, the courts have essentially settled on Turner's approach, but that outcome was not always so clear. Early Supreme Court decisions[28] suggested that "courts would characterize as concerted action interfirm coordination realized by means other than a direct exchange of assurances."[29] All that was required was "a unity of purpose, a common design and understanding, or a meeting of the minds."[30] In its 1954 decision in *Theatre Enterprises*, the Court drew a limit, holding that "'conscious parallelism' has not yet read conspiracy out of the Sherman Act entirely."[31] But that case held only that evidence of consciously parallel conduct did not, by itself, warrant judgment as a matter of law for the plaintiff where there were independent justifications for the defendants' actions.[32] The Court suggested in 1968 that consciously parallel conduct could raise a jury issue of agreement so long as the defendants did not produce evidence

26. *Id.* at 92 (arguing that evidence that the sellers agreed to establish a basing-point system should be "unnecessary to establish a violation of the Sherman Act").

27. George J. Stigler, *A Theory of Oligopoly*, 72 J. POL. ECON. 44 (1964).

28. *See* United States v. Paramount Pictures, Inc., 334 U.S. 131, 142 (1948) ("[The conspiracy] was inferred from the pattern of price-fixing disclosed in the record. We think there was adequate foundation for it too. It is not necessary to find an express agreement in order to find a conspiracy. It is enough that a concert of action is contemplated and that the defendants conformed to the arrangement."); Am. Tobacco Co. v. United States, 328 U.S. 781, 809 (1946) ("No formal agreement is necessary to constitute an unlawful conspiracy."); Interstate Circuit, Inc. v. United States, 306 U.S. 208, 226 (1939) (An express agreement was not necessary to show a conspiracy when the participants knew about and adhered to the scheme).

29. William E. Kovacic, *Antitrust Policy and Horizontal Collusion in the 21st Century*, 9 LOY. CONSUMER L. REV. 97, 100 (1997).

30. *Am. Tobacco*, 328 U.S. at 810.

31. Theatre Enter., Inc. v. Paramount Film Distrib. Corp., 346 U.S. 537, 541 (1954).

32. *Id.* at 541–42 (holding that defendant's evidence (e.g., of "local conditions surrounding the [plaintiff's] operation which, they contended, precluded it from being a successful first-run house") "raised fact issues requiring the trial judge to submit the issue of conspiracy to the jury").

that they had no motive for joint action.[33] During the late 1970s and early 1980s, the federal enforcement agencies relied on Posner's analysis of oligopoly to argue for extending the Sherman Act and the Federal Trade Commission Act to condemn interdependent conduct, but the courts were unreceptive.[34]

Matsushita clarified the law by holding that "to survive a motion for summary judgment or for a directed verdict, a plaintiff seeking damages for a violation of § 1 must present evidence 'that tends to exclude the possibility' that the alleged conspirators acted independently."[35] The lower courts have interpreted *Matsushita* to require plaintiffs to produce evidence that "tend[s] to exclude the possibility that the defendants merely were engaged in lawful conscious parallelism."[36] To visualize what this requirement means: imagine two intersecting circles, one representing evidence consistent with independent action and one representing evidence consistent with concerted action.[37] Evidence of consciously parallel conduct is consistent both with independent action and with concerted action and thus lies in the intersection of these sets. That category of evidence is insufficient to carry the plaintiff's burden of production under *Matsushita*. The plaintiff must produce evidence consistent *only* with concerted action—evidence in the concerted action circle, but *not* the independent action circle.[38] The lower courts call this sort of evidence a plus factor.

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33. First Nat'l Bank v. Cities Serv. Co., 391 U.S. 253, 289 (1968) ("Essentially all that the lower courts held in this case was that [FED. R. CIV. P.] 56(e) placed upon [plaintiff] the burden of producing evidence of the conspiracy he alleged only after respondent Cities Service conclusively showed that the facts upon which he relied to support his allegation were not susceptible of the interpretation which he sought to give them. That holding was correct."). In that era, summary judgment (for defendants) was disfavored in antitrust litigation, including cases alleging concerted action. *See* William H. Page, *The Chicago School and the Evolution of Antitrust: Characterization, Antitrust Injury, and Evidentiary Sufficiency*, 75 VA. L. REV. 1221, 1284–85 (1989).

34. *See* Lopatka & Page, *supra* note 3, at 1718–19 (describing the Antitrust Division and the FTC's attempts to persuade courts of Posner's position).

35. Matsushita Elec. Indus. Co. v. Zenith Radio Corp., 475 U.S. 574, 588 (1986). For recent discussion, see Nickolai G. Levin, *The Nomos and Narrative of* Matsushita, 73 FORDHAM L. REV. 1627 (2005).

36. City of Tuscaloosa v. Harcros Chems., Inc., 158 F.3d 548, 571 n.35 (11th Cir. 1998).

37. For a diagram illustrating this point, see 2 JOSEPH P. BAUER & WILLIAM H. PAGE, KINTER FEDERAL ANTITRUST LAW 59 (2d ed. 2002).

38. Some courts have suggested that evidence in "equipoise" does not create a jury issue. *Harcros*, 158 F.3d at 569 (holding that where "circumstantial documentary evidence is in equipoise summary judgment against the plaintiffs would be in order"). Of course the plaintiff need only introduce evidence that *tends* to exclude the possibility of independent action. If the evidence actually excluded independent action, the plaintiff would be entitled to summary judgment.

As courts and commentators have long recognized, *Matsushita* was not a typical cartel case because the plaintiffs alleged a conspiracy to charge *predatory* prices in the United States. The Court thought it necessary to "limit[] the range of permissible inferences from ambiguous evidence"[39] in part because the alleged conspiracy was "implausible"[40] and in part because allowing the jury to infer agreement in such a case would deter price cutting, which is "the very essence of competition."[41] Those considerations do not necessarily apply to the usual case alleging that firms conspired to raise prices and restrict output. Such a strategy "makes perfect economic sense"[42] to profit-maximizing firms. Moreover, raising prices and restricting output below competitive levels is not necessarily the essence of competition.[43] Thus, lower courts have acknowledged that there may be less reason in cases alleging ordinary cartel behavior to impose strict limitations on the range of permissible inferences from ambiguous evidence.[44]

Even courts that recognize these distinctions, however, still require that the plaintiff produce evidence that tends to exclude the inference of interdependent oligopolistic behavior.[45] First of all, a cartel explanation for parallel conduct can be implausible in some circumstances. For example, one court held that an allegation that wholesale prices increased because of concerted action after one firm's drastic price cut was less plausible where the prices during most of the alleged conspiracy period were lower and rose more slowly than in a competitive period preceding the alleged conspiracy[46] and where the firms greatly increased retail promotional expenditures.[47] Even though a strategy of cartelization can be rational, the evidence must give rise to

39. *Matsushita*, 475 U.S. at 588.

40. *Id.* at 593.

41. *Id.* at 594.

42. Petruzzi's IGA Supermarkets, Inc. v. Darling-Del. Co., 998 F.2d 1224, 1232 (3d Cir. 1993); *In re* Flat Glass Antitrust Litig., 385 F.3d 350, 358 (3d Cir. 2004) ("Here, like in *Petruzzi's,* plaintiffs' theory of conspiracy—an agreement among oligopolists to fix prices at a *supra*competitive level—makes perfect economic sense [and] absent increases in marginal cost or demand, raising prices generally does not approximate—and cannot be mistaken as—competitive conduct."). *See also* Champagne Metals v. Ken-Mac Metals, Inc., 458 F.3d 1073, 1087 (10th Cir. 2006) (holding that it was "certainly economically rational for a group of established firms to attempt to keep an aggressive competitor out of the market, whether they are doing so to protect profits or simply to guard market share," and that, consequently "the district court erred in drawing such limited inferences from Champagne's circumstantial evidence").

43. *Petruzzi's*, 998 F.2d at 1232.

44. *Id.*; *Flat Glass*, 385 F.3d at 358.

45. *Flat Glass*, 385 F.3d at 358.

46. Williamson Oil Co., Inc. v. Philip Morris USA, 346 F.3d 1287, 1320 (11th Cir. 2003).

47. *Id.* at 1320–21.

a reasonable inference that the defendants have actually pursued the strategy rather than acted interdependently. More important, in many instances, the actions on which plaintiffs rely to prove conspiracy have procompetitive justifications.[48] Thus, the Supreme Court's concerns about deterring procompetitive conduct will often play a role in the inference of conspiracy based on actions that are apparently beneficial to consumers.

After *Matsushita*, the lower courts have required plaintiffs to produce a plus factor to avoid summary judgment.[49] The term "plus factor," which long predates *Matsushita*,[50] has been used to describe a broad array of types of evidence that, together with interdependent conduct, might contribute to an inference of agreement.[51] The term is now most often used, however, as a conclusory label to describe evidence that actually satisfies the plaintiff's burden of production.[52] Plaintiffs can

48. In *Ethyl*, for example, the court refused to enjoin the use of practices, such as price protection clauses and delivered pricing, that facilitated price stability. E.I. du Pont de Nemours & Co. v. FTC, 729 F.2d 128, 141–42 (2d Cir. 1984). The court pointed out that the practices arose at a time when there was only a single firm in the market, and thus must have had competitive benefits that consumers wanted. *Id.* at 133–34. To allow the practices would deter firms from making choices that were arguably in the interests of consumers. *Id.* at 140. Consider Carlton's gas station hypothetical, described in Part II. Coordination of prices would be more difficult if the stations did not post their prices on large signs. Consequently, if a jury could infer concerted action in those circumstances, a court might choose to remedy it by ordering the stations to post prices only on the pumps. Courts would be unlikely to issue such an order, however, because it would obviously also increase consumers' search costs and inhibit any future rivalry that might develop.

49. *See, e.g.*, Blomkest Fertilizer, Inc. v. Potash Corp. of Sask., 203 F.3d 1028, 1032–34 (8th Cir. 2000) (holding that the plaintiff "has the burden to present evidence of consciously paralleled pricing supplemented with one or more plus factors," and granting defendant summary judgment because plaintiff did not meet its burden).

50. *See, e.g.*, C-O-Two Fire Equip. Co. v. United States, 197 F.2d 489, 493, 497 (9th Cir. 1952) (examining a series of "plus factors").

51. *See, e.g.*, William E. Kovacic, *The Identification and Proof of Horizontal Agreements Under the Antitrust Laws*, 38 ANTITRUST BULL. 5, 35 (1993) (observing that courts rarely rank plus factors or "specify the minimum critical mass of plus factors that must be established to sustain an inference" of collusion). Kovacic identifies as plus factors in this broader sense "[e]xistence of a rational motive for defendants to behave collectively," "[a]ctions contrary to the defendant's self-interest unless pursued as part of a collective plan," "[m]arket phenomena that cannot be explained rationally except as the product of concerted action," "[d]efendant's record of past collusion-related antitrust violations," "[e]vidence of interfirm meetings and other forms of direct communications among alleged conspirators," "[d]efendant's use of facilitating practices," "[i]ndustry structure characteristics that complicate or facilitate the avoidance of competition," and "[i]ndustry performance factors that suggest or rebut an inference of horizontal collaboration." *Id.* at 37–55.

52. City of Tuscaloosa v. Harcros Chems., Inc., 158 F.3d 548, 572, 571 n.35, 572 (11th Cir. 1998) (describing plus factors as "necessary," and stating that plaintiff must show plus factors "tending to exclude the possibility of lawful action"). *See also In re* Baby Food Antitrust Litig., 166 F.3d 112, 122 (3d Cir. 1999) ("The simple term 'plus factors' refers to 'the additional facts or factors required to be proved as a prerequisite to finding that parallel action amounts to a

establish a plus factor by pointing to a constellation of pieces of evidence that, taken as a whole, create the necessary inference. Even after *Matsushita*, courts continue to recognize the principle of *Continental Ore* that courts should not "compartmentaliz[e] the various factual components [of the plaintiffs' case] and wip[e] the slate clean of scrutiny of each."[53] Nevertheless, each component must have some tendency to support the inference of concerted action.[54]

Under these decisions, were a case like *Theatre Enterprises* filed today, the defendants would certainly be entitled to summary judgment because their parallel actions had independent justifications.[55] But the same result would follow even if there were no justification, so long as the evidence did not establish a plus factor. Thus, in a case like Carlton, Gertner, and Rosenfield's hypothetical scenario, in which oligopolists are able to coordinate a price increase based solely on their public price announcements, summary judgment for the defendants would also follow.

III. THE INADEQUACY OF PRESENT DEFINITIONS OF CONCERTED ACTION

The plus factors approach I have just described has narrowed the category of cases involving alleged conscious parallelism that will be allowed to go to the jury. But it has left uncertain, or at least unexpressed, exactly what it is that distinguishes consciously parallel conduct from concerted action. Courts must rely on antiquated statements of the definition that fail to make the crucial distinction between consciously parallel and concerted practices. To make matters worse, economic theory provides no standards for making the distinction. This remarkable ambiguity at the heart of antitrust law is problematic. It makes the plus factors inquiry less certain and, for those cases that reach the jury, it leaves the jurors with no guidance in evaluating the evidence the court has determined constitutes a plus factor.

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conspiracy.'" (citation omitted)); *cf. Blomkest*, 203 F.3d at 1043 (Gibson, J., dissenting) ("[I]t is useful to distinguish between 'plus factors' that establish a background making conspiracy likely and 'plus factors' that tend to exclude the possibility that the defendants acted without agreement.").

53. Continental Ore Co. v. Union Carbide & Carbon Corp., 370 U.S. 690, 699 (1962).

54. *See, e.g., In re* High Fructose Corn Syrup Antitrust Litig., 295 F.3d 651, 655 (7th Cir. 2002) (recognizing that "zero plus zero equals zero").

55. One lower court, following *Matsushita*, has even suggested that in "antitrust cases summary judgment is particularly favored because of the concern that protracted litigation will chill procompetitive market forces." PepsiCo, Inc. v. Coca-Cola Co., 315 F.3d 101, 104 (2d Cir. 2002).

A. Legal Formulations

One court has suggested that concerted action is "a term of art in the context of the Sherman Act; it cannot be understood as it might be in ordinary parlance, to reach any and all forms of joint activity by two or more persons."[56] If concerted action is a term of art, however, one would expect the courts to explain to jurors just how the meaning of concerted action in antitrust parlance differs from our ordinary understanding of the term. But they do not. On the contrary, courts continue to define concerted action by quoting some version of the Supreme Court's sixty-year-old definition of agreement as "a unity of purpose or a common design and understanding, or a meeting of minds."[57] This definition and the related formulation of "a conscious commitment to a common scheme"[58] tell us (and jurors) little. Unity of purpose, common design, and common scheme seem to mean the same thing, that rivals act the same way with the same goal; "common . . . understanding" and "conscious commitment" also seem to mean the same thing, that rivals know they all have the same goal. A "meeting of the minds" would also seem to refer to the rivals' knowledge of a common goal.[59] The Court has also informed us that a Sherman Act agreement need not involve an "explicit agreement,"[60] an "express agreement,"[61] a "formal agreement,"[62] or "letters, agreements, or other testimonials to a conspiracy."[63]

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56. Virginia Vermiculite, Ltd. v. Historic Green Springs, Inc., 307 F.3d 277, 281–82 (4th Cir. 2002).

57. Am. Tobacco Co. v. United States, 328 U.S. 781, 810 (1946). These phrases reappear repeatedly in the cases, not always with attribution to *American Tobacco*. *See, e.g.*, *In re* Flat Glass Antitrust Litig., 385 F.3d 350, 357 (3d Cir. 2004) (referring to the words used in *American Tobacco*, and adding that there also must be "a conscious commitment to a common scheme") (citations and internal quotations omitted); Transcript of Jury Instructions at 2318, *In re* High Pressure Laminates Antitrust Litig., 00 MDL 1368 (CLB), 2006 WL 931692 (S.D.N.Y. Apr. 7, 2006) [hereinafter Laminates Transcript], *available at* http://www.abanet.org/antitrust/at-committees/at-trial/pdf/jury-instructions/DOC_00000027.pdf ("The required combination or conspiracy may be established by showing that the Defendant knowingly came to a common and mutual understanding with others to accomplish or attempt to accomplish an unlawful purpose together."); U.S. Football League v. Nat'l Football League, No. 84 Civil 7484 PLK, 1986 WL 10620, at *22 (S.D.N.Y. July 31, 1986) (instructing the jury that "what the plaintiffs must prove is that the members of the conspiracy, in some way, came to an agreement or mutual understanding to accomplish their purpose of achieving (*or* maintaining) a monopoly").

58. Monsanto Co. v. Spray-Rite Serv. Corp., 465 U.S. 752, 768 (1984); *In re Flat Glass*, 385 F.3d at 357 (citations and internal quotations omitted).

59. The Supreme Court could not have meant to incorporate any sort of technical meaning of this term from the law of contracts, which employs it to determine which arrangements to enforce, not which arrangements to condemn.

60. United States v. Gen. Motors Corp., 384 U.S. 127, 142–43 (1966).

61. United States v. Paramount Pictures, Inc., 334 U.S. 131, 142 (1948) ("It is enough that a concert of action is contemplated and that the defendants conformed to the arrangement.").

The primary flaw in all of these statements is that they fail to distinguish concerted from interdependent action, the most important function that the definition should serve in the horizontal context.[64] It would not distort "common design or understanding" (or any of the other phrases) to encompass simple price leadership, as in our gas station hypothetical. This failure is less surprising if we note that the most-often-quoted definition of agreement is from the Supreme Court's 1946 *American Tobacco* decision, which permitted an inference of conspiracy on the basis of a pattern of parallel price changes that appeared unjustified by demand and cost conditions.[65] The Court there went so far as to say that a "combination or conspiracy in violation of the Sherman Act may be found in a course of dealing or other circumstances as well as in an exchange of words."[66] Herbert Hovenkamp has recently described the case as "the high point of judicial recognition that collusion could be based on nonverbal or other tacit communication."[67] As one might expect, the Court framed a definition that could embrace conscious parallelism.

This lack of clarity can have a number of unfortunate consequences. First, it may foster a lack of clarity in pleading. A full discussion of this issue is beyond the scope of the present article, but a clearer definition

62. Am. Tobacco Co. v. United States, 328 U.S. 781, 809–10 (1946) (adding that "[o]ften crimes are a matter of the person accused," and evidence of a violation "may be found in a course of dealings or other circumstances as well as in any exchange of words").

63. Norfolk Monument Co. v. Woodlawn Mem'l Gardens, Inc., 394 U.S. 700, 703–04 (1969) (citing *Am. Tobacco*, 328 U.S. at 809, for the proposition that no formal agreement is necessary).

64. This point is made forcefully in Kovacic, *Horizontal Agreements*, *supra* note 51, at 24–25 (1993). Kovacic cites Jonathan B. Baker, *Two Sherman Act Section 1 Dilemmas: Parallel Pricing, the Oligopoly Problem, and Contemporary Economic Theory*, 38 ANTITRUST BULL. 143 (1993); Peter C. Carstensen, *Commentary: Reflections on Hay, Clark, and the Relationship of Economic Analysis and Policy to Rules of Antitrust Law*, 1983 WIS. L. REV. 953, 962 (1983); Dennis A. Yao & Susan S. DeSanti, *Game Theory and the Legal Analysis of Tacit Collusion*, 38 ANTITRUST BULL. 113, 115–21 (1993). *See also* Jonathan B. Baker, *Identifying Horizontal Price Fixing in the Electronic Marketplace*, 65 ANTITRUST L.J. 41, 47 (1996) (observing that "a court conscientiously applying these definitions would be led to mistakenly infer an agreement merely from the consciously parallel interaction among oligopolists"); Werden, *supra* note 15, at 777–78 ("One might reasonably find a 'meeting of minds' or a 'conscious commitment to a common scheme' in the equilibrium of every oligopoly model; in Nash, non-cooperative equilibrium, competitors' actions depend on the observed actions of their rivals.").

65. *Am. Tobacco*, 328 U.S. at 804–10.

66. *Id.* at 809–10. The Court may have meant only that it was reasonable to infer from the pattern of price changes that an agreement involving an exchange of words actually occurred, even if there was no specific evidence of an exchange of words. But many scholars at the time quite understandably read the court as defining conspiracy broadly to include coordination that did not involve an exchange of words. *See* Werden, *supra* note 15, at 742 n.100 (collecting sources).

67. Herbert Hovenkamp, *The Rationalization of Antitrust*, 116 HARV. L. REV. 917, 925 (2003) (reviewing RICHARD A. POSNER, ANTITRUST LAW (2d ed. 2001)).

of concerted action would appear to require plaintiffs to make corresponding allegations in the complaint to avoid dismissal.[68] Second, the lack of clarity in the definition of concerted action makes it less certain which questions will be submitted to the jury. If a plus factor is evidence that tends to exclude the possibility of independent action, the same evidence must also tend to confirm the likelihood of concerted action. Whether that burden will be met in a particular case must depend on the applicable definition of agreement. Where the definition is vague, this decision must be made casuistically on the basis of fact patterns that have passed or failed the test in earlier cases. There is much to be said for casuistry, which is the engine of the common law.[69] Courts may achieve a reasonable consistency using this sort of analysis. Moreover, courts can rely on unstated definitions while resolving cases casuistically. In fact, I argue in Part V that courts have implicitly adopted a more concrete understanding of the meaning of concerted action since *Matsushita* than most have been willing to spell out. Nevertheless, it is reasonable to think that greater consistency and better guidance to juries and businesses would follow if there were a clearer articulation of the idea of concerted action operating in the cases.

Third, if the court holds the evidence legally sufficient to raise a jury question, the vagueness of the definition of agreement leaves the jury with inadequate guidance to resolve the issue of liability. The ABA's

68. In Twombly v. Bell Atl. Corp., 425 F.3d 99 (2d Cir. 2005), *cert. granted,* 126 S. Ct. 2965 (2006), the court held that "pleading of facts indicating parallel conduct by the defendants can suffice to state a plausible claim of conspiracy" and "plus factors are not *required* to be pleaded to permit an antitrust claim based on parallel conduct to survive dismissal." *Id.* at 114. Under the definition of concerted action proposed in this article, the plaintiff would be required to allege communications among rivals, but not the details of the communications. *Twombly,* for example, approved another court's rejection of the contention that plaintiffs must allege "when [the conspiracy] conversations took place, how many occurred, who participated, where the conversations took place, [and] what topics were discussed as well as . . . meeting dates, meeting places and [names of] individuals employed by . . . [d]efendants who allegedly participated." *Id.* at 114 n.9 (internal quotation marks omitted) (citing *In re* Tableware Antitrust Litig., 363 F. Supp. 2d 1203, 1206 (N.D. Cal. 2005)). *Twombly* also suggested that it was not fatal that the plaintiff was unable to "identify specific instances of conspiratorial conduct or communications." *Id.* at 117. These results would not change under the proposal. It is not necessary, at least in a civil case, to identify specific conversations in order to infer that conversations took place. *See infra* Part V.C.1. (discussing *In re* High Fructose Corn Syrup Antitrust Litig., 295 F.3d 651 (7th Cir. 2002)).

69. Cass R. Sunstein, *Problems with Rules*, 83 CAL. L. REV. 953, 958 (1995) (arguing "that legal systems sometimes do and should abandon rules in favor of a form of *casuistry* [in which] 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"); *see also* CASS R. SUNSTEIN, LEGAL REASONING AND POLITICAL CONFLICT 121–35 (1996) (arguing against inflexible, generalized rules, and advocating casuistry and emphasis on particulars).

Model Jury Instructions in Civil Antitrust Cases,[70] which have recently been revised to reflect current case law, illustrate the problem. The model instructions define a conspiracy as an agreement,[71] which is present if "the parties knowingly worked together to accomplish a common purpose."[72] This statement, like the *American Tobacco* formulation, does not distinguish agreement from consciously parallel conduct in which the parties knowingly choose similar paths to accomplish a common goal such as sustaining supracompetitive prices. "Worked together" is of little use, because it could encompass interdependent actions; if it is interpreted to require more than interdependence, it merely restates the condition that the defendants' action be concerted, without indicating what about the action places it in that category. Other statements in the instruction appear to imply even more directly that conscious parallelism alone could constitute an agreement. A conspiracy can exist, according to the instruction, even if the parties never met or "directly stated what their object or purpose was . . . or the means by which they would accomplish their purpose."[73] Indeed, jurors are told, "The agreement itself may have been entirely unspoken."[74] These statements, although fully supported by the early cases, are potentially misleading after *Matsushita*.

There is a separate model instruction for cases involving parallel conduct, but it does not clarify this issue. It states that evidence of consciously parallel conduct is not enough to establish an agreement and that the plaintiff must offer evidence that "tends to exclude the possibility that the defendant acted independently."[75] The instruction

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70. ABA SECTION OF ANTITRUST LAW, MODEL JURY INSTRUCTIONS IN CIVIL ANTITRUST CASES, 2005 EDITION (2005) [hereinafter MODEL INSTRUCTIONS]. For related criticism of an earlier edition of this publication, see Phillip Areeda, *The Rule of Reason—A Catechism on Competition*, 55 ANTITRUST L.J. 571, 583–86 (1986).

71. MODEL INSTRUCTIONS, *supra* note 70, at B-2 ("A conspiracy is an agreement by two or more persons to accomplish some unlawful purpose or to accomplish a lawful purpose by unlawful means.").

72. *Id.* at B-3. *See also* Laminates Transcript, *supra* note 57, at 2320 ("An unlawful agreement may be shown if the proof establishes that [the defendants] knowingly worked together to accomplish a common illegal purpose.").

73. MODEL INSTRUCTIONS, *supra* note 70, at B-2 to B-3 (stating that all plaintiff must show to "prove that a conspiracy existed is that the alleged members of the conspiracy in some way came to an agreement to accomplish a common purpose").

74. *Id.* at B-3. *See also* Laminates Transcript, *supra* note 57, at 2318–19 (stating that an "agreement may be tacit and some of its elements may not be formally expressed"; that "the evidence doesn't have to show that its members entered into any express, formal or written agreement, or even that they met together, or that they directly stated what their object or purposes were, or the details of it, or the means by which they would accomplish their purpose;" and that the "agreement itself may be entirely unspoken").

75. MODEL INSTRUCTIONS, *supra* note 70, at B-8.

directs the court to identify for the jury the particular conduct that amounts to a plus factor, offering as an example evidence showing that the defendants' "parallel conduct is contrary to [their] independent business interests."[76] Again, these statements are supported by the law, but neither gives the jury guidance in deciding whether the evidence shows interdependent and concerted action.

Courts often mention evidence that is contrary to the defendant's individual interest as a plus factor.[77] This category is important because it dictates summary judgment in cases like *Theatre Enterprises* in which the evidence shows only parallel practices that firms have good reason to adopt regardless of what their rivals do.[78] But in cases in which the evidence shows firms have engaged in parallel practices without an independent justification, the "contrary to independent interest" formulation tells us little. In the gas station hypothetical, for example, the fact that one gas station follows another's price increase is not evidence that the action is "contrary to [its] independent business interests" because firms can legitimately take account of each other's actions. The action may be contrary to a firm's individual interest measured by short-run profit maximization, but entirely consistent with its "individual" interest, if the firm takes account of the likely responses of its rival.[79] Thus, as courts have recognized, the requirement that the defendant's actions not be in its independent self-interest usually only restates the requirement of interdependence.[80] Consequently, we need some other standard to know if evidence tends to exclude independent conduct.

Of course, under *Matsushita*, this ambiguity in the instructions would be harmless if the evidence only showed the price leadership scenario, because the jury would never hear it: the court would grant the defendants summary judgment or judgment as a matter of law. But let

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76. *Id.*

77. Kovacic, *Horizontal Agreements*, *supra* note 51, at 38–42.

78. Theatre Enters., Inc. v. Paramount Film Distrib. Corp., 346 U.S. 537, 541–42 (1954). *See also* Abraham v. Intermountain Health Care Inc., 461 F.3d 1249, 1261 (10th Cir. 2006) (affirming summary judgment for defendants because plaintiff optometrists failed to offer evidence that a managed care company's exclusion of them from its network was against its interest); *In re* Brand Name Prescription Drugs Antitrust Litig., 186 F.3d 781, 786 (7th Cir. 1999) (Posner, C.J.) (holding that parallel price discrimination was not sufficient to raise a jury question of agreement because the defendants had an incentive to engage in the practice unilaterally).

79. Williamson Oil Co. v. Philip Morris USA, 346 F.3d 1287, 1311 (11th Cir. 2003) (not following a rival's price increase "likely would have resulted in little if any market share gain [and] would have minimized profits, given that lower prices generate smaller revenues").

80. *In re* Flat Glass Antitrust Litig., 385 F.3d 350, 360 (3d Cir. 2004) (citing PHILLIP E. AREEDA & HERBERT HOVENKAMP, ANTITRUST LAW ¶ 1434(c)(1), at 245 (2d ed. 2000) and POSNER, *supra* note 6, at 100).

us suppose the court finds there is a plus factor and allows the case to go to the jury. In that case, the model instruction would inform the jurors that "if you conclude that the plaintiff has carried the burden of producing evidence that tends to exclude the possibility that certain defendants acted independently, then you must find for the plaintiff and against the defendant on the question of whether those defendants participated in the conspiracy."[81]

There are two problems with this instruction. First, it confuses the burden of production with the burden of persuasion. *Matsushita*'s "tends to exclude" formulation states only the plaintiff's burden of production, that is, what the plaintiff must produce to "survive a motion for summary judgment or for a directed verdict."[82] Even if the plaintiff carries that burden, the jury is free to disbelieve the evidence or to conclude that, on balance, the defendants did not agree. It would be formally correct to instruct the jury that it must find for the plaintiff if it concludes that the plaintiff proved by a preponderance of the evidence that the defendants had not acted independently.[83] But even that statement would not correct the second and more fundamental flaw in the instruction: it does not define agreement other than tautologically as the absence of independent action. The jury must not only infer what happened as factual matter, it must also determine whether what happened amounted to an agreement. The instruction gives the jury little guidance on this critical function—understandably so, because the law itself provides little guidance.

B. Economic Expert Testimony

Nor can economic testimony assist the jury on the ultimate issue of agreement. Economic evidence may establish the conditions of interdependence and may exclude variables that might provide independent justifications for the defendants' actions. Economic experts may testify to issues such as market definition and damages even though those are ultimate issues in many cases. For those issues, the expert is qualified to testify to every aspect of the issue, because there is no gap between the legal and economic concepts involved in

81. MODEL INSTRUCTIONS, *supra* note 70, at B-8 to B-9.

82. Matsushita Elec. Indus. Co. v. Zenith Radio Corp., 475 U.S. 574, 588 (1986).

83. *See, e.g.*, Laminates Transcript, *supra* note 57, at 2332 (reading the following question from the special verdict form that would be submitted to the jury: "Have Plaintiffs proved by a preponderance of the evidence that Defendant Wilsonart had an agreement or participated in a conspiracy with any other manufacturer of high pressure laminates, with the purpose of raising or maintaining the price of high pressure laminates sold in the United States, excluding Peninsula Florida?").

resolving them. On the ultimate issue of whether behavior is the result of a contract, combination, or conspiracy, however, courts routinely prevent economists from offering an opinion,[84] because economics has surprisingly little to say about this issue.

The same characteristics that predispose a market toward the formation of a cartel also predispose it toward interdependent behavior.[85] While the law distinguishes concerted and interdependent behavior, economic theory does not:[86] "formal economic theory tells us that any outcome that is possible with [cheap] talking is possible without it."[87] Game theory does model cooperative games in which the players can form coalitions.[88] But cooperation, in that context, means that the players' commitments are legally binding—an assumption that makes

84. Robert A. Milne & Jack E. Pace, *Conspiratologists at the Gate: The Scope of Expert Testimony on the Subject of Conspiracy in a Sherman Act Case*, 17 ANTITRUST 36, 39–42 (2003) (arguing experts should testify only to "relatively objective factors as whether there is an economic motive to conspire, whether the market structure is conducive to collusion, whether defendants' conduct is consistent with their non-interdependent business interests and the like"). Some argue economic experts should be allowed to testify to whether the defendant's actions are collusive in an economic sense. *See, e.g.*, Herbert Hovenkamp, *Economic Experts in Antitrust Cases*, *in* 3 MODERN SCIENTIFIC EVIDENCE: THE LAW AND SCIENCE OF EXPERT TESTIMONY 111, 141 (David L. Faigman, et al., eds. 2002) (stating that an expert should be permitted to testify that "a fact inference of agreement is warranted" by the economic evidence); Robert F. Lanzillotti & James T. McClave, *Comment: Meeting the "Ambiguity" Test Under* Daubert, 17 ANTITRUST 44, 45 (Spring 2003) (suggesting that an expert should be permitted to testify to the Bayesian "likelihood ratio" of collusion because their expertise can tell "whether the evidence was *more likely* to have been generated in a collusive than in a non-collusive market"); George J. Stigler, *What Does an Economist Know?*, 33 J. LEGAL EDUC. 311, 311–12 (1983) (arguing that an expert should be permitted to testify that economics suggests that defendants are "de facto members of a cartel"); all quoted and criticized in Milne & Pace, *supra*, at 38–39. The difficulty with all of these suggestions is that the jury would be likely to assume that the economist's definition is the same as the legal one. *See* Williamson Oil Co. v. Philip Morris USA, 346 F.3d 1287 (11th Cir. 2003) (excluding economic testimony of collusion that used a definition different from the legal one).

85. *See* MICHAEL D. WHINSTON, LECTURES ON ANTITRUST ECONOMICS 39–52 (2006) (discussing several structural and behavioral factors to consider when analyzing price-fixing conspiracies).

86. *Id.* at 20. *See also* Stigler, *supra* note 84, at 312 ("There is no established economic content to words such as 'collusion,' 'conspiracy,' or 'concerted action.'"); Werden, *supra* note 15, at 726 (observing that, "from an economic point of view the difference between true agreement [produced by explicit bargaining] and quasi-agreement [produced by implicit bargaining] is one affecting fine points more than the fundamental characteristics of the problem") (quoting from WILLIAM FELLNER, COMPETITION AMONG THE FEW 15–16 (1949)).

87. WHINSTON, *supra* note 85, at 46.

88. *See, e.g.*, DAVID M. KREPS, GAME THEORY AND ECONOMIC MODELLING 9 (1990) (comparing cooperative and noncooperative game theory, and stating that "in co-operative game theory the unit of analysis is most often . . . the coalition"); MARTIN SHUBIK, GAME THEORY IN THE SOCIAL SCIENCES 217 (1982) (describing differences between cooperative and noncooperative models of game theory and suggesting that the players' behavior under the cooperative theory involves the "notion of coalition and joint action").

the analysis essentially useless in defining antitrust conspiracies.[89] Noncooperative game theory has shown that noncompetitive results can occur without the strong form of cooperation, as the gas station hypothetical shows, but these results cannot tell us which of the noncompetitive outcomes involve concerted action in a legal sense. Econometric studies showing departures from the behavior of competitive firms cannot distinguish consciously parallel from concerted practices because "[w]hat matters for the empirical estimates is the outcome and not the cause of noncompetitive pricing."[90]

What is decisive in these cases is *noneconomic* evidence of the cause, particularly involving communications. This sort of evidence may strongly suggest a cartel, but "economic expertise cannot contribute to drawing this inference."[91] This conclusion is obviously true where the expert tries to apply a more expansive definition of agreement than the legal definition.[92] But even if the expert purports to apply the legal definition, whatever that may be, the testimony should be excluded because it is outside of an economist's expertise. One court has held that an expert should not be permitted to testify to the ultimate issue of agreement, because the jury is "entirely capable of determining whether or not to draw such conclusions without any technical assistance from [economists]."[93] Unfortunately, as we have seen, the jury will be hindered in this task by an inadequate legal definition.

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89. *Cf.* Werden, *supra* note 15, at 729 (describing the oligopoly model created by Reinhard Selten, set forth in Reinhard Selten, *A Simple Model of Imperfect Competition, Where 4 Are Few and 6 Are Many*, 2 INT'L J. GAME THEORY 141 (1973)).

90. Alexis Jacquemin & Margaret E. Slade, *Cartels, Collusion, and Horizontal Merger*, *in* 1 HANDBOOK OF INDUSTRIAL ORGANIZATION 415, 452 (Richard Schmalensee & Robert D. Willig eds., 1989) (noting that a difficult, and perhaps impossible, problem with all statistical approaches to testing price-taking behavior is that "it is impossible to distinguish pure tacit collusion from illegal price-fixing or other explicit cartel agreements").

91. *See* Werden, *supra* note 15, at 792–93 (suggesting that "expert economists often draw inferences that may be reasonable but do not involve the practice of economics"). Werden suggests that an expert may properly testify to whether aggressive price cutting is punishment for cheating on a cartel agreement, and to whether a pattern of communications could constitute "negotiation to consensus on price or output." *Id.* at 793.

92. Williamson Oil Co. v. Philip Morris USA, 346 F.3d 1287, 1323 (affirming the exclusion of the testimony of an expert who "defined collusion to include conscious parallelism . . . [and] did not differentiate between legal and illegal pricing behavior, and instead simply grouped both of these phenomena under the umbrella of illegal, collusive price fixing. This testimony could not have aided a finder of fact to determine whether appellees' behavior was or was not legal, and the district court properly excluded it.").

93. City of Tuscaloosa v. Harcros Chem., Inc., 158 F.3d 548, 565 (11th Cir. 1998). *See also* Ohio v. Lewis Trauth Dairy, Inc., 925 F. Supp. 1247, 1254 (S.D. Ohio 1996) ("[E]xperts may not express an opinion in the form of a legal conclusion regarding the existence of an illegal conspiracy."); *but cf.* Petruzzi's IGA Supermarkets, Inc. v. Darling-Del. Co., 998 F.2d 1224, 1240–41 (3d Cir. 1993) (allowing expert economic testimony where cross-examination, contrary

IV. COMMUNICATION AND CONCERTED ACTION

Commentators have recently brought differing perspectives to the issue of the definition of agreement in the context of parallel actions by oligopolists. Oliver Black develops a clearer definition based on a philosophical analysis of the concept of concerted action as it is used in European competition law. Black's definition focuses on the role of communication among rivals. Although he derives the theory using the tools of analytical philosophy, I suggest that this definition is consistent with the economic approach to antitrust law, which I endorse. We have already seen that economic theory does not formally distinguish concerted action from consciously parallel action. Nevertheless, economics does not contradict an approach that distinguishes these two conditions by focusing on the role of communication. Economists Carlton, Gertner, and Rosenfield argue that the concept of agreement is so vacuous in both economic and legal terms that it should be displaced as the focus on section 1 inquiry in cases involving exchanges of information among competitors. But their analysis of the role of communications in fostering coordination is consistent with including communications in the definition of concerted action. Moreover, even though the role of communications in concerted action may be difficult to model formally, many economists believe it is essential in practice.

A. A Philosophical Perspective

Oliver Black has recently attempted to specify the concept of concerted action using the tools of analytical philosophy.[94] Black classifies conduct along a spectrum of degrees of "correlation" between parties and their respective actions, with the highest constituting concerted action,[95] which European competition law distinguishes from agreement.[96] This model has interesting implications for American law.

The levels of correlation, in ascending order, are:

Independent action: each party does an act entirely independently of the other.

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evidence, and careful instruction would limit the possibility of the testimony causing unfair prejudice).

94. BLACK, *supra* note 1.

95. *Id.* at 185–87. He uses the term correlation consciously in order to avoid terms that imply a legal characterization.

96. Treaty Establishing the European Community art. 81(1), Nov. 10, 1997, http://europa.eu.int/eur-lex/en/treaties/dat/EC_consol.html (prohibiting "all agreements between undertakings, decisions by associations of undertakings and concerted practices which may affect trade between Member States and which have as their object or effect the prevention, restriction or distortion of competition within the common market").

Mutual belief: the firms act, each believing the other is acting in a particular way.

Mutual reliance: the firms act, not only believing the others will act in a certain way, but relying on them to do so.

Mutual reliance with a common goal: the firms act in reliance on their belief that the others will act in a certain way, and in doing so the firms have the same goal.

Mutual reliance with a common goal and with knowledge: the firms act knowing that all of the foregoing conditions have been satisfied.

Mutual reliance with a common goal and with knowledge gained, in part, by communication: the firms act knowing that all conditions have been satisfied in part because they communicate their reliance and their goals to each other.

This highest level of correlation, according to Black, constitutes a concerted practice.[97]

Under Black's definition, the critical issues in evaluating parallel conduct are whether the requisite reliance, belief, and knowledge that accompany the parties' actions were acquired, at least in part, by communication between the rivals. Black recognizes that "[c]ommunication comes . . . in various forms and degrees."[98] As to form, the range includes indirect communications, mediated by a third person; "non-specific" communication, in which "someone makes a general announcement"; "inexplicit" communication, in which "the hearer needs to make large inferences in order to reach the speaker's meaning"; and non-linguistic communication by "nods or eye contact."[99] As to "degrees" of communication, the range runs from a case in which "the speaker says something to the hearer in words which they both understand in the words' normal sense" to "somewhere short of the case where one person simply causes another to believe something."[100] In each case, however, the communication must

97. BLACK, *supra* note 1, at 187. Black argues that "concerted practice" under Article 81 of the European Treaty is a species of joint action. *Id.* at 157–58. Conduct falling short of joint action may represent a form of coordinated pricing that would be of concern in evaluating a prospective merger, but does not constitute a concerted practice. *Id.* at 161. He distinguishes concerted action from "agreement" under Article 81. *Id.* at 164–66.

98. *Id.* at 161.

99. *Id.* at 152–55. *Cf.* Esco Corp. v. United States, 340 F.2d 1000, 1007 (9th Cir. 1965) ("A knowing wink can mean more than words."); *see also* Werden, *supra* note 15, at 766–67 (describing a bid rigging conspiracy in which a bidder signaled its desire to win one auction by submitting a bid in another auction ending in digits that corresponded to the trading area covered by the first auction).

100. BLACK, *supra* note 1, at 154.

successfully convey the speaker's intention to act in a certain way in reliance on others doing the same.[101]

Black also distinguishes the *definition* of concerted action from *proof* of concerted action.[102] He has little to say about the latter issue, but suggests that the sort of economic evidence of market structure, conduct, and performance that is typical in cases alleging horizontal price fixing would all be relevant to the question of whether concerted action, properly defined, had occurred. Conceivably, one might be able to infer that the requisite knowledge, reliance, common goals, and communication were present without any specific evidence of communication, if the parties' conduct could be explained in no other way. Obviously, however, under a definition that requires communication of a particular sort, evidence of specific communications is important.

Black also (following EU law) distinguishes concerted action and agreement.[103] Concerted practices, in Black's view, involve communication followed by parallel action to complete the offense.[104] Agreement, by contrast, can be completed solely by communication, if one party makes a conditional promise and another party makes a promise in response. The parties' subsequent actions would be evidence of agreement if they permitted the inference that the mutual promises had occurred.

Black's analysis is framed using the terminology of Article 81 of the European Treaty, which differs slightly from the language of section 1 of the Sherman Act.[105] Nevertheless, Black's analysis provides a useful

101. *Id.* at 159–60; Oliver Black, *Communication, Concerted Practices, and the Oligopoly Problem*, 1 EUR. COMPETITION J. 341, 342–46 (Oct. 2005). More precisely, for a firm's action to constitute communication, it must: be made with the intention of causing a rival (1) to believe the firm is acting in reliance on the rival's acting in a certain way, and (2) to believe this in part because it recognizes the firms' intention; moreover, the action must successfully cause the rival to believe the firm is acting in reliance on the rival's corresponding act, and the rival must believe this in part because it recognizes the firms' intentions. *Id.*

102. BLACK, *supra* note 1, at 162.

103. *Id.* at 164–66.

104. *See id.* at 159–60 (criticizing a statement in a European case suggesting that mere communication of intentions may amount to a concerted practice even if "the parties do not act in mutual reliance").

105. *Compare* Treaty Establishing the European Community, *supra* note 96 (prohibiting "all agreements between undertakings, decisions by associations of undertakings and concerted practices which may affect trade between Member States and which have as their object or effect the prevention, restriction or distortion of competition within the common market") *with* 15 U.S.C.A. § 1 (West 2004) ("Every contract, combination in the form of trust or otherwise, or conspiracy, in restraint of trade or commerce among the several States, or with foreign nations, is declared to be illegal.").

basis for examining the conditions necessary for determining when consciously parallel action constitutes an agreement under section 1 of the Sherman Act.[106] Before turning to the applicability of the definition to U.S. law, however, it may be helpful to consider its consistency with economics.

B. An Economic Perspective

Black's proposal to include communication in the definition of concerted action is explicitly based on a philosophical analysis and only indirectly draws on economic ideas. One might object that, because the goal of antitrust is to promote economic efficiency, antitrust rules should be based solely on economic theory and empirical studies. Indeed, as we will see in this section, Carlton, Gertner, and Rosenfield argue that "agreement" as it is used in the oligopoly pricing cases is a noneconomic concept and should not be used to trigger per se illegality, except in the clearest cases. I suggest, however, that clarifying the concept of concerted action by the inclusion of a communication requirement can be defended on economic grounds. Even if economic theory has not shown that explicit communication is necessary for noncompetitive oligopoly pricing, most economists believe that it is usually necessary in complex real-world markets. If we credit those empirical estimates, communication is a sensible defining characteristic of agreement, and including it in the definition is likely to reduce error costs more than the rule of reason inquiry proposed by Carlton, et al., or the present vague standard.

As we saw in the last Part, the economic theory of oligopoly does not distinguish consciously parallel action to achieve a competitive outcome from (self-enforcing) concerted action to achieve a competitive outcome. This gap in the theory has led some economists to challenge antitrust law's reliance on the distinction. Carlton, Gertner, and Rosenfield, for example, argue that the existence of an agreement, under some artificial definition, should not be the decisive issue in cases involving exchanges of information among rivals, because the word cannot usefully distinguish efficient and inefficient conduct.[107] "Agreement" would certainly include a legally enforceable contract, according to these authors, because "each side knows what it is obligated to do and knows that if it breaches, it faces a penalty that will

106. BLACK, *supra* note 1, at 184.

107. Carlton et al., *supra* note 17, at 424 ("'[A]greement' does not have a sufficiently clear economic (or, in our view, even legal) meaning which allows one to decide independent of the industry facts whether a particular form of communication should be banned").

be enforced by courts—either specific performances or damages."[108] But, as the authors recognize, legal enforceability is a useless criterion for evaluating conduct under section 1, which applies only to "agreements" that courts will not enforce.[109] It would nevertheless be "sensible," the authors argue, to extend the idea of agreement to reach cases in which "competitors meet to set price and to restrict aggregate output and the meeting ends with an understanding of what each party is to do, and then each does what it promised."[110] But the concept of agreement should not be used to condemn under the per se rule more attenuated interactions among competitors. "Agreement" does not distinguish efficient communications from inefficient ones. Consequently, the authors suggest that direct or indirect interfirm communications be evaluated under the rule of reason to determine if they are likely to harm consumers by restricting output more than would have been the case absent the exchange of prices.[111]

The authors identify three factors that influence whether communications are likely to be anticompetitive: whether the communications are public, to both competitors and consumers; whether the information communicated is historical, current, or future; and whether the communications are repeated.[112] Public communications to both consumers and rivals conceivably could restrain competition, but much more likely would make the market more competitive by making consumers more informed in the search process.[113] Distribution of historical price and cost data, particularly if aggregated, can provide useful information for benchmarking or formulation of best practices, without being of much use in coordinating current prices; communication of future prices is much more likely to facilitate coordination. [114] Finally, even private communications about future pricing actions are more likely to change rivals' beliefs and actions if, by repeated communications, the firm making the statement has developed a reputation for truthfulness.[115]

Something like these authors' proposal to focus directly on anticompetitive effect is already the established approach in cases

108. *Id.*
109. *Id.*
110. *Id.*
111. *Id.* at 427.
112. *Id.* at 431–32.
113. *Id.* at 432–34.
114. *Id.* at 434–35.
115. *Id.* at 435–36. For a similar analysis, see Maurice E. Stucke, *Evaluating the Risks of Increased Price Transparency*, 19 ANTITRUST 81, 82 (2005) (noting that private communication of nonpublic pricing is a positive factor for a rule of reason analysis).

involving formal information exchanges among competitors. In these cases, typified by the trade association cases of the 1920s[116] and *Container*,[117] the element of agreement is satisfied by the implicit or explicit agreement to exchange information. These sorts of agreements are judged under the rule of reason, because exchanges can benefit consumers by spreading information in the market.[118] The focus of analysis is on whether the exchange of information has an anticompetitive effect on prices given the form and substance of the exchanges and the structure of the industry. Exchanges are lawful if "a legitimate business reason for the exchange offsets any likely anticompetitive effect . . . ."[119]

Interestingly, in these cases, it is often difficult to distinguish the issue of the effects of the agreement to exchange information from the issue of whether the parties have agreed to fix prices. An information exchange may be unlawful if it is found to have an unreasonable effect on prices, or if it is found to be a plus factor permitting an inference of a per se illegal agreement to fix prices.[120] The similarity of the two inquiries is no coincidence. The inference of an agreement to fix prices in a per se analysis serves a similar function to the balancing of procompetitive and anticompetitive effects of an agreement to exchange information in a rule of reason analysis. The existence of an agreement in cases alleging price fixing is not a purely formal issue; it is the dividing line between lawful and unlawful behavior, and thus involves policy choices about the legitimacy of various types of interactions among rivals. The Supreme Court recognized this characteristic of agreement in *Matsushita* by elevating the burden of production when the plaintiff alleged a violation that closely resembled a procompetitive practice.

Carlton, Gertner, and Rosenfield's proposal to focus directly on competitive effects is fully consistent with these sorts of cases. It is problematic, however, in cases in which there is no proven agreement to exchange information. In these cases also, the authors propose to evaluate the conduct under the rule of reason. But the proposal does not

116. Am. Column & Lumber Co. v. United States, 257 U.S. 377 (1921); United States v. Am. Linseed Oil Co., 262 U.S. 371 (1923); Maple Flooring Mfg. Ass'n v. United States, 268 U.S. 563 (1925); Cement Mfrs. Protective Ass'n v. United States, 268 U.S. 588 (1925).

117. United States v. Container Corp. of Am., 393 U.S. 333, 334–35 (1969).

118. United States v. Citizen & S. Nat'l Bank, 422 U.S. 86, 113 (1975).

119. Debra J. Pearlstein et al., 1 ABA SECTION OF ANTITRUST LAW, ANTITRUST LAW DEVELOPMENTS (FIFTH) 95 (2002).

120. *Cf.* Todd v. Exxon Corp., 275 F.3d 191, 198 (2d Cir. 2001) (distinguishing between information exchange as plus factor in establishing per se illegal price fixing agreement and independent violation under rule of reason).

address how to resolve the legal requirement of proving an agreement, which applies to rule of reason cases as well as per se cases. The authors seem to suggest that, in cases of interdependent pricing, courts should find an agreement under some relaxed definition, then determine legality by applying a rule of reason informed by the insights of game theory. The agreement would be illegal if the communications increased the likelihood that the market equilibrium will be worse for consumers—that is, whether the communications gave the rivals an "extra ability to raise prices."[121]

This approach would seemingly have the advantage of making the issue of the legality of parallel pricing a more purely economic one. But it would do so at the expense of eliminating *Matsushita*'s requirement that the plaintiff produce something more than evidence of interdependence in order to raise a jury issue. Consequently, it is unlikely that reliance on the rule of reason would reduce net error costs. More cases would almost certainly go to the jury under a rule of reason standard than currently are submitted to the jury under *Matsushita.* Some conduct a jury would find amounted to a per se illegal agreement might be found lawful under the authors' proposed rule of reason; on the other hand, some cases that would never reach the jury under *Matsushita* might be found unlawful under the rule of reason. Subjecting most oligopoly pricing to rule of reason scrutiny might deter efficient conduct. [122]

Including communication in the definition of concerted action is a more promising reform. Communication, if that term is properly clarified, is an appropriate basis for distinguishing concerted from interdependent conduct.[123] It is true that oligopoly theory does not prove that

121. Carlton et al., *supra* note 17, at 431.

122. In *Copperweld Corp. v. Independence Tube Corp.*, 467 U.S. 752, 774–75 (1984), the Supreme Court recognized that the statutory requirement that restraints of trade be concerted creates a gap in the coverage of the Sherman Act. There may be actions of individual firms without monopoly power that restrain trade and harm consumers. *Id.* at 775. Nevertheless, the Act "leaves untouched a single firm's anticompetitive conduct (short of threatened monopolization) that may be indistinguishable in economic effect from the conduct of two firms subject to § 1 liability," because "[s]ubjecting a single firm's every action to judicial scrutiny for reasonableness would threaten to discourage the competitive enthusiasm that the antitrust laws seek to promote." *Id.* In these passages, the Court was explaining why section 1 did not apply to agreements among a parent company and its subsidiaries, but a similar logic applies in the context of consciously parallel actions. *Id.* at 771, 776–77. Bypassing the requirement of agreement, or reducing it to a reasonableness inquiry could ultimately deter efficient conduct. The concept of agreement is ambiguous, but the rule of reason involves uncertainties of its own. These uncertainties might be mitigated by tailoring the level of scrutiny under the rule of reason depending upon the characteristics of the information exchange. But even these measures may not avoid the costs of overdeterrence.

123. Turner, *supra* note 21, at 683 ("Once one goes beyond the boundaries of explicit,

communication is necessary or sufficient to achieve noncompetitive prices. In desert-island scenarios, like the gas station hypothetical, communication may not be necessary for the parties to cooperate. Where the parties do have an incentive to cheat, communication may not be sufficient to overcome it, because the parties have the same incentive to lie about their intentions. Still, there is reason to think that communication will, as a practical matter, increase cooperation. As one judge put it, "[S]uccessful price coordination requires accurate predictions about what other competitors will do; it is easier to predict what people mean to do if they tell you."[124]

There is some support, albeit inconclusive, in experimental studies for this intuition. As Christopher Leslie summarizes the results:

> [S]ubjects who were unlikely to cooperate in the absence of communication saw their cooperation rates raise dramatically once the players were allowed to exchange promises to cooperate. Communication seems to have a linear relationship with trust. The more time that subjects have to communicate, the greater their cooperation; the more communications that are exchanged, the greater the cooperation. Furthermore, "[c]ooperation apparently increases as communication becomes more explicit."[125]

As we have already seen, Carlton, Gertner, and Rosenfield offer a similar summary of the sorts of communications that are likely to facilitate noncompetitive pricing. Nevertheless, Michael Whinston cautions, "[T]here does not yet appear to be a consensus in the experimental literature about the exact circumstances and manner in which cheap talk about intended play matters."[126]

Despite the equivocal implications of theory and empirical studies, most economists believe that stable coordinated pricing usually requires both mutual recognition of self-interest and direct communication.[127]

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verbally communicated assent to a common course of action—a step long since taken and from which it would not seem reasonable to retreat—it is extraordinarily difficult if not impossible to define clearly a plausible limit short of interdependence.").

124. Blomkest Fertilizer, Inc. v. Potash Corp. of Sask., 203 F.3d 1028, 1042 (8th Cir. 2000) (Gibson, J., dissenting).

125. Leslie, *supra* note 11, at 538–39 (citations omitted).

126. WHINSTON, *supra* note 85, at 23.

127. Werden, *supra* note 15, at 763 (noting that game theoretic "models show that pricing coordination is possible under certain circumstances, but very few economists take the models so literally that they believe coordinated pricing occurs without communication of any form"); Kenneth G. Elzinga, *New Developments on the Cartel Front*, 29 ANTITRUST BULL. 3, 25 (1984) (observing that "coordination cannot be simply spontaneous" and "the needed efforts at concurrence, coordination, and compliance should yield sufficient smoking-gun-type evidence for conviction").

Xavier Vives has observed that "[c]learly, communication is necessary to sustaining collusion."[128] He continues:

> The research on the effect of communication on collusion is not yet conclusive. In repeated games, for instance, in the presence of imperfect monitoring and privately observed signals, it is not known whether full collusion is possible without communication or whether communication is even needed for collusion. However, in general, the presumption is that communication abets collusion.[129]

Whinston has similarly noted that it is "paradoxical that the least controversial area of antitrust," the illegality of concerted but not interdependent behavior, "is perhaps the one in which the basis of the policy in economic theory is the weakest."[130] Nevertheless, he continues, "most economists are not bothered by this, perhaps because they believe (as I do) that direct communication (and especially face-to-face communication) often will matter for achieving cooperation, and that procompetitive benefits of collusion are both rare and difficult to document."[131] Economists with enforcement experience agree. Jonathan Baker has suggested that the plus factors are "the kinds of things that suggest that there really was a secret agreement, such as secret direct communications just before prices rise" and evidence that rivals have achieved a noncompetitive outcome by a "'forbidden process' of negotiation and exchange of assurances."[132] Gregory Werden has gone so far as to propose on "practical and policy" grounds that the "existence of an agreement should not be inferred absent some evidence of communications of some kind among the defendants through which an agreement could have been negotiated."[133]

Thus, informed empirical estimates suggest that communication is usually, if not invariably, necessary for successful cooperation in real-world markets. This suggests that communication is an economically appropriate basis for distinguishing interdependent and concerted action. Not all communications, of course, would satisfy the proposed definition. But Black's suggestion that the communications should convey the intention to act and reliance on others to follow suit provides a starting point for further analysis. Black also suggests that the communications need not amount to a completed verbal agreement.

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128. XAVIER VIVES, OLIGOPOLY PRICING: OLD IDEAS AND NEW TOOLS 320 (MIT Press 1999).

129. *Id.* at 321.

130. WHINSTON, *supra* note 85, at 26.

131. *Id.*

132. Baker, *Electronic Marketplace*, *supra* note 64, at 48.

133. Werden, *supra* note 15, at 780.

Nevertheless, difficult choices would remain in shaping the communication requirement.

Carlton, Gertner, and Rosenfield's analysis of the probative value of various types of evidence of communications in a rule of reason inquiry can also inform the issue of inference of concerted action under the proposed definition. As we have seen, in cases involving agreements to exchange information, it is often difficult to distinguish the issue of whether the exchange is anticompetitive and, therefore, illegal under the rule of reason from the issue of whether the exchange facilitates a price fixing conspiracy that is illegal per se. This is because the issue of agreement incorporates many of the policy considerations that guide the rule of reason inquiry. As the authors suggest, the form, frequency, and content of communications can influence their likely competitive effect. Thus, the authors' analysis of the likely competitive effects of different types of communications should be relevant to proof of agreement.

Suppose, in the authors' gas station hypothetical, the evidence showed that one of the station owners telephoned the other and each said he would increase prices by 10 cents the next day in reliance on the other's doing so, and both followed suit. Under the proposed definition, the owner's actions would be concerted, even though abstract economic theory does not dictate this result. The noncompetitive joint price increase is an equilibrium that can *theoretically* be reached regardless of any communication. Moreover, the communication is cheap (unenforceable) talk, so it is not clear why it should influence the other station owner's belief about what action the other station owner will do.[134] Nevertheless, the content and the circumstances of the communication—for example, that it is private and relates to future prices, both factors that Carlton, et al., identify—could make it reasonable to infer that the communication facilitated coordination rather than performing a benign function.

V. THE COMMUNICATION MODEL AND THE SHERMAN ACT

We are now in a position to consider whether the proposed definition is applicable to American law. One might argue that the Supreme Court's pre-*Matsushita* cases that address the meaning and proof of agreement under the Sherman Act foreclose such a concrete requirement. Those cases undoubtedly establish that "courts would characterize as concerted action interfirm coordination realized by means other than a direct exchange of assurances."[135] But the proposed

134. WHINSTON, *supra* note 85, at 22–24.

135. Kovacic, *supra* note 29, at 100.

definition does not require that the communications be direct, nor does it require that the communications amount to an exchange of assurances, that is, a completed verbal agreement. Because something more than conscious parallelism is necessary for actions to be concerted, communication of some sort is the best and perhaps the only candidate for a practical distinguishing factor.

In this Part, I argue first that the early Supreme Court precedents can be reconciled with a model that focuses on communication. I then clarify some of the implications of the model using American case law. Finally, I examine the three most recent important cases in the courts of appeals that address the question of concerted action and suggest that they have explicitly or implicitly moved toward a definition of concerted action that is consistent with the one proposed here.

A. Supreme Court Cases

As we have seen, the unhelpful definition of agreement most frequently cited today originated in the cryptic and dubious *American Tobacco* case. That case probably accounts for the misleading statement in the *Model Jury Instructions* that an illegal agreement may be "entirely unspoken." The Court's other leading cases have also been vague both in defining concerted action and in their analyses of evidence that concerted action has occurred. Nevertheless, they can at least be reconciled with the focus on communication that I propose here.

In *Eastern States Retail Lumber Dealers' Association v. United States*,[136] the association collected complaints from its members about wholesale lumber dealers who sold directly to consumers. If a board determined the complaint was valid, the name of the wholesaler would be added to a "blacklist" that the secretary of the association would distribute to members. Association members often refused to deal with the named wholesalers. Although there was no stated agreement among the dealers to refuse to deal with the blacklisted wholesalers, the evident purpose and "natural consequence" of the "concerted action" of circulating the list, according to the Supreme Court, was to lead the dealers to do so.[137] Consequently, a conspiracy to accomplish that end could be inferred.

The retailers argued that the agreement was "necessary to the protection of the retail trade and promotive of the public welfare in

136. 234 U.S. 600 (1914).

137. *Id. at* 612.

providing retail facilities"[138] because the wholesalers were cream-skimming by selling to large consumers without the expense of maintaining local lumberyards. But the Court viewed this argument as simply whining about lower-cost competition and not a justification for a boycott. The Court was especially concerned that the arrangement "tends to prevent other retailers who have no personal grievance against [the wholesaler], and with whom he might trade, from so doing, they being deterred solely because of the influence of the report circulated among the members of the associations."[139] The Court appeared here to suggest that there was no legitimate independent reason for dealers who did not compete with a direct-selling wholesaler to refuse to deal with him because of the blacklist if he offered the best price. These retailers only benefited from their refusals to deal because others did so as well.

If the evidence had showed only parallel refusals to deal with direct-selling wholesalers by strangers to the offending transactions, a court would likely have concluded the actions were independent. But centralized collection of complaints and the distribution of blacklists, along with membership in the association, supplied the requisite element of communication. Individual retailers did not necessarily communicate directly among themselves, nor did they necessarily report any refusals to deal with direct-selling wholesalers to the association. But retailers who refused to deal did so based on the blacklist, assembled from reports of their rivals, and (it is reasonable to infer) acted in reliance that their rivals would do so as well—a reliance gained from the blacklist itself. The blacklist did not, like a list of firms engaged in fraud,[140] contain information that would lead a retailer to refuse to deal regardless of what other retailers did. The blacklist was effective only if the firms acted jointly—something they could not do without the list. Thus, the blacklists themselves were communications, adopted by collective action, which included regular complaints of direct dealing that provided the critical information on behalf of the members of the association.

More problematic is *Interstate Circuit, Inc. v. United States.*[141] In that case, a representative of two circuits of first-run movie exhibitors wrote a letter to its distributors demanding that the distributors impose restrictions in their licensing agreements that required second-run exhibitors to raise their admission prices and avoid showing double

138. *Id.* at 613.

139. *Id.* at 612.

140. *See* Cement Mfrs. Protective Ass'n v. United States, 268 U.S. 588, 601–06 (1925).

141. 306 U.S. 208 (1939).

features. The letter named all of the distributors as addressees. The distributors largely acceded to the demands of one of the circuits and uniformly rejected the demands of the other circuit.[142] The Supreme Court affirmed the district court's inference of a conspiracy among the distributors even though there was no testimony describing direct communications among them. 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 . . . uniformity of action."[143] The pattern of uniform acceptance and rejection of the proposals to change established marketing practices supported the inference of a conspiracy, particularly "when uncontradicted and with no more explanation than the record affords."[144]

It seems evident that the Court believed that communications among the distributors actually occurred even though no one testified to their content. The defendants called as witnesses local managers who testified that "they did not have conferences or reach agreements with the other distributors," but the defendants' failure to call officers who actually had authority to set prices raised the inference that those officers would have testified to the contrary.[145] Because all of the distributors knew the nature of the proposal before them, the inferred communications must have related to details of the proposal and whether the distributors could rely on each other to act uniformly. The Court observed that:

> [w]hile as a result of independent negotiations either of the two restrictions without the other could have been put into effect by any one or more of the distributors and in any one or more of the Texas cities served by Interstate, the negotiations which ensued and which in fact did result in modifications of the proposals resulted in substantially unanimous action of the distributors, both as to the terms of the restrictions and in the selection of the four cities where they were to operate.[146]

The Court may have meant to suggest by this passage that indirect communication occurred during the negotiations when the exhibitors' representatives relayed the positions of the various distributors. The evidence was sufficient at least to raise that inference in the absence of testimony by the representatives of the distributors who actually conducted the negotiations. The Court "decline[d] to speculate whether

142. *Id.* at 214–20.
143. *Id.* at 222.
144. *Id. at* 225.
145. *Id.* at 226.
146. *Id.* at 222.

there may have been other and more legitimate reasons for such action not disclosed by the record."[147]

In an alternate holding, the Court held that, even if the government had not produced sufficient evidence to infer a conventional agreement among the distributors, it would have won because it showed concerted action following the invitation to participate in the arrangement: "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."[148] This language describes a so-called hub-and-spokes conspiracy, in which the distributors assent not to each other, but only to the exhibitor. But it also seems to suggest that action pursuant to the proposal is necessary for the arrangement to be shown. Similarly, in *Paramount Pictures*, the Supreme Court held that an agreement may be shown where "a concert of action is contemplated and . . . defendants conformed to that arrangement." [149]

Recall that Black distinguishes concerted action from agreement. The parties form an agreement by exchanging promises; they engage in a concerted practice by communicating and then act consistently with the communications.[150] While American courts typically use "concerted action" interchangeably with "agreement," *Interstate Circuit* appears to recognize concerted action as a species of agreement that requires the concurrence of both a plan and an action in accordance with the plan. Evidently this sort of agreement is different from those the Supreme Court had in mind in *Madison Oil,* which held that illegal price fixing occurs when the parties agree, regardless of whether the agreement is successful or even possible to implement.[151] *Madison*

147. *Id.* at 225. In *Toys "R" Us, Inc. v. FTC*, 221 F.3d 928 (7th Cir. 2000), the court affirmed the Commission's finding that a toy retailer had induced its suppliers to form a horizontal boycott of warehouse clubs that were undercutting the defendant's retail prices. Although *Monsanto* required that there be evidence that "tends to exclude the possibility" of independent action, the court noted that it does not require the plaintiff to exclude that possibility entirely. *Id.* at 934–35. The court found sufficient evidence to support the finding of agreement, essentially following *Interstate Circuit.* It pointed particularly to evidence that rather than becoming more dependent on Toys "R" Us, the companies wanted to diversify from it. Moreover, "each manufacturer 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." *Id.* at 936.

148. *Interstate Circuit*, 306 U.S. at 226.

149. United States v. Paramount Pictures, Inc., 334 U.S. 131, 142 (1948).

150. *See* BLACK, *supra* note 1, at 166–69.

151. *Cf.* United States v. Socony-Vacuum Oil Co., 310 U.S. 150, 224 n.59 (1940) (stating that "a conspiracy to fix prices violates § 1 . though no overt act is shown, though it is not established that the conspirators had the means available for the accomplishment of their

Oil's concept of agreement, drawn from the law of criminal conspiracy, could be satisfied by what the cases sometimes call a "traditional conspiracy,"[152] in which the parties exchange mutual assurances in a hotel room or over the phone. Such an agreement would be unlawful, even if it never came to fruition. *Interstate Circuit*, in contrast, suggests that something less than a completed agreement need not pass between the defendants to establish that subsequent parallel actions are concerted. This language seems to endorse the notion that concerted action may be shown by communication of a plan followed by parallel action pursuant to the plan.

B. Characterizing and Proving the Necessary Communications

Including communication of intentions and reliance in the definition of concerted action does not tell us what sorts of communications satisfy the definition, nor does it tell us what evidence would be sufficient to prove that the requisite communications had taken place. Even when there is direct evidence of communications, it will be necessary to determine whether they carry the necessary import. Because the forms and degrees of communication are virtually infinite, and may not even be verbal, [153] this task will recur in every case and will require difficult choices. Moreover, in cases in which the direct evidence of communications does not by itself satisfy the definition, it will still be necessary to infer from circumstantial evidence whether the requisite communications occurred. Nevertheless, recognizing the necessity of communication of a certain kind in concerted action can narrow the focus of the analysis. There will be many contexts in which the model has implications, but I will focus on public announcements of future prices and on private exchanges of price information.

1. Public Announcements

Carlton, Gertner, and Rosenfield's gas station hypothetical illustrates how public price announcements might produce a coordinated price increase. Although this scenario involves communication of individual pricing intentions, the communications do not convey the requisite information with anything like the degree of certainty to satisfy the

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objective").

152. *In re* Flat Glass Antitrust Litig., 385 F.3d 350, 360 (3d Cir. 2004).

153. Werden, *supra* note 15, at 765. Werden describes cases in which "competitors communicated using something akin to language, but they never directly addressed each other, nor did they use words as such." *Id.* Nevertheless "the communication did not consist of taking, or publicizing, marketplace actions such as the building of capacity, the production of output, or the charging of particular prices." *Id.*

proposed model. The parties may act in reliance on each other's doing likewise and may have a common goal, but, in the absence of other cues, they have not communicated their reliance on others' actions and a common goal in any meaningful sense.[154] To interpret them as satisfying the requirement would erase any distinction between conscious parallelism and concerted action. Worse, it would deter communication not only with rivals but also with the entire market, communication that is as necessary to competition as it is to interdependent pricing. To qualify as a communication of reliance and goals concerning prices, a public announcement would have to be far more explicit than a bare posting of a price.

In *Petroleum Products*, the court suggested in dicta that gasoline refiners' public announcements of increases in wholesale prices and withdrawals of dealer discounts would support an inference of conspiracy, because the actions made it easier for firms to coordinate price increases.[155] The court cited the first edition of Richard Posner's *Antitrust Law* for the proposition that "the *form* of the exchange—whether through a trade association, through private exchange as in *Container,* or through public announcements of price changes—should not be determinative of its legality."[156] Instead, legality should turn on whether "the exchange promotes collusive rather than competitive pricing."[157]

These statements alone could be read to suggest that the *Petroleum Products* court would hold that the gas station hypothetical constitutes concerted action. The court emphasized, however, that because all of the defendants sold through franchised dealers, there was no obvious competitive benefit in publishing *wholesale* prices. Consumers had no interest in knowing the prices. Indeed, there was evidence that the publication of prices was intended to communicate primarily with

154. United States v. Gen. Motors Corp., 1974-2 Trade Cas. (CCH) ¶ 75,253, at 97,671 (E.D. Mich. 1974) (noting that a public price announcement "cannot be twisted into an invitation or signal to conspire"). Similarly, *cf.* Blomkest Fertilizer, Inc. v. Potash Corp. of Sask., 203 F.3d 1028, 1042 (8th Cir. 2000) ("In the absence of express agreements, oligopolists must rely on uncertain and ambiguous signals to achieve concerted action. The signals are subject to misinterpretation and are a blunt and imprecise means of ensuring smooth cooperation, especially in the context of changing or unprecedented market circumstances. This anticompetitive minuet is most difficult to compose and to perform, even for a disciplined oligopoly.") (citing Brooke Group Ltd. v. Brown & Williamson Tobacco Corp., 509 U.S. 209, 227–28 (1993)).

155. *In re* Coordinated Pretrial Proceedings in Petroleum Prods. Antitrust Litig., 906 F.2d 432, 445–50 (9th Cir. 1990).

156. *Id.* at 447 (quoting RICHARD A. POSNER, ANTITRUST LAW: AN ECONOMIC PERSPECTIVE 146 (1976)).

157. *Id.* at 447.

rivals.[158] Most important, the court added in a footnote that its "conclusion would necessarily be different were the appellants' inference of a price-fixing conspiracy based on the dissemination or advertising of *retail* prices; permitting an inference of conspiracy from such evidence would make it more difficult for retail consumers to get the information they need to make efficient market decisions."[159]

It is not clear what the court means by this last qualification. If the court really endorsed Posner's assertion that it does not matter whether communications are public or private, it would seem that the usefulness of the information to consumers should not defeat an inference of conspiracy where the pricing is anticompetitive. The court may have been suggesting that the benefit to consumers raised the plaintiff's burden of production. As in *Matsushita*, where conduct is "the essence of competition," courts should not permit easy inferences of illegality. Alternatively, the court may have been suggesting that the fact that information is intended only for one audience can change its import, and thus its appropriate legal effect. If so, the court's distinction is relevant to my suggestion that a public announcement of pricing information that is relevant to multiple audiences is less likely to convey the element of reliance on others acting in a certain way. The only way a public announcement could convey the requisite information would be if the circumstances of other communications provide clarifying cues. This condition would be satisfied most obviously if the rivals had arranged a code in which the critical information would be triggered by superficially innocuous public announcements.[160]

2. Private Exchanges of Price Information

As Carlton, Gertner, and Rosenfield have recognized, private communications among rivals are more suspicious than public announcements. In some instances, private communications will be so explicit they will constitute direct evidence of an agreement. In others, they will be considered along with other circumstantial evidence tending to show concerted action. In both instances, the significance of

158. *Petroleum Prods.*, 906 F.2d at 448 ("[T]he public dissemination of such information served little purpose other than to facilitate interdependent or collusive price coordination.").

159. *Id.* at 448 n.14.

160. For example, the station owners might, by prearrangement, established a system in which prices posed as $2.99 $^{8}/_{10}$ rather than $2.99 $^{9}/_{10}$ would be a signal indicating reliance on a similar posting. This hypothetical is based on an alleged conspiracy described in Werden, *supra* note 15, at 766, in which bidders communicated a request that rivals withdraw bids in certain lots by using coded bid amounts on other lots.

the communications will depend in part on the definition of concerted action.

Direct evidence of agreement sweeps away all of the limitations of *Matsushita* and creates a jury issue. The only question about this sort of evidence is its credibility, which the jury is best situated to evaluate: "[N]o inferences are required from direct evidence to establish a fact and thus a court need not be concerned about the reasonableness of the inferences to be drawn from such evidence."[161] This sort of evidence necessarily consists of communications,[162] but not all communications about prices amount to direct evidence.[163] Evidence is only direct if it spells out the terms of the communications, which in turn meet the definition of agreement. Evidence of a completed verbal agreement through the testimony of immunized conspirators is almost invariably required for a criminal prosecution.[164]

Even if evidence of a completed verbal agreement is not available, evidence of private communications can contribute to an inference of

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161. Petruzzi's IGA Supermarkets, Inc. v. Darling-Del. Co., 998 F.2d 1224, 1233 (3d Cir. 1993). The court continued that the focus "in *Matsushita* was on *ambiguous* evidence, and what inferences *reasonably* could be drawn from that type of evidence." *Id.* (internal quotations omitted). *See also* Williamson Oil Co., Inc. v. Philip Morris USA, 346 F.3d 1287, 1300 (11th Cir. 2003) ("In the unusual case where the plaintiff is able to muster direct evidence of price fixing, summary judgment is categorically inappropriate."); *Petroleum Prods.*, 906 F.2d at 441 (holding that the court must deny summary judgment if plaintiff offers direct evidence of conspiracy). *But cf.* Sylvester v. SOS Children's Villages Ill., Inc., 453 F.3d 900, 903 (7th Cir. 2006) (observing that "actually all evidence, even eyewitness testimony, requires drawing inferences"); Champagne Metals v. Ken-Mac Metals, Inc., 458 F.3d 1073, 1085 (10th Cir. 2006) (reserving the question of whether weak direct evidence, in itself insufficient to raise a jury issue, always "remove[s the] case from the *Matsushita* framework").

162. United States v. Therm-All, Inc., 323 F.3d 625 (5th Cir. 2004) (detailed testimony of conversations spelling out terms and mechanism of price-fixing agreement were sufficient to support a conviction, despite circumstantial evidence of continued competition in the market); United States v. Taubman, 297 F.3d 161, 165 (2d Cir. 2002).

163. *In re* Citric Acid Litig., 996 F. Supp. 951 (N.D. Cal. 1998) (meetings of rivals were not direct evidence of conspiracy in the absence of explicit evidence of agreement). *See also In re* High Fructose Corn Syrup Antitrust Litig., 295 F.3d 651, 662 (7th Cir. 2002) (holding that direct evidence of conspiracy "is evidence tantamount to an acknowledgment of guilt" and that circumstantial evidence of conspiracy "is everything else *including* ambiguous statements").

164. *But cf.* United States v. Foley, 598 F.2d 1323, 1339 (4th Cir. 1979) (affirming a conviction for commission rate fixing based on inconclusive conversations about future prices followed by consistent action); United States v. Champion Int'l Corp., 1975-2 Trade Cas. (CCH) ¶ 60,453 (D. Or. 1975), *aff'd*, 557 F.2d 1270, 1274 (9th Cir. 1977) (affirming conviction for bid rigging based on meetings followed by a suspicious pattern of bidding), both discussed in Werden, *supra* note 15, at 747. Even with such high standards of prosecutorial discretion, defendants in criminal antitrust who choose to go to trial are acquitted far more frequently than other criminal defendants. F. Joseph Warin, David P. Burns, and John W.F. Chesley, *To Plead or Not to Plead?, Reviewing a Decade of Criminal Antitrust Trials,* THE ANTITRUST SOURCE, July 2006, *available at* http://www.abanet.org/antitrust/at-source/06/07/Jul06-Warin7=20f.pdf.

concerted action.[165] Consider a hypothetical posed in *Esco Corp. v. United States*[166] over four decades ago:

> Let us suppose five competitors meet on several occasions, discuss their problems, and one finally states—"I won't fix prices with any of you, but here is what I am going to do- put the price of my gidget at X dollars; now you all do what you want." He then leaves the meeting. Competitor number two says—"I don't care whether number one does what he says he's going to do or not; nor do I care what the rest of you do, but I am going to price my gidget at X dollars." Number three makes a similar statement—"My price is X dollars." Number four says not one word. All leave and fix "their" prices at "X" dollars.[167]

The court concluded that these facts would *raise* but not *compel* an inference of concerted action. Mere statements of intention would be insufficient to establish an agreement simply on the basis of what the parties said. The jury would have to decide if the parties had formed an agreement based on "evidence as to what these competitors had done before such meeting, and what actions they took thereafter, or what actions they did not take."[168] The court discussed the definition of agreement and identified the sort of communications that would be necessary to establish an agreement when rivals have engaged in parallel conduct. An agreement required "mutual consent," according to the court, but not necessarily "an exchange of assurances to take or refrain from a given course of conduct."[169] It would be sufficient that one rival suggests a course of conduct "in the presence of other competitors" and all follow it "generally and customarily and continuously for all practical purposes, even though there be slight variations."[170] Thus, even competitor number four in the court's hypothetical might be held liable, without communicating anything verbally, so long as the course of conduct suggests that he was conveying a participation in the larger conspiracy.

The court's discussion of its hypothetical is broadly consistent with the distinction between concerted action and a complete verbal agreement. Viewed in isolation from their context, the rivals' words in

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165. *See, e.g.*, Brown v. Pro Football, Inc., 518 U.S. 231, 241 (1996) (suggesting that a jury may find concerted action based on "uniform behavior among competitors, preceded by conversations implying that later uniformity might prove desirable").

166. 340 F.2d 1000 (9th Cir. 1965).

167. *Id.* at 1007. *Cf.* WHINSTON, *supra* note 85, at 20 (observing that the law distinguishes cases in which the parties merely state their intentions form cases in which they communicate assent, but "economists have essentially nothing to say about this").

168. *Esco*, 340 F.2d at 1007.

169. *Id.* at 1007–08.

170. *Id.* at 1008.

the hypothetical do nothing more than announce their intentions with respect to future prices. But the announcement of the prices at a secret meeting of rivals indicates that the first rival is proposing a common course of action, and the other statements at the meeting and the subsequent conduct of the rivals could allow a jury to infer that the communications conveyed the requisite elements of reliance.

The most problematic feature of the court's hypothetical is "number four," who says nothing at the meeting, but follows the proposed price. The profit-maximizing price for a fringe firm in a market in which other firms have formed a cartel is the cartel price. If actions that are profit maximizing for a price-taking firm are to be found sufficient to form an agreement, the reasons should be explained much more fully. Black addresses the related example in which one firm tells another that it will raise prices if the other goes first, and the other responds by raising prices, which are then matched.[171] He acknowledges the possibility that a more relaxed form of the model might encompass this scenario, but suggests that allowing that exception would make it more difficult to distinguish oligopoly pricing. Even if one accepts Black's more restrictive view, however, one might still argue that number four should be liable if the circumstances indicate that its *actions* manifest the requisite information. For example, one might argue that, in the context of the industry, number four's very attendance at a series of secret meetings at which rivals communicate intentions, and (implicitly) reliance, is itself a communication of intent and reliance.

These considerations are relevant to the issue of proof of concerted action. In the *Esco* hypothetical, for example, the fact that the communications occur at a private meeting rather than in public announcements of future price actions makes it more likely that a variety of contextual cues could convey the elements of reliance. The fact that the statements are about future prices also weighs in favor of an inference of concerted action, because they provide knowledge and a basis for reliance on others' actions. Finally, as the court in *Esco* noted, the significance of various statements at the meeting depends upon whether the exercise is repeated. Carlton, et al., suggest this sort of one-way communication might be sufficient to violate the rule of reason in circumstances in which one of the parties had established a reputation for reliability in matters of pricing.[172] The same considerations might justify an inference of concerted action.

171. BLACK, *supra* note 1, at 161.

172. *Id.*

A more challenging case is secret, repeated communications about prices in *completed* transactions. In *Blomkest*, perhaps the most controversial case alleging concerted action in recent years, the plaintiffs pointed to, among other evidence, a pattern of price verification calls among the defendants about the prices at which recent sales had occurred.[173] The majority found this evidence insufficient to raise a jury issue of collusion, because "a conspiracy to fix a price would involve one company communicating with another company *before* the price quotation to the customer."[174] Consequently, the plaintiffs' argument "assumes a conspiracy first, and then sets out to 'prove' it."[175] The majority is certainly correct that the verification calls do not form an agreement in themselves. Nor do they satisfy the communication requirement in the proposed model, because they do not convey intent to achieve a common goal or reliance on one's rival to do the same.[176] The dissent observed, however, that the "communications are not supposed to be direct evidence of a one-time mini-conspiracy to fix the price on one sale. Rather, they are circumstantial evidence of a type of behavior one would not expect in the absence of a[] [preexisting] agreement to cooperate."[177] Thus, according to the dissent, the communications permitted an inference of a broader conspiracy, presumably involving other communications, because they revealed confidential information about discounts, something no firm would do absent participation in a cartel. More provocatively, the dissent may have been suggesting that tacit coordination reinforced by periodic communication to assure compliance should satisfy the agreement requirement.

C. Communication and Concerted Action in Recent Cases

We have seen that antitrust law has not yet defined "concerted action" in sufficiently meaningful terms to guide courts and juries. Antitrust law is not unique in leaving key terms largely undefined. To some degree, the common law process requires courts to adapt standards to new fact patterns, drawing on theoretical, political, and

173. Blomkest Fertilizer, Inc. v. Potash Corp. of Sask., 203 F.3d 1028, 1033 (8th Cir. 2000).

174. *Id.* at 1034.

175. *Id.* at 1033.

176. Similarly, it is not quite accurate to say "[c]ajoling competitors into adhering to their posted price lists, or reprimanding them when they steal sales, is not conscious parallelism; it is collusion." HOVENKAMP, *supra* note 18, at 135. It may be circumstantial evidence of collusion, but it is collusion as a matter of law. Hovenkamp clarifies the point in the next sentence, stating that the evidence of structure and communications was "more than enough to create an inference of agreement." *Id.*

177. *Blomkest*, 203 F.3d at 1047 (Gibson, J., dissenting).

other societal changes in directing the lines of liability. Pragmatic judges prefer the flexibility that vagueness provides. Nevertheless, it can become apparent at some point in the evolution of the law that an unarticulated structure of concepts is informing the courts in their shaping of standards. By bringing that structure to the surface, it may be possible to clarify key terminology and perhaps contribute to greater predictability and consistency in decision-making.

The lower courts' post-*Matsushita* cases continue typically to quote the received definitions of agreement and the conventional plus factors formula. But their applications of the received formulas reveal that they have been guided by a more specific standard that requires communication. As we have seen, courts invariably focus on communications when the plaintiff seeks to prove the agreement by direct evidence. But the focus on communication is also evident in cases involving circumstantial evidence of concerted action. In the search for evidence that tends to exclude independent action, courts have focused primarily on evidence tending to suggest communication has occurred. Although some cases do not involve testimony or documents detailing communications, the courts nevertheless require proof that they conclude justifies an inference that communications took place. In essence, there is no longer an open-ended plus factors analysis; the only evidence that actually distinguishes interdependent and concerted action is evidence that tends to show that the defendants have communicated in the requisite ways.

To illustrate this trend, I will discuss three recent court of appeals decisions, the Seventh Circuit's *High Fructose Corn Syrup* decision in 2002,[178] the Eleventh Circuit's *Williamson Oil* decision in 2003,[179] and the Third Circuit's *Flat Glass* decision in 2004.[180] In *Fructose*, the court found the evidence of concerted action sufficient to raise a jury question; in *Williamson*, the court found the evidence insufficient; and in *Flat Glass*, the court found the evidence sufficient as to one alleged conspiracy and insufficient as to another. Each case turned on whether there was evidence tending to show communications between defendants of the requisite form and content.

1. *High Fructose Corn Syrup*

Judge Posner's opinion in *Fructose* refers obliquely to his long-standing expansive interpretation of the reach of section 1: the

178. *In re* High Fructose Corn Syrup Antitrust Litig., 295 F.3d 651 (7th Cir. 2002).

179. Williamson Oil Co. v. Philip Morris USA, 346 F.3d 1287 (11th Cir. 2003).

180. *In re* Flat Glass Antitrust Litig., 385 F.3d 350 (3d Cir. 2004).

> statutory language 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. If a firm raises price in the expectation that its competitors will do likewise, and they do, the firm's behavior can be conceptualized as the offer of a unilateral contract that the offerees accept by raising their prices.[181]

Such an interpretation would collapse interdependent and concerted action, treating the gas stations in our hypothetical as a cartel. Recognizing that courts, particularly since *Matsushita*, have decisively rejected any such interpretation, Posner grudgingly conceded that "it is generally believed . . . that an express, manifested agreement, and thus an agreement involving actual, verbalized communication, must be proved in order for a price-fixing conspiracy to be actionable under the Sherman Act."[182] Although such an agreement can be proven by direct testimony, it can also be proven by "economic evidence suggesting that the defendants were not in fact competing, and noneconomic evidence suggesting that they were not competing because they had agreed not to compete."[183] Notice that, in this formulation, economic evidence shows only interdependence; noneconomic evidence is crucial to proof of concerted action, defined by "actual, verbalized communication."

Because noneconomic evidence of collusion tends to be testimony about conversations, motivations, and other facts bearing on the issue of agreement, the usual rules governing the assessment of this kind of evidence at the summary judgment stage applied. For example, Judge Posner rejected as a basis for summary judgment the uncontradicted but "self-serving, uncorroborated, [and] implausible"[184] testimony of one of the defendants' executives, because the jury was free to disbelieve it. He also noted that so long as bits of evidence are not wholly without weight on the issue of agreement, they should not be rejected simply because each one is insufficient to avoid summary judgment; they should be considered as a whole.[185] Finally, Posner distinguished evidence of conspiracy from evidence of its efficacy. The defendants argued evidence that transaction prices departed from list prices

181. *Fructose*, 295 F.3d at 654. *See also* POSNER, *supra* note 6, at 94 ("[O]ne seller communicates his 'offer' by restricting output, and the offer is 'accepted' by the actions of his rivals in restricting their outputs as well.").

182. *Fructose*, 295 F.3d at 654. He also said the element agreement required "an explicit, manifested agreement rather than a purely tacit meeting of the minds." *Id.* at 654–55.

183. *Id.* at 655.

184. *Id.*

185. *Id.* at 655–61 (stating that courts must avoid supposing that "if no single item of evidence presented by the plaintiff points unequivocally to conspiracy, the evidence as a whole cannot defeat summary judgment").

disproved the existence of agreement. Posner recognized that mere identity of list prices would not be evidence of agreement even if transaction prices were the same; but the fact that transaction prices were different did not contradict noneconomic evidence of an agreement to fix list prices, which is per se illegal.[186]

Posner found that the economic evidence showed the market was conducive to secret price fixing. He explained that it would be impractical to police by surreptitious communications markets with many sellers, heterogeneous products, and few buyers, because the High Fructose Corn Syrup (HFCS) market was concentrated and the product homogeneous, "elaborate communications, quick to be detected, would not have been necessary to enable pricing to be coordinated" and cheating to be unmasked. The fact that some HFCS was manufactured using corn provided by customers complicated the problem of fixing prices, but apparently not insurmountably. The existence of a few large buyers also did not prevent price fixing, because sellers could conspire to discriminate in price, exploiting the smaller buyers.[187]

Posner also reviewed the evidence of noncompetitive conduct and found it consistent with price fixing. Parallel price changes in the proportion of the prices of the two grades of HFCS were not explained by the proportional difference in sweetness. Parallel changes in the terms of contracts to the detriment of consumers without a compensating change in price were also noncompetitive. Most suggestively, the defendants bought HFCS from each other to supply contracts, even though it would have been less costly to produce the marginal units themselves. Finally, market shares remained stable during the alleged conspiracy period, despite changes in demand. The plaintiff produced, and the court admitted, a regression analysis tending to show that economic variables affecting the price of the product did not account for the price increases during the alleged conspiracy period; the defendant's economic testimony did not entirely discredit these studies.[188]

Although this evidence showed that the defendants "tacitly agreed not to compete" it was insufficient to avoid summary judgment, because "the plaintiffs must prove that there was an actual, manifest agreement not to compete." Posner found that a collection of bits of "noneconomic" evidence supported that inference.

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186. *Id.* at 656.

187. *Id.* at 656–58. The court found that the *Fructose* situation was one with "some large and some small buyers." *Id.* at 658.

188. *Id.* at 658–61.

> One of the defendants' plant managers said, "We have an understanding within the industry not to undercut each other's prices."[189]
>
> One of the defendants' documents stated it would "support efforts to limit [HFCS] pricing to a quarterly basis."[190]
>
> The president of one defendant said "our competitors are our friends. Our customers are the enemy." Another said "competitors[']' happiness is at least as important as customers[']' happiness." [191]
>
> A director of one of the defendants said "*every* business I'm in is an organization,"[192] apparently industry jargon for a cartel.
>
> An executive of ADM referred to a "deal" to "fuck [Coca-Cola] over" and to an "understanding between the companies that . . . causes us not to . . . make irrational decisions."[193] He compared ADM and Cargill to Japanese firms that many believe fix prices.
>
> A defendant's document expressed concern about "entry of new entrants (barriers) and [whether they] will they play by the rules (discipline)."[194]
>
> An ADM executive who was convicted of price fixing in other markets expressed concern that another rival might have been "hit" in an FBI raid when ADM was. The same executive took charge of ADM's HFCS operation at the same time the noncompetitive behavior in the industry became prevalent. That executive and another convicted ADM executive asserted their Fifth Amendment privilege when asked questions about HFCS, creating an adverse inference of conspiracy that was admissible against ADM.[195]

Posner concluded that evidence was "highly suggestive of the existence of an explicit though of course covert agreement to fix prices" and thus even though it was "not conclusive" and there were "alternative interpretations of every bit of it," it was sufficient for "a reasonable jury to infer that the agreement to fix prices was express rather than tacit."[196]

This passage strikingly displays Posner's adoption (at least for purposes of the case) of a demanding definition of agreement, but a relaxed burden of production for the plaintiff on the issue of agreement. He stressed at several points that any agreement must have involved

189. *Id.* at 660.
190. *Id.*
191. *Id.*
192. *Id.*
193. *Id.*
194. *Id.*
195. *Id.* at 663.
196. *Id.*

secret communications to reach consensus on list prices. Nevertheless, he accepted an assortment of cryptic statements that there was an "understanding," or "rules," or an "organization" in the industry as sufficient evidence that such a consensus was reached. Superficially and individually, all of these terms are ambiguous and could be interpreted to mean only interdependent action. Together, they were sufficient.

Posner did not distinguish concerted action from a completed verbal agreement. Perhaps he thought it was not necessary to do so for purposes of the case, because he believed the evidence referred to an "organization," an explicit (though secret) cartel. It is easy to see why the Antitrust Division did not bring criminal charges against the defendants for their actions in this market. As we have seen, a criminal case almost invariably requires detailed accounts of specific conversations (through immunized witnesses or surveillance tapes) in which each participant expresses acceptance of a proposed course of action. Although the Antitrust Division was able to meet that standard in some segments of the grain industry,[197] it failed in HFCS, presumably because there were no accounts of any specific communications. [198] Nevertheless, in the context of an industry in which imprisoned executives asserted a Fifth Amendment privilege, it was reasonable to read the statements in a more sinister light for purposes of a civil case. That industry usage suggested, although it did not specify, communications within the framework of a conventional clandestine cartel.

2. *Williamson Oil*

In *Williamson Oil*,[199] cigarette wholesalers alleged that Philip Morris had orchestrated an industry-wide price increase by means that amounted to concerted action. Philip Morris had tried various ineffective measures to counter the effects of discount brands on the prices and market share of its premium products. Finally, in a bold stroke, Philip Morris cut the price of its dominant Marlboro brand by 40 cents per pack and announced it would not increase the prices of its premium brands for the foreseeable future. Several months later, it extended the price cuts to its other premium brands. It also cut the price of discount brands and increased the price of its deep discount brands,

197. These conspiracies are the subject of KURT EICHENWALD, THE INFORMANT: A TRUE STORY (Broadway Books 2000).

198. Posner recognized that "the evidence in this case probably is not strong enough to establish the defendants' guilt beyond a reasonable doubt." *Fructose*, 295 F.3d at 664.

199. Williamson Oil Co. v. Philip Morris USA, 346 F.3d 1287 (11th Cir. 2003).

thus simplifying its price structure and narrowing the differences among them. The rest of the industry matched the price cuts.[200]

The plaintiffs alleged that manufacturers coordinated a series of price increases by an elaborate system of "signaling." According to the plaintiffs, Philip Morris's drastic price cut, called "Marlboro Friday," "constructively informed its competitors that price discounting to gain market share would no longer be tolerated, and that only when such efforts were abandoned, and the premium/discount price gap narrowed, could prices again rise."[201] Other cigarette manufacturers responded by expressing displeasure with the price war in the trade press. Philip Morris then accepted this "offer" by limiting wholesalers' allocations, heralding the desired price increase. R.J. Reynolds Tobacco (RJR), a competitor, then announced price increases in both premium and discount brands, thus maintaining the narrow gap between premium and discount brands, and the other manufacturers followed. More industry price increases followed, some allegedly against the interests of some of the manufacturers, and each accomplished by "credit memos" to wholesalers that functioned as signaling mechanisms.[202] The manufacturers also "exchang[ed] sales data through a common consultant . . . to ensure that all were adhering to their allocation programs and to detect and punish" defectors from the agreement.[203]

The manufacturers responded by noting that while wholesale prices increased, manufacturers were investing heavily in retail promotions like coupons. Moreover, the increases were few and did not bring wholesale prices to pre–Marlboro Friday levels for several years. As evidence of continued competition, they noted that market shares changed significantly during the supposed conspiracy period.[204]

The court rejected the plaintiffs' contention that the evidence revealed "signaling" that amounted to a plus factor. The court viewed these actions as "communications with the market," which oligopolists could legitimately monitor to formulate their strategies. "Antitrust law permits such discussions" because "dissemination of pricing information" can have economic benefits.[205] The purported signaling

200. *Id.* at 1292.

201. *Id.* at 1293.

202. *Id.* at 1294.

203. *Id.* at 1295–96.

204. *Id.* at 1294.

205. *Id.* at 1305; *see also* United States v. Gen. Motors Corp., 1974 WL 926 at 21 (E.D. Mich. Sept. 16, 1974) ("The public 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.").

merely "return[ed] the tobacco industry from the pricing chaos that followed Marlboro Friday to a 'traditional normal oligopoly.'"[206] Marlboro Friday itself, including the commitment to keep prices low, was an "exceptionally competitive move."[207] The Supreme Court in *Brooke Group* rejected any rule of above-cost predatory pricing because "discouraging a price cut and forcing firms to maintain supracompetitive prices, thus depriving consumers of the benefits of lower prices in the interim, does not constitute sound antitrust policy."[208] To characterize price-cutting as a signal for a price-fixing conspiracy would create similar perverse incentives.

The subsequent response of other cigarette manufacturers to raise prices without re-widening the gap between discount and premium brands was also "rational pricing behavior"[209] because Philip Morris had made clear to all by Marlboro Friday that it would match the discount prices and undercut the premium prices. The comment of a rival executive that his company had "no wish to escalate"[210] the price war could not reasonably be interpreted as a signal, particularly when taken in context of the executive's entire statement, which emphasized his firm's exercise of tactical judgment.

The statement of another executive to stock analysts that his company "intend[ed] to pursue options other than price" on discount cigarettes was likewise innocuous when viewed in context because it simply acknowledged the narrowed gap between premium and discount brands.[211] Nor was Philip Morris's announcement of an allocation program limiting the volume of product that wholesalers could buy viewed as a signal that a price increase was in the offing because it was a legitimate way to prevent "loading" by wholesalers at the lower price.[212] Finally, Philip Morris's rivals did not signal acceptance of a plan of concerted action by raising discount and premium prices by the same amounts because they knew any attempt to widen the gap between the tiers would continue the price war.[213]

The rivals also, through an independent management services firm, exchanged information that tracked information on wholesale to retail

206. *Williamson Oil*, 346 F.3d at 1306.

207. *Id.*

208. Brooke Group Ltd. v. Brown & Williamson Tobacco Corp., 509 U.S. 209, 223–24 (1995).

209. *Williamson Oil*, 346 F.3d at 1307.

210. *Id.*

211. *Id.* at 1308–09.

212. *Id.* at 1309.

213. *Id.* at 1309–10.

sales and shipments, but not on prices. Philip Morris had developed the system with the firm, then later allowed its rivals to participate, with each rival sharing the cost of the service and its sales information. The court found that the independent benefit of sharing costs was as good an explanation for the arrangement as facilitating the monitoring of the conspiracy.[214] It was also in the individual interests of the firms because each firm had an interest in "keeping tabs" on its rivals.[215] Sharing one's information was a condition of gaining access to rivals' information:

> If a particular manufacturer ceased providing its own information, its entitlement to that of its competitors would similarly end. To draw an analogy, each company's willingness to give its own information can be viewed as the ante in a poker game. To ante is irrational only if there is no legitimate reason why one would be playing the game; yet here, the game is oligopolistic competition, which everyone concedes is lawful, and the ante is perfectly consonant with the desire to play.[216]

This language should not be read as approving information exchanges by rivals to overcome practical difficulties in coordinating price increases. Participating in such an arrangement is evidently an agreement to exchange information. But it would only be the basis for inferring concerted action if the information exchanged involved communication of reliance on rivals' pricing behavior, or at least suggested that such exchanges had occurred. Because the information exchanged in *Williamson Oil* did not include pricing data, it was far less suspicious.

If we place *Williamson Oil* alongside *Fructose*, the meaning of communication in the definition and proof of agreement becomes clearer. In *Fructose*, although there was no evidence of any specific communication, Judge Posner expressly applied a definition of agreement that required communications of a particular kind—secret communications aimed at reaching agreement on list prices—and found sufficient evidence of such an agreement in the form of references to "understandings" and an "organization" in a segment of an industry in which other segments were admittedly cartelized. In *Williamson Oil*,

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214. *Id.* at 1313.

215. *Id.*; *see also In re* Citric Acid Litig., 191 F.3d 1090, 1099–1100 (9th Cir. 1999) (holding defendant's participation in an association that required sharing of information in return for aggregate sales and production data was in the defendant's individual interest).

216. *Williamson Oil*, 346 F.3d at 1313. The district court also found that the firms did not negotiate and agree on modifications of the information provided; the services firm considered each proposal for changes separately. *Id.* at 1315. The court rejected as a plus factor the tobacco industry's history of price fixing. *Id.* at 1317–1318.

there was a great deal of evidence of communication, but the court concluded that there was insufficient evidence of concerted action to create an issue for the jury. In reaching this result, the Eleventh Circuit purported to apply the conventional, if meaningless, "meeting of minds" definition of agreement rather than Judge Posner's more concrete definition that required communication of a particular sort. Nevertheless, it is apparent in *Williamson Oil* the court was implicitly applying a standard that required at least communication of intent and reliance.[217]

This more exacting definition is apparent in the court's rejection of the plaintiffs' purported evidence of signaling. The Marlboro Friday price cut did not qualify as a signal because it was a communication with the market, not a direct (or mediated) communication between manufacturers; consequently, it was impossible to attribute to it the sort of definite assertion of future pricing intentions and reliance on the actions of others. The statements to the press by executives about their expectations about the market were likewise too ambiguous about future pricing intentions and their dependence on the actions of others to meet the definition of concerted action. The information exchange arrangement, which did not convey prices but aggregated sales and shipment data, could not have conveyed the information necessary for agreement and was not sufficiently specific to police a preexisting agreement. In all of these instances, the court was evidently looking for communications that could convincingly convey the sort of information about pricing intentions and reliance.

217. *See also In re* Baby Food Antitrust Litig., 166 F.3d 112 (3d Cir. 1999), in which the court affirmed summary judgment for the defendant despite evidence of exchange of price information among rivals. The court characterized the exchanges as "sporadic exchanges of shop talk among field sales representatives who lacked pricing authority . . . ." *Id.* at 125. To meet the plaintiff's burden of production, the information exchanges must "rise to the level of an agreement, tacit or otherwise." *Id.* at 126. This was not shown, according to the court. There was also a suggestion in one internal memo that the parties had reached a "truce," but the same document described "aggressive competition." *Id.* at 127. The court also found that the rivals' pricing decisions were different over 80 percent of the time. *Id.* at 128. The result in the case was probably correct, but the reasoning was unnecessarily vague, particularly in the description of the nature of the communications that would be required to show concerted action. Mere exchanges of current price data among employees without pricing authority do not allow an inference that the interlocutors conveyed their reliance on one another's actions. *See also* Blomkest Fertilizer, Inc. v. Potash Corp. of Sask., 203 F.3d 1028, 1037 (8th Cir. 2000) *reversing en banc*, 176 F.3d 1055 (8th Cir. 1992), in which a narrow majority of the court held that evidence of exchange of price verification information was an insufficient basis for inferring an agreement to fix prices.

3. *Flat Glass*

Flat Glass, the most recent important case on proof of concerted action, is of particular interest, first because of the court's focused discussion of the nature of plus factors, and, second, because of the court's revealing application of that analysis to two alleged conspiracies in the glass industry. Although the court applied the plus factors framework, it implicitly required evidence tending to show communications of intentions and reliance. Tellingly, it characterized the factors as "proxies for direct evidence of an agreement."[218] As we have seen, direct evidence requires unambiguous testimony of conversations spelling out the communications.

The court listed as plus factors "(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.'"[219] It then characterized the first two in this list as "neither necessary nor sufficient"[220] to create a jury issue because they rarely do more than "restate the phenomenon of interdependence" in parallel pricing cases.[221] As we have already seen, rivals have a motive to form a cartel whenever their industry's structure makes it possible, but that same structure also makes purely interdependent action more likely to be possible. Similarly, if the market is structured in a way that permits interdependence, increasing prices in hopes that others will do the same may well be in a firm's long-run individual interest.

Strikingly, however, the court exempted from its caution concerning the probative value of the first two factors "non-price" actions against self-interest that facilitate price coordination. The only example of this sort of evidence the court offered was "apparently unilateral exchanges of confidential price information," which may be more probative of agreement, because they "cannot simply be explained as a result of oligopolistic interdependence."[222] Thus, the court viewed nonpublic

218. *In re* Flat Glass Antitrust Litig., 385 F.3d 350, 360 (3d Cir. 2004).

219. *Id.* (citing Petruzzi's v. Darling-Delaware Co., 998 F.2d 1224, 1244 (3d Cir. 1993)).

220. *Id.* at 361 n.12.

221. *Id.* at 360.

222. *Id.* at 361 n.12. Interestingly, the court cited the dissent in *Blomkest* for this proposition. Blomkest Fertilizer, Inc. v. Potash Corp. of Sask., 203 F.3d 1028, 1047 (8th Cir. 2000) (Gibson, J., dissenting). In that case, the purportedly confidential information was the price of completed transactions, something the dissent considered inexplicable other than as a means of policing cheating. *Id. See also In Re* High Pressure Laminates Antitrust Litig., No. 00 MDL 1368(CLB), 2006 WL 1317023, at *2 (S.D.N.Y. May 15, 2006) (holding that there was a permissible inference that it "made no economic sense" for the defendant to possess cost data from one rival and to fax it to another rival, unless there was a price fixing agreement).

communications of pricing information, even if they do not amount to direct evidence of conspiracy, as the primary form of action against self-interest that may actually constitute a plus factor.

The only other plus factor the court identified as sufficient was "evidence implying a traditional conspiracy," that is, quoting Judge Posner in *Fructose*, "non-economic evidence 'that there was an actual, manifest agreement not to compete.'"[223] This sort of evidence may involve "'proof that the defendants got together and exchanged assurances of common action or otherwise adopted a common plan even though no meetings, conversations, or exchanged documents are shown.'"[224] This last passage, quoted from the Areeda and Hovenkamp treatise, also places communications at the center of the inquiry, although it clouds the point somewhat by implying that rivals may adopt a common plan "otherwise" than by communication. If we set this quibble to one side, the court's framing of the plus factors standard all but stated that communication sufficient to convey the requisite knowledge, common goals, and reliance is an element of concerted action.

Its application of the plus factors analysis confirms this interpretation. One class alleged that the defendants fixed the prices of flat glass and another alleged they fixed the prices of automotive replacement glass. The court found the evidence of alleged flat glass conspiracies sufficient to create a jury issue and the evidence of the alleged replacement glass conspiracy insufficient. The result in both cases hinged on the court's interpretation of evidence of communication among the defendants. The buyers of flat glass alleged that the manufacturers colluded in a series of price increases over four years. All of the manufacturers settled, except PPG Industries, who moved for summary judgment. The Third Circuit concluded that the manufacturers had a motive to conspire (because the industry was oligopolistic, with declining demand and substantial excess capacity) and that there was evidence the defendants had coordinated increases in list prices that were not justified by changes in demand or cost.[225] In addition, however, there was strong evidence of "traditional conspiracy" among PPG's rivals—a submission by one of them to the Antitrust Division seeking leniency that referred to an "agreed upon, across the board price increase for the entire United States."[226] Although evidence that others in the industry had conspired

223. *Flatglass*, 385 F.3d at 361 (quoting *Fructose*, 295 F.3d at 661).

224. *Id.* at 361 (quoting AREEDA & HOVENKAMP, *supra* note 80, at ¶ 1432(b), at 243).

225. *Id.* at 361–62.

226. *Id.* at 363.

might be insufficient to avoid summary judgment in favor of a firm that "mirrored" their actions, the evidence was relevant and sufficient when considered together with evidence that PPG had joined the agreement.

Most of the evidence of PPG's involvement consisted of memos referring to communications with rivals about upcoming price increases.[227] After an unsuccessful attempt by one rival to raise prices, one of PPG's rivals held an internal meeting, whose minutes stated that "there are indications that a price increase of approximately 8% would hold."[228] Later, representatives of that same rival met with a PPG executive. Two weeks later, PPG increased prices by the predicted 8%, and others followed. Internal documents of PPG and another rival suggested they knew in advance the increase would occur. Other internal memos at first expressed satisfaction that the price increase had been "implemented," but later memos complained that the increase ultimately failed because some rivals did not "hold the line."[229]

In another instance, one rival knew in advance of the exact date and amount of another firm's planned price increase. Even though PPG memos admitted that demand did not justify the increase, all rivals increased prices within a week of each other.[230] Other evidence indicated rivals met at a trade meeting and one expressed "support" for another's price increase proposal. In the last instance, rivals discussed an upcoming price increase, and one took it into account in budgeting. A rival then faxed to PPG a preannouncement copy of its planned price changes. PPG increased its own prices by the same amount a week before the planned increases and the rest of the firms in the industry followed. After the increase, there were memos about 'holding firm' and "stick[ing] to the rules."[231]

Unlike an earlier Third Circuit decision in which evidence that firms had copies of their rivals' internal memos was found to be innocuous, in this instance the memos reflected high-level contacts and were correlated with actual price increases.[232] Like Posner in *Fructose*, the

227. *Id.* at 364–67. For a similar case in which evidence suggested rivals had prior knowledge of rivals' price increases and directly communicated about the need to increase margins, see *In Re* High Pressure Laminates Antitrust Litig., No. 00 MDL 1368(CLB), 2006 WL 1317023, at *3–4 (S.D.N.Y. May 15, 2006). The court there denied the defendant's motion for a directed verdict at the close of the plaintiff's case. *Id.* at *5.

228. *Flat Glass*, 385 F.3d at 364.

229. *Id.* at 365.

230. *Id.* at 365–66.

231. *Id.* at 366–67.

232. *Id.* at 368 (discussing *In re* Baby Food Antitrust Litig., 166 F.3d 112, 126 (3d Cir. 1999)). Although the court did not discuss it, this consideration also distinguishes Blomkest Fertilizer, Inc. v. Potash Corp. of Sask., 203 F.3d 1028, 1034–35 (8th Cir. 2000), in which the

court emphasized that pieces of evidence could not be scrutinized individually, but considered in their "totality" and in relation to one another.[233] For example, the faxing of a prepublication list of anticipated price increases gained significance because the recipient increased prices by the same amount before the senders' prices went into effect and the remaining firms followed.

In the alleged conspiracy to fix the price of automotive replacement glass, the plaintiffs alleged that the defendants fixed truckload prices by reference to the retail prices suggested by NAGS, an independent company. NAGS collected the truckload prices in the industry, selected one as a benchmark, then applied a multiplier to determine the suggested retail price. The glass manufacturers knew the multiplier, and so were able to adjust their truckload prices to conform to the one selected by NAGS. The court refused to infer a conspiracy in these circumstances because publication of this sort of pricing information could be procompetitive and actually benefit consumers.[234]

The courts' analyses of the two conspiracies show not only the central role of communications in the analysis, but that the form and content that communications must have to be probative of concerted action. In the flat glass conspiracy, evidence suggesting private, high-level communications of impending price increases created a reasonable inference of agreement. The court emphasized that the relatively ambiguous evidence that firms knew about their rivals' price increases before the public was reinforced by the ensuing pattern of their own price changes and other communications. In the automotive replacement glass conspiracy, however, dissemination of price information by an independent organization created no such inference.

VI. CONCLUSION

Courts continue to quote *American Tobacco*'s vague definition of agreement in section 1 cases. The *Model Jury Instructions*, revised in 2005, still state that an agreement may be "entirely unspoken." Since *Matsushita*, however, courts have required plaintiffs to produce evidence that permit an inference that the defendants' parallel conduct was concerted rather than merely interdependent. In doing so, the courts have implicitly moved toward a more specific definition of concerted action, one that requires not only common goals and reliance,

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majority rejected as evidence of conspiracy exchanges of price verifications concerning completed transactions that were not correlated with the allegedly conspiratorial price increases.

233. *Id.* at 369.

234. *Id.* at 369–70.

but communication that made those goals and reliance possible. Explicit adoption of such a definition would not relieve courts and juries of difficult problems of inference. It might, however, foster consistency in application of the *Matsushita* standard and provide juries with better guidance in evaluating evidence that courts find meets that standard.