HOW TO HIDE A PRICE-FIXING CONSPIRACY: DENIAL, DECEPTION, AND DESTRUCTION OF EVIDENCE

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Price-fixing conspiracies overcharge consumers by billions of dollars every year. Although such collusion violates antitrust law, hundreds of price-fixing cartels continue to operate unimpeded because they successfully conceal their illegal collusion. Using examples from more than fifty price-fixing conspiracies, this Article identifies and catalogs the various concealment measures that actual price fixers employ to hide their collusion.

When engaging in price fixing, respectable business executives use code names and encrypted messages; they register in hotels using aliases; they rendezvous secretly in seedy locations; they create fake trade associations; they hide or destroy incriminating documents; and they falsify their travel documents and expense reports. And if they are ever accused of collusion, they deny the charges and profess that they are reputable businesspeople who would never countenance illegal conduct. Then they tell false cover stories that they have coordinated in advance.

This Article explains how federal courts have unwittingly rewarded the various concealment methods commonly employed by price-fixing conspirators. For example, judges treat defendants' documents as inherently accurate, even though price-fixing conspirators routinely fabricate exculpatory documents. Because they do not understand cartel concealment methods, many federal judges are too quick to dismiss price-fixing claims or grant summary judgment to price-fixing defendants. This Article analyzes dozens of cases, across most federal circuits, in which judges have been fooled by–or have failed to appreciate the significance of–cartel concealment methods.

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I. INTRODUCTION

When Dede Brooks became the CEO of Sotheby's, the preeminent auction house in America, her days of driving herself to the airport were in the past.[1] So, it was unusual when Brooks drove her green Lexus to JFK Airport.[2] But she needed to arrive at the curbside passenger pick-up area alone.[3] Waiting for Brooks was neither an old friend nor a family member.[4] Fresh from his trip from London on the now-defunct Concorde supersonic jet, was Christopher Davidge, the CEO of Christie's, Sotheby's primary rival in the international market for auctioning world-class masterpieces.[5] Both CEOs arrived at JFK secretly because their liaison was criminal.[6] Brooks drove Davidge to a short-term parking lot across the street from the airport where the two executives exchanged confidential documents and conspired to impose non-negotiable commissions on their clients.[7] A couple of hours later, Davidge was back on the Concorde, flying home to London, and Brooks returned to her publicly scheduled events.[8] Their colleagues were unaware of the transcontinental rivals rendezvousing in New York City.[9]

Like polo and baccarat, participation in international price-fixing rings is generally a game reserved for the wealthy. Well-heeled and well-respected men and women plan clandestine meetings to set prices and divide up world markets, all while maintaining the illusion of active competition. Congress enacted the Sherman Act to deter and punish price fixing.[10] Yet, instead of holding price-fixing conspirators accountable for their collusion and concealment, federal judges often reward the latter and, thus, encourage the former.

Price fixers use code names; they register for hotels using aliases; they rendezvous secretly; they create fake trade associations; they hide or destroy incriminating documents; they falsify their travel documents and expense reports.[11] And, if they are ever accused of collusion, they deny the charges and profess that they are reputable businesspeople who would never countenance illegal conduct. Many judges defer to these protestations of innocence and prevent even the most credible price-fixing claims from reaching a jury.[12]

1. CHRISTOPHER MASON, THE ART OF THE STEAL: INSIDE THE SOTHEBY'S –CHRISTIE'S AUCTION HOUSE SCANDAL 127 (2004).
2. *Id.* at 157.
3. *Id.*
4. *Id.*
5. *Id.*
6. *See id.* at 157–58.
7. *Id.* at 157.
8. *Id.* at 158.
9. *Id.*
10. 15 U.S.C. §§ 1–7.
11. *See* discussion *infra* Part III.
12. *See* discussion *infra* Part IV.

This Article explains how price-fixing conspirators conceal their illegal collusion from the prying eyes of their victims, prosecutors, and judges. Part II reviews the consequences of cartelization for both the victims and perpetrators of price-fixing conspiracies. A simple symmetry would suggest that, because price fixing represents a wealth transfer from consumers to producers, the effects are balanced. But the stakes are not symmetrical because, if caught, price fixers are subject to treble damages, criminal fines, and imprisonment. These penalties create an overwhelming incentive for cartel members to conceal their collusion.

Part III explores the lengths to which firms go to conceal their price-fixing activities. As part of their planning efforts, cartel ringleaders often develop sophisticated schemes involving code names, encrypted messages, and clandestine meeting places, so that no outsiders can observe or trace their activities. Many price-fixing conspiracies create sham trade associations, including fake meeting minutes and agendas, which they then use to justify their time together, time actually spent fixing price and allocating market shares. Price fixers develop false cover stories that they agree in advance to tell government officials or private plaintiffs should anyone inquire about their inter-competitor meetings or other suspicious behavior. Finally, in addition to concealing their interactions and creating cover stories to explain their suspicious conduct, price-fixing conspirators engage in the affirmative destruction of materials that could expose their collusion. Part III provides examples from dozens of cartels showing how price-fixing conspirators conceal their crimes.

Part IV examines how federal courts have unwittingly rewarded the various concealment methods commonly employed by price-fixing conspirators. Courts often treat a defendant's denial of price fixing as powerful evidence of innocence, instead of recognizing that price-fixing conspirators reflexively deny their collusion. Judges treat defendants' documents as inherently accurate, despite the fact that price-fixing conspirators falsify exculpatory documents. Conversely, judges treat an absence of notes from inter-competitor meetings as a nonevent and fail to assign sufficient negative consequences to the destruction of notes and other evidence. Many judges defer to the explanations proffered by defendants for their parallel pricing behavior and other suspicious conduct. Yet judges fail to sufficiently draw negative inferences when these explanations are shown to be false.

Because they do not appreciate cartel concealment methods, many federal judges are too quick to dismiss price-fixing claims. In many cases, judges demand a quantum and quality of evidence that is unattainable for most victims of price-fixing conspiracies. Even when plaintiffs survive motions to dismiss, federal courts routinely grant summary judgment to price-fixing defendants. Part IV reviews dozens of cases across most federal circuits in which judges have granted or affirmed summary judgment because they failed to recognize that price-fixing conspirators conceal their collusion through manipulating their price announcements, creating fake trade associations and using legitimate trade associations as a cover for collusive meetings, transferring sensitive documents anonymously, using common consultants and secret bilateral meetings to exchange infor-

mation, engaging in inter-competitor sales, and destroying incriminating evidence. All of these are classic forms of cartel concealment. Yet many courts do not seem to understand their significance.

Part V proposes how antitrust doctrine could better serve the twin goals of holding price-fixing conspirators liable for the injuries they cause while protecting innocent firms against improper findings of antitrust liability. The fact that price-fixing conspirators routinely lie and destroy evidence should inform how judges approach a range of legal questions that arise in antitrust litigation. As currently applied in much price-fixing litigation, the standards for motions to dismiss and motions for summary judgment are as likely to protect felons as they are to protect innocent defendants. When considering defendants' dispositive motions, courts should treat the defendants' concealment efforts as strong evidence of collusion. Concealment is not only a significant plus factor in its own right, but defendants' concealment efforts also explain *why* the plaintiffs may not have more evidence—whether circumstantial or direct—of illegal collusion among the defendants. Finally, Part V proposes ways to reinvigorate the Department of Justice's ("DOJ") antitrust amnesty program in order to better encourage individuals with evidence of price-fixing conspiracies to step forward.

Part VI concludes by explaining how the judicial deference to defendants undermines deterrence of price-fixing activity and thwarts the goal of compensating a cartel's victims.

II. THE CONSEQUENCES OF PRICE FIXING

Price fixing has been ubiquitous since the emergence of modern capitalist economies. For much of the twentieth century, major commodities were controlled by international cartels, which constrained production and raised prices with the goal of maximizing profits at the expense of consumer welfare.[13] Then and now, price-fixing activities have had profound impacts on the consumers targeted by the collusion and, when caught and punished, on the conspirators themselves.

Of all economic crimes, price fixing is perhaps the most directly harmful to the greatest number of consumers. When firms successfully collude, they reduce the accessibility of necessary goods and services and overcharge consumers in amounts that can range from hundreds of dollars to billions of dollars. Price-fixing conspiracies raise the price of food, of medicine, and of everyday items like mobile phones and televisions.[14] This can deplete consumers' disposable income, reducing savings and the money available to purchase the other necessities of life, and exacerbating the problem of income inequality.[15] Because price

13. *See* JOHN M. CONNOR, GLOBAL PRICE FIXING 1, 46–47 (2d ed. 2008); *see also* GEORGE W. STOCKING & MYRON W. WATKINS, CARTELS IN ACTION 5, 154 (1947).

14. Christopher R. Leslie, *Antitrust Law as Public Interest Law*, 2 U.C. IRVINE L. REV. 885, 887–90 (2012).

15. *See* Rory Van Loo, *Broadening Consumer Law: Competition, Protection, and Distribution*, 95 NOTRE DAME L. REV. 211, 237 (2019) ("[A]ntitrust scholars have mostly concluded that antitrust-related overcharge contributes significantly to income inequality . . . .").

fixing is unambiguously bad for consumers and the economy, antitrust law condemns price-fixing agreements as per se illegal, which means such agreements violate Section 1 of the Sherman Act as a matter of law without any proof that the conspiracy was successful.[16]

The consequences of price fixing for the conspirators span two extremes. The potential gains from price fixing are essentially symmetric to the consumers' losses. Each dollar that consumers are overcharged results in a dollar of ill-gotten gain for the cartel.[17] For some cartels, these overcharges can measure in the billions of dollars.[18] From a sample of price-fixing conspiracies discovered since 1990, economist John Connor estimates that consumer overcharges exceeded half a trillion dollars.[19] But while society rightly views collusion as causing a massive unfair transfer of wealth from consumers to producers,[20] price fixers only see a corresponding increase in their profits.

This equivalence of effects vanishes, however, when one considers the legal consequences of price fixing. Not only can customers who purchased products from a cartel member sue to recover any overcharge they paid, the Sherman Act mandates that successful private plaintiffs receive treble damages.[21] For every dollar of actual damages that private plaintiffs can prove at trial, they receive three dollars in recovered damages.[22] Thus, when a cartel overcharges its customers by $100 million, its members are potentially on the hook for $300 million in damages. The trebling is automatic when the suit is successful; the judge has no discretion.[23] Congress intended treble damages to serve three functions: compensate victims of antitrust violations, disgorge the violator's ill-gotten gains, and deter future violations.[24]

Section 1 of the Sherman Act is simultaneously a civil and a criminal statute. Beyond the monetary penalties in private litigation, price fixers face severe criminal consequences if they are caught and convicted, including criminal fines that are the greater of double-the-gain or double-the-loss associated with the violation.[25] More importantly, the Sherman Act provides for prison sentences of

16. *In re* High Fructose Corn Syrup Antitrust Litig., 295 F.3d 651, 655 (7th Cir. 2002) ("[P]rice-fixing agreements are illegal even if the parties were completely unrealistic in supposing they could influence the market price."); Christopher R. Leslie, *Hindsight Bias in Antitrust Law*, 71 VAND. L. REV. 1527, 1579–80 (2018).

17. Of course, the cartel also incurs costs in creating and maintaining its illegal operations, many of which are related to concealment efforts. *See* discussion *infra* Part III.

18. *See, e.g.*, CONNOR, *supra* note 13 at 8–9 ("Taken altogether the vitamins cartels were probably the most destructive global conspiracies of all time, with world wide customers overcharged by $4 to $9 billion.").

19. *Id*. at 8.

20. Robert H. Lande, *Wealth Transfers as the Original and Primary Concern of Antitrust: The Efficiency Interpretation Challenged*, 50 HASTINGS L.J. 871, 919 (1999).

21. 15 U.S.C. § 15(a).

22. Because most price-fixing recoveries are achieved through settlement, not trial awards, plaintiffs rarely receive treble damages. Christopher R. Leslie, *De Facto Detrebling: The Rush to Settlement in Antitrust Class Action Litigation*, 50 ARIZ. L. REV. 1009, 1011 (2008).

23. *Id.* at 1009.

24. *See* Mark A. Lemley & Christopher R. Leslie, *Antitrust Arbitration and Merger Approval*, 110 NW. U. L. REV. 1, 22–24 (2015). In addition to treble damages, private plaintiffs also recover their reasonable attorneys' fees and costs. This is again as a matter of right, not discretion, though the district judge does have latitude in calculating the plaintiffs' "reasonable" attorneys' fees.

25. *See* 18 U.S.C. § 3571(d).

up to ten years for price fixing. Criminal exposure is not hypothetical. When discovered and prosecuted, price-fixing executives are routinely sentenced to lengthy prison terms.[26] The prospect of prison is a particularly salient consequence for price fixers because, unlike criminal fines, firms cannot easily compensate or reimburse their employees for this form of punishment.[27]

As with many financial crimes, the decision to participate in a price-fixing conspiracy is often a matter of cost-benefit analysis.[28] If the expected benefits of price fixing exceed the expected costs, then rational—amoral or immoral—executives focused solely on profit maximization will start or join price-fixing cartels. Conversely, if the expected costs exceed the expected benefits, a rational firm will decline any invitation to collude with its competitors. Aside from the administrative costs of running the cartel, the expected costs are a function of being exposed and subjected to civil and criminal penalties. If the conspiracy is never exposed, then none of the cartel participants will incur treble damages, criminal fines, or prison time. Consequently, if firms considering collusion have confidence that they can successfully conceal their conspiracy and thereby avoid exposure, they are far more likely to engage in price fixing.

Given the risk of financial liability and criminal penalties, price fixers have every incentive to conceal their conspiracy from the outside world. Beyond avoiding costs, the longer a cartel can hide its existence, the longer it can generate a stream of cartel profits for its members. Thus, cartel concealment simultaneously reduces the expected costs and increases the expected gains from illegal price fixing. Part III describes the various methods that cartels use to hide their collusion.

III. HOW PRICE FIXERS CONCEAL THEIR COLLUSION

The risk of treble damages and criminal penalties compels price fixers to conceal their collusion.[29] Cartel members therefore continually stress to each other the importance of "extreme secrecy."[30] This generally entails price fixers implementing systematic and coordinated plans to hide their crimes from their

26. *See Criminal Program Update 2015*, U.S. DEP'T OF JUST., https://www.justice.gov/atr/division-update/2015/criminal-program-update (last visited Apr. 9, 2021) [https://perma.cc/S5CL-24MK].

27. Christopher R. Leslie, *Cartels, Agency Costs, and Finding Virtue in Faithless Agents*, 49 WM. & MARY L. REV. 1621, 1654–55 (2008).

28. Gary S. Becker, *Crime and Punishment: An Economic Approach*, 76 J. POL. ECON. 169, 176 (1968).

29. Kai Hüschelrath & Jürgen Weigand, *Fighting Hard Core Cartels*, *in* THE INTERNATIONAL HANDBOOK OF COMPETITION 307, 322 (Manfred Neumann & Jürgen Weigand eds., 2d ed. 2013) ("As cartel members are typically aware of the illegality of their agreements, they have a strong incentive to keep them secret."); Michael K. Vaska, *Conscious Parallelism and Price Fixing: Defining the Boundary*, 52 U. CHI. L. REV. 508, 508 (1985) ("Section 1 of the Sherman Antitrust Act has eliminated most overt price-fixing arrangements. In order to avoid sanctions under this law, firms wishing to engage in collusive, anticompetitive practices are forced to enter into secret agreements to fix prices.").

30. JUNE H. TAYLOR & MICHAEL D. YOKELL, YELLOWCAKE: THE INTERNATIONAL URANIUM CARTEL 78 (1979) (reporting how Australia representative to the international uranium cartel "stressed the need for extreme secrecy").

victims and antitrust authorities.[31] Most price-fixing conspiracies have several moving parts and, therefore, require concealing many different things. Price fixing is usually far more complicated than competitors simply meeting once and agreeing to fix a price for their wares or services. Successful, long-term price fixing often entails relatively frequent meetings to adjust cartel prices in response to changes in consumer demand, inflation, foreign exchange rates, and other exogenous factors.[32] All of these meetings require either concealment or a convincing cover story.

Because each member of the conspiracy can increase its short-term profits by cheating on the cartel, charging a lower-than-cartel price or selling more than its cartel allotment,[33] many cartels develop and implement enforcement mechanisms. Effective cartel enforcement generally entails monitoring the co-conspirators' sales and prices and, when necessary, penalizing those firms that stray from their cartel commitments. These enforcement efforts often require meetings and other interactions among the co-conspirators.[34]

The multiple moving parts of a cartel scheme mean that conspirators must conceal their initial agreement, their ongoing cartel management, and their enforcement mechanisms. Each of these cartel functions may require its own method of concealment. This Part reviews several concealment techniques that actual cartels have used to camouflage their antitrust violations.

A. Cloak and Dagger: Code Names and Secret Assignations

Upon joining a price-fixing conspiracy, respected executives of major corporations devolve into characters who would be at home in dime-store spy novels. Successful businessmen and businesswomen adopt aliases, speak in code, and meet their rivals in hidden locales, some glamourous and some seedy. All of this is done in the name of cartel concealment.

1. Hidden Identities

Price-fixing conspirators try to conceal their identities from the outside world (and sometimes from each other). This often involves developing code names. This can be as simple as using initials or assigning each conspirator a

31. MARK JEPHCOTT, LAW OF CARTELS 17 (2d ed. 2011) ("Accordingly, cartelists frequently go to great lengths to limit the amount of incriminating documentation that exists."); *In re* Vitamins Antitrust Litig., No. MISC 99-197(TFH), 2000 WL 1475705, at *3 (D.D.C. May 9, 2000) (alleging price fixers' acts of concealment included holding "secret meetings, confining the conspiracy plan to a small group of key officials at each company, avoiding references in documents or the creation of documents which would reveal these antitrust violations, destroying documents, using codes to conceal the identity of co-conspirators, and providing false information to law enforcement authorities"); JOHN G. FULLER, THE GENTLEMAN CONSPIRATORS: THE STORY OF THE PRICE-FIXERS IN THE ELECTRICAL INDUSTRY 13 (1962) (discussing concealment methods of electrical equipment cartels).

32. *See, e.g.*, Daniel R. Shulman, *An Outsider Looks at a Criminal Antitrust Trial*, 14 SEDONA CONF. J. 89, 89 (2013) (noting regular meetings of flat-screen panels cartel).

33. Christopher R. Leslie, *Trust, Distrust, and Antitrust*, 82 TEX. L. REV. 515, 524–28 (2004).

34. *See infra* Section III.B.3.

number.[35] In the electrical equipment cartels and graphite electrodes cartel, the executives who ran the conspiracies assigned specific code numbers to each company and each individual, such as "Joe Number One."[36] In the gas insulated switchgear cartel, the cartel leaders assigned code numbers for each firm in the conspiracy along with codes for individuals, which were "based on the company number, followed by one or more letters typically based on the first name of the person."[37]

But cartel smokescreens are sometimes more complicated. For example, in the grocery store price-fixing conspiracy against cattlemen, the conspirators used nameless, color-coded badges to identify each other while maintaining anonymity.[38] Some price-fixing conspiracies, such as the lithium ion batteries cartel, used both "code names and symbols to refer to competitors, effectively frustrating outsiders' attempts to comprehend the communications."[39] In the vitamins cartel, managers concealed the identities of individual conspirators on the spreadsheets used by the cartel, rendering them unhelpful should they be discovered by outsiders.[40] The members of the graphite electrodes cartel used code names like BMW, Pinot and Wave to conceal their conspiracy to drive up the cost of specialized rods used in steelmaking.[41] Similarly, the freight forwarders that cartelized their billion-dollar market referred to their conspiracy as the "Gardening Club" and called each other by vegetable-themed code names such as asparagus and baby courgettes.[42] Most modern price-fixing conspiracies use some form of code names.[43]

Besides using code words to identify individuals, some price fixers adopt false identities or personas.[44] Some conspirators pick false names designed to

35. *See, e.g.*, FULLER, *supra* note 31, at 14, 67; *see id.* at 81 ("[T]he code numbers for the companies (GE was Number 1; Westinghouse, Number 2; Allis-Chalmers, Number 3; Federal Pacific, Number 7, and so forth); and the use of first names with numbers (Joe Number One)."); MICHAEL A. UTTON, CARTELS AND ECONOMIC COLLUSION: THE PERSISTENCE OF CORPORATE CONSPIRACIES 56 (2011) (Graphite electrodes); *In re* Polyurethane Foam Antitrust Litig., 152 F. Supp. 3d 968, 1005 (N.D. Ohio 2015).

36. FULLER, *supra* note 31, at 81.

37. JEPHCOTT, *supra* note 31, at 17–18 n.36.

38. Bray v. Safeway Stores, Inc., 392 F. Supp. 851, 857 (N.D. Cal. 1975).

39. *In re* Lithium Ion Batteries Antitrust Litig., No. 13-md-02420-YGR (DMR), 2015 WL 4999762, at *2 (N.D. Cal. Aug. 21, 2015).

40. Harry First, *The Vitamins Case: Cartel Prosecutions and the Coming of International Competition Law*, 68 ANTITRUST L.J. 711, 715 (2001).

41. Stephen Labaton, *The World Gets Tough on Fixing Prices*, N.Y. TIMES (June 3, 2001), https://www.nytimes.com/2001/06/03/business/the-world-gets-tough-on-fixing-prices.html [https://perma.cc/VW9P-NBAL].

42. Press Release, Eur. Comm'n, Antitrust: Commission Imposes € 169 Million Fine on Freight Forwarders for Operating Four Price Fixing Cartels (Mar. 28, 2012), https://ec.europa.eu/commission/presscorner/detail/en/IP_12_314 [https://perma.cc/EZ3A-9BES].

43. *See, e.g.*, *In re* Auto. Parts Antitrust Litig., No. 12-md-02311, 2014 WL 4272772, at *13 (E.D. Mich. Aug. 29, 2014) (firms fixing the prices of automotive wire harness systems "admitted to using code names and meeting at remote locations as well as monitoring compliance with the conspiracy"); David Gow, *Heineken and Grolsch Fined for Price-Fixing*, GUARDIAN (Apr. 18, 2007), https://www.theguardian.com/business/2007/apr/18/7 [https://perma.cc/6G3U-WBHW] (noting that brewers fixing prices in Dutch beer market "tried to cover their tracks by using code names and abbreviations for secret meetings").

44. *See, e.g.*, Brief for the United States of America at 22, United States v. Gaev, 24 F.3d 473 (3d Cir. 1994) (No 93-1643), 1993 WL 13121236.

obfuscate their collusion should their communications be discovered. For example, in the international lysine cartel—led by the rival agribusiness titans, Japan-based Ajinomoto and U.S.-based ADM—Kanji Mimoto, head of the feed additives division of Ajinomoto, adopted the pseudonym "Tany" because this was the name of a Japanese ADM employee; thus, "any outsider discovering the calls would think they were internal to ADM, rather than evidence of an illegal conspiracy between two companies."[45] Such tricks help hide the crime of collusion.

In addition to concealing the identities of individuals involved in the price-fixing conspiracy, cartel leaders often try to conceal the identity of the cartel group itself behind an innocuous name. Some cartels have christened their conspiracies with code names. The members of the clandestine uranium cartel referred to themselves as "the Club,"[46] a moniker also adopted by the zinc phosphate cartel.[47] The senior executives running the Japanese consumer electronics cartel referred to themselves as "The Palace Group."[48] Manufacturers of flat-screen panels used in cellphones, computer monitors, and televisions referred to their cartel meetings as "Crystal Meetings," of which they held approximately fifty during the conspiracy's operation.[49] By sounding innocuous, these names help hide the cartel operation from the outside world.

2. Secret Communications

Some price-fixing conspirators communicate through the mail. When doing so, they generally use plain envelopes with no return address and blank stationery populated with code names that would be meaningless to any unintended readers.[50] In the electronic equipment cartel, conspirators mailed their messages to executives' homes, not their offices where assistants could unwittingly open incriminating letters.[51] Through these means, rivals could exchange confidential price lists with each other.[52] Some modern cartels have continued to use the postal service despite the availability of more instantaneous modes of communication.

Other price-fixing cartels have eschewed the mail and conspired through telephone conversations punctuated by code words and code names, which would confuse anyone eavesdropping in person or through wiretapping.[53] When relying on telephone contacts, calls are "placed after normal business hours and

45. JAMES B. LIEBER, RATS IN THE GRAIN: THE DIRTY TRICKS AND TRIALS OF ARCHER DANIELS MIDLAND 171 (2000).

46. TAYLOR & YOKELL, *supra* note 30, at xv.

47. Case COMP/E-1/37.027—Zinc Phosphate, Comm'n Decision of Dec. 11, 2001, 2003 O.J. (L 153) 1, ¶ 230.

48. DAVID SCHWARTZMAN, THE JAPANESE TELEVISION CARTEL: A STUDY BASED ON MATSUSHITA V. ZENITH 87 (1993).

49. Shulman, *supra* note 32, at 89.

50. FULLER, *supra* note 31, at 13, 71, 81.

51. *Id*. at 81.

52. *Id*. at 71.

53. CONNOR, *supra* note 13, at 212.

on weekends, including near the times of price increase announcements."[54] Conspirators often made their calls from "chilly public phone booths to avoid carefully any public record of the calls, and any wire-tapping that might be involved."[55] With the demise of public phone booths and the rise of telecom technology, price fixers today are more likely to use mobile phones,[56] especially untraceable burner phones or prepaid phone cards, to collude with their co-conspirators.[57] But even modern price-fixing conspiracies continue to seek out public phone booths. For example, price fixers in the publication paper industry used public phones to ensure, in their words, "a clean line," by which they meant "a phone line that was not being 'followed or taped' by law enforcement authorities."[58] Similarly, although some conspirators use their home fax machines to share cartel documents,[59] more savvy price fixers use public fax machines, such as "a fax machine at a Comfort Inn or from an office supply store."[60]

Some conspirators favor email over phones or faxes. When colluding through email, conspirators often exchange sensitive information through personal e-mail accounts, not their official business accounts.[61] More recently, conspirators have employed encryption techniques to conceal their conversations. For example, the gas insulated switchgear "cartel evolved towards more sophisticated means to communicate and to protect its secrecy, by using secured e-mail and SMS messages, 'Blowfish' (a software system for encryption of documents) and encrypted telephone communications."[62] Modern encryption techniques protect price fixers against accidental disclosure and can shield a cartel from even focused efforts by private plaintiffs or government officials seeking to detect collusion.

Some price fixers prefer face-to-face meetings in order to reduce the risk of being criminally indicted for mail fraud or wire fraud.[63] When meeting in person, price-fixing conspirators generally conceal their cartel meetings by rendezvousing in places where they are unlikely to be observed together.[64] For example, some European cartels held their meetings in countries outside of the European

54. *In re* Urethane Antitrust Litig., 913 F. Supp. 2d 1145, 1156 (D. Kan. 2012).

55. FULLER, *supra* note 31, at 58; *In re* Publ'n Paper Antitrust Litig., 690 F.3d 51, 59 (2d Cir. 2012) (conspirators calling each other on public phones).

56. UTTON, *supra* note 35, at 56 (discussing graphite electrodes).

57. *See, e.g.*, *In re* Urethane Antitrust Litig., 768 F.3d 1245, 1264 (10th Cir. 2014).

58. *In re* Publ'n Paper Antitrust Litig., 690 F.3d at 59.

59. UTTON, *supra* note 35, at 56 (Graphite electrodes).

60. *In re* Polyurethane Foam Antitrust Litig., 152 F. Supp. 3d 968, 1005 (N.D. Ohio 2015).

61. *Id.*; *see also* Press Release, Dep't of Just., Former CEO Convicted of Fixing Prices for Canned Tuna (Dec. 3, 2019), https://www.justice.gov/opa/pr/former-ceo-convicted-fixing-prices-canned-tuna [https://perma.cc/UG4V-BQ67] (noting canned tuna cartel's "measures to conceal their conspiratorial conduct, including . . . using third-party e-mail addresses") [hereinafter Canned Tuna Press Release].

62. JEPHCOTT, *supra* note 31, at 17–18 n.36.

63. CONNOR, *supra* note 13, at 32; *see also* Supermarket of Marlinton, Inc. v. Meadow Gold Dairies, Inc., 71 F.3d 119, 121 (4th Cir. 1995) ("Aware that price-fixing violated the law, [one price fixer] related that he would not discuss the subject over the telephone or if non-conspirators were present.").

64. *See, e.g.*, Canned Tuna Press Release, *supra* note 61 (noting canned tuna cartel's "measures to conceal their conspiratorial conduct, including meeting at offsite locations").

Union.[65] Even when colluding closer to home, cartel members conspire in clandestine settings. The managers of the vitamin A and vitamin E cartels held their meetings in out-of-the-way places so that their business colleagues would not observe any inter-competitor conferences and grow suspicious.[66] These cartel leaders eventually began holding price-fixing meetings in executives' private homes, which eliminated the risk of hotel records exposing the cartel.[67] But most price fixers seem to meet in hotels or restaurants, from high-end establishments with private conference rooms to dive coffee shops.[68] Sometimes price fixers collude in high-end environments, such as the Union League in Chicago or the Barclay in New York, or plush island resorts.[69] And sometimes, executives from respected firms meet in lower-end establishments like airport motels or Dirty Helen's, a former Milwaukee speakeasy and brothel.[70] Conspirators fixing the price of ethylene propylene diene monomer ("EPDM")—a synthetic rubber—conspired in more touristy haunts such as the Russian Tea Room in New York City and the Grand Ole Opry in Nashville.[71] Other cartel meetings were more far afield, like the vitamins cartels' meetings in Germany's Black Forest[72] or the electrical equipment conspirators rendezvousing in off-the-grid hotels where they registered as individuals without company affiliations.[73] Similarly, the organizer of one EPDM price-fixing meeting registered for the conference room under a false name,[74] while another had his hotel bill made out to an alias.[75]

Even within the confines of the hotels where they held meetings, many price-fixing conspirators made sure never to be seen together in lobbies or dining rooms, restricting their gatherings to private suites.[76] Co-conspirators traveling to the same illegal cartel meetings take efforts not to be seen together en route.[77] Members of the lysine cartel staggered their arrivals and departures for their illegal meetings "as not to arouse suspicion by having the entire group enter and

65. JEPHCOTT, *supra* note 31, at 19 (discussing *Aalborg Portland* case).

66. CONNOR, *supra* note 13, at 285.

67. *Id*. at 286; *see also In re* Auto. Parts Antitrust Litig., No. 12-MD-02311, 2014 WL 1746450, at *11 (E.D. Mich. Apr. 30, 2014) ("Defendants used code names and met at private residences or remote locations . . . .").

68. *See, e.g.*, *In re* Urethane Antitrust Litig., 768 F.3d 1245, 1264 (10th Cir. 2014).

69. FULLER, *supra* note 31, at 13–14, 70.

70. *Id.* at 14, 71; *see* Aimee Robinson, *Booze, Bawdy Houses and Dirty Helen*, MILWAUKEE MAG. (Feb. 11, 2015), https://www.milwaukeemag.com/booze-bawdy-houses-dirty-helen/ [https://perma.cc/BLA9-QJMS] (relating to the history of Dirty Helen's).

71. *In re* Ethylene Propylene Diene Monomer (EPDM) Antitrust Litig., 681 F.Supp.2d 141, 174 (D. Conn. 2009).

72. First, *supra* note 40, at 713–14.

73. FULLER, *supra* note 31, at 13.

74. *In re Ethylene Propylene Diene Monomer* (*EPDM*), 681 F. Supp. 2d at 174.

75. *Id.* at 161; *see also In re* Refrigerant Compressors Antitrust Litig., 795 F. Supp. 2d 647, 663 (E.D. Mich. 2011) (discussing allegation that "[d]efendants traveled to the clandestine meetings separately, so as to not be seen together, and reserved hotel rooms under false names").

76. FULLER, *supra* note 31, at 73.

77. Gilbert Geis, *White Collar Crime: The Heavy Electrical Equipment Antitrust Cases of 1961*, *in* MARSHALL B. CLINARD & RICHARD QUINNEY, CRIMINAL BEHAVIOR SYSTEMS: A TYPOLOGY 143 (1967).

leave the room at the same time."[78] Some individuals in the urethane price-fixing conspiracy were particularly paranoid, holding their illegal pricing discussions outside "in order to avoid listening devices in the facility" where the other co-conspirators were meeting.[79]

In addition to stationary locations, such as hotels and diners, some price fixers collude while on the move. In 1995, when Christopher Davidge, the CEO of Christie's, wanted to meet with Dede Brooks, the CEO of Sotheby's, to share confidential documents, the leaders of the world's two major auction houses had a problem: Davidge was in London and Brooks in New York City.[80] Davidge solved the problem by flying on the Concorde supersonic jet to New York City's John F. Kennedy Airport, where Brooks picked him up in her dark green Lexus and drove the pair to a short-term parking lot across the street from the airport.[81] In the backseat of Brooks' car, the two executives conspired on how they would fix and announce their new non-negotiable rate structures to their clients.[82] Three hours after landing in New York, Davidge was back on the Concorde, returning to London.[83] He missed only one day of work. When asked where he had been, Davidge told his work colleagues that he had spent the previous day at the dentist.[84] Although supersonic jet travel is no longer with us, price-fixing conspirators who are wary of being seen together in public, but need to meet face-to-face, still have secret meetings in their cars.[85]

Some price fixers try to minimize the likelihood of detection by limiting their collusion to bilateral meetings. For example, two conspirators in the urethane cartel would leave their trade association meetings and rendezvous at an off-site coffee shop where they could conspire without witnesses.[86] Some executives have taken this principle of not participating in group collusion to an extreme. For example, while General Electric was leading the electrical equipment cartel, one of its vice presidents traveled to the cabin-filled forest where the conspirators were meeting, but he remained in his own isolated cabin and "wait[ed] for an executive of a smaller electrical equipment manufacturer to act as a room service bellhop with news of how the price-fixers and market-slicers were doing down the line."[87] Similarly, one member of the vitamin cartel would only hold

78. James M. Griffin, *An Inside Look at a Cartel at Work: Common Characteristics of International Cartels*, *in* CARTELS VOLUME I 115, 119–20 (Margaret C. Levenstein & Stephen W. Salant eds., 2007).

79. *In re* Urethane Antitrust Litig., 913 F. Supp. 2d 1145, 1156 (D. Kan. 2012).

80. MASON, *supra* note 9, at 157.

81. *Id*.

82. *Id.*

83. *Id*. at 157–58.

84. *Id*.

85. *See, e.g.*, Supermarket of Marlinton, Inc. v. Meadow Gold Dairies, Inc., 71 F.3d 119, 121 (4th Cir. 1995) (price fixer testified "that all meetings were in person, prearranged, and conducted away from the office in parking lots, restaurants, or private automobiles").

86. *See, e.g.*, *In re* Urethane Antitrust Litig., 913 F. Supp. 2d 1145, 1155–56 (D. Kan. 2012) ("Mr. Stern and Mr. Bernstein would leave trade association meetings and conduct future pricing discussions at an off-site coffee shop so that the men could talk in confidence.").

87. FULLER, *supra* note 31, at 13–14.

bilateral meetings with other members of the cartel in order to maintain plausible deniability of his participation in the collusion.[88]

While such bilateral meetings may be informal for many conspiracies, some cartels implement them as a matter of cartel policy. For instance, members of the vitamin B6 cartel ensured that no antitrust authorities could place the conspirators in the same room at the same time by having the three major manufacturers meet only in pairs, never as a trio.[89] Through these pairwise meetings, the conspirators successfully raised market price at least four times in the early 1990s.[90] The vitamin A and vitamin E cartels borrowed this concealment tactic, abandoning tripartite meetings in November of 1997 and limiting all conspiratorial meetings to bilateral ones.[91] A month later, Rhone-Poulenc—a major player in several of the vitamin cartels—sought to reduce its exposure to antitrust liability by declaring to its various cartel partners that it would no longer engage in price fixing.[92] This was a ruse; Rhone-Poulenc continued to participate in the cartels through secret meetings with only Roche and BASF, the two other major players across the various vitamin cartels.[93] Thus, Rhone-Poulenc remained a member of several illegal cartels even though most of its co-conspirators were unaware of its participation. The use of bilateral meetings to effect market-wide collusion is not unusual.[94]

Some price-fixing conspirators go beyond making their meetings merely bilateral and avoid direct communications altogether. Cartels sometimes use third parties—often denominated as industry consultants—to relay messages and orchestrate market-wide collusion.[95] For example, the Maryland district court in *In re Titanium Dioxide Antitrust Litigation*[96] explained how the manufacturers of titanium dioxide used a third-party industry consultant to confirm price increases, leak sensitive documents, and to "ascertain relative TiO2 inventory levels for some of our key competitors."[97] For some people, "cartel consultant" is a real, albeit illicit, job title. For example, in Europe, AC Treuhand made a profitable business "by organising meetings, mediating conflicts, proposing market

88. CONNOR, *supra* note 13, at 285.

89. *See id.* at 296–97.

90. *Id*. ("The three members of the vitamin B6 cartel met pair-wise: biennially in Basel (Takeda and Roche) and biennially in Tokyo (Takeda with Daiichi).").

91. *Id.* at 286.

92. *Id.*

93. *Id*.

94. *See, e.g*., Shulman, *supra* note 32, at 89 (noting use of bilateral meetings by members of flat-screen panel cartel); CHRISTOPHER HARDING & JENNIFER EDWARDS, CARTEL CRIMINALITY: THE MYTHOLOGY AND PATHOLOGY OF BUSINESS COLLUSION 130–31 (2015) (discussing marine hose cartel's use of bilateral meetings); Commission Decision No. COMP.37.773 of 19 Jan. 2005 [O.J.] 306 (explaining firms fixing the price for monochloroacetic acid (or "MCAA")—a reactive organic acid used to manufacture detergents, adhesives and as a thickener for food, pharmaceuticals and cosmetics—used a mix of bilateral and multilateral meetings to maintain their illegal cartel); *see* sources cited *supra* notes 89–94.

95. *See* HARDING & EDWARDS, *supra* note 94, at 131 (discussing role of cartel consultant in marine hose cartel).

96. 959 F. Supp. 2d 799, 806 (D. Md. 2013).

97. *Id*. at 812–13. The case resulted in a $163.5 million settlement. *In re* Titanium Dioxide Antitrust Litig., No. 10-CV-00318 RDB, 2013 WL 6577029, at *1 (D. Md. Dec. 13, 2013).

shares and hiding incriminating evidence" for various price-fixing conspiracies, including the organic peroxides cartel.[98] Cartel consultants are not the only third-party conduits used by price fixers. In *In re Polyurethane Foam Antitrust Litigation*,[99] the court explained how a scrap broker "served as a conduit for Defendant employees looking to build support for" increasing the price of their products,[100] and at one point informed one defendant "that it ought not go forward with a price increase because [its alleged co-conspirator] had backed off the same increase."[101] Through judicious use of third-party go-betweens, price fixers can conspire and adjust prices without ever being in the same room.

B. Cover Stories

Price-fixing conspiracies generally try to disguise parallel pricing or other suspicious behavior as legitimate business conduct. Much of this is done using cover stories to justify their meetings and their pricing. For example, the conspirators try to make their parallel price increases appear natural and independent. This Section describes some of the measures that cartels use to create the illusion of competition.

1. Trade Associations

Rather than meeting secretly, some price-fixing conspiracies create mechanisms that allow the conspirators to meet publicly, but under circumstances that will not raise suspicions of collusion. This includes social gatherings and seemingly legitimate functions.[102] Historically, price-fixing conspirators have disguised their cartel meetings to create the façade of legal joint commercial activity, as members of the international aluminum cartel did in the 1930s when they formed a so-called "'ghost cartel' without the appearance of an ordinary cartel" in an attempt to avoid antitrust liability.[103] More recently, the lysine cartel held one of its clandestine meetings in Atlanta to coincide with a poultry exposition,

98. Comm'n Decision (EC) No. COMP/E-2/37.857 of 10 Dec. 2003, 2003 O.J. (L 110) 45.

99. 152 F. Supp. 3d 968, 968 (N.D. Ohio 2015).

100. *Id*. at 1012.

101. *Id*. at 985.

102. John Gibeaut, *Antitrust American Style*, A.B.A. J. (Apr. 1, 2004, 5:00 PM), https://www.abajournal.com/magazine/article/antitrust_american_style [https://perma.cc/FHU6-589X] ("Cartels are especially hard to detect because members can reach secret agreements under the cover of social connections, trade associations, mutual business contacts and other legitimate circumstances."); *see, e.g*., Christopher R. Leslie, *The Art of the Cartel*, 4 ANTITRUST SOURCE 1, 5 (2004) (reviewing CHRISTOPHER MASON, ART OF THE STEAL: INSIDE THE SOTHEBY'S-CHRISTIE'S AUCTION HOUSE SCANDAL (2004)) (noting that one executive behind the auction house price-fixing conspiracy lied to her own attorneys by stating that she had met with her rival only to discuss "legitimate industry issues"); Arthur D. Austin, *A Price-Fixer's Memoir–Exculpation and Revenge While Confronting the Antitrust Abyss: An Essay on Threshold Resistance by Alfred Taubman*, 8 ANTITRUST SOURCE 1, 8 (2008) (discussing Gary dinners); F. M. SCHERER, INDUSTRIAL MARKET STRUCTURE AND ECONOMIC PERFORMANCE 159 (1970) ("Social gatherings are an occasion for one of the least structured, but not ineffective, forms of collusion.").

103. MARCO BERTILORENZI, THE INTERNATIONAL ALUMINIUM CARTEL, 1886–1978: THE BUSINESS AND POLITICS OF A COOPERATIVE INDUSTRIAL INSTITUTION 164–65 (2016).

which provided a reason for the manufacturers of lysine, an amino acid added to chicken feed, to be in the same city at the same time.[104]

The most common way that cartels fashion an artifice that allows conspirators to gather together is the creation of sham trade associations.[105] The lysine price-fixing conspiracy is a case in point. Before ADM began manufacturing lysine, an Asia-based international cartel had secretly fixed the world price of the amino acid.[106] The cartel fluctuated in effectiveness.[107] When ADM entered the lysine business, it set its sights on leading the international lysine cartel.[108] Although Terry Wilson had no experience in the lysine business, he was one of ADM's two representatives at an early secret meeting to reconstruct the lysine cartel.[109] Wilson's qualifications? He had organized and managed the international citric acid cartel for ADM.[110] With his cartel experience, Wilson took the reins of the latest incarnation of the lysine cartel.[111] His first order of business: create a fake trade association. Secretly taped by an informant, Wilson pitched his fake trade association idea to the other lysine manufacturers by promising that it was the "perfect cover" for their illegal collusion.[112] The conspirators created an amino acid working group under the auspices of the European Feed Additives Association (a legitimate trade association) and used this "new subcommittee . . . to provide a false, but facially legitimate, explanation as to why they were meeting."[113] The fake lysine trade association provided camouflage "for the members to travel to a central location for meetings; travel invoices and credit card charges could ostensibly be covered by travel to a legitimate industry association."[114] The ploy worked; in only three years, the lysine conspirators overcharged their customers by hundreds of millions of dollars.[115]

Similarly, the ringleaders of the international uranium cartel created the Uranium Marketing Research Organization, which was designed to disguise their illegal bid-rigging meetings as "legitimate exchanges of marketing information."[116] Not content with just one bogus association, the Australian constituents of the cartel established the Australian Uranium Producers Forum "as a

104. LIEBER, *supra* note 45, at 155; United States v. Andreas, 216 F.3d 645, 654 (7th Cir. 2000) ("The cartel met in Atlanta in January 1995, using a major poultry exposition as camouflage for the producers being in the same place at the same time.").

105. CONNOR, *supra* note 13, at 32 ("In some cases, cartels create sham associations with fake agendas as a cover for illegal price discussions.").

106. *Id.* at 211.

107. *See id.* at 203, 212.

108. *Id.* at 190.

109. *Id.*

110. *Id.* at 189–90.

111. *Id.* at 189.

112. Griffin, *supra* note 78, at 132.

113. *Id*. at 121–22.

114. CONNOR, *supra* note 13, at 211.

115. *Id*. at 235.

116. Jeffrey L. Wood & Victor M. Carrera, *The International Uranium Cartel: Litigation and Legal Implications*, 14 TEX. INT'L L. J. 59, 72 (1979).

cover organization for cartel activities."[117] These sham organizations successfully concealed the underlying conspiracy for years.[118]

Even if a particular trade association is not a complete sham, many cartel leaders arrange to hold their collusive meetings in tandem with otherwise legal trade association conferences.[119] Price fixers routinely use trade association meetings as a cover for their conspiracies.[120] For example, the European Citric Acid Manufacturers' Association ("ECAMA") was, in some ways, a legitimate industry trade association.[121] Its members, however, were also secretly colluding and fixing the world price of citric acid.[122] The cartel members' "senior decision-makers . . . held a series of secret, conspiratorial, 'unofficial' meetings in conjunction with the official meetings of ECAMA."[123] The citric acid conspiracy became itinerant, traveling across Europe holding their trade association meetings in Belgium, Austria, Ireland, England and Switzerland, and then across the Mediterranean to Israel, fixing world prices along the way.[124] The citric acid cartel's strategy is, unfortunately, not unique. Conspirators commonly hold secret meetings in conjunction with trade association meetings.[125] Holding cartel meetings concurrently with seemingly legitimate trade association meetings makes it harder to detect illegal collusion.[126] From the outside, it can be difficult to distinguish between a legitimate meeting and an illegal summit to fix prices. Differentiating between the two may be well-nigh impossible when the conspirators forge a documentary trail of counterfeit paperwork, as explained below.[127]

117. TAYLOR & YOKELL, *supra* note 30, at 78–79.

118. *See infra* note 279 (discussing the exposure of the uranium cartel).

119. CONNOR, *supra* note 13, at 32 ("The major problem with face-to-face meetings, especially for global conspiracies, is that they create a paper trail of travel records. To overcome this problem, cartels often hold meetings concurrent with those of an otherwise legitimate trade association.").

120. GRIFFIN, *supra* note 78, at 121–22 ("Another characteristic of international cartels is that they frequently use trade associations as a means of providing 'cover' for their cartel activities.").

121. CONNOR, *supra* note 13, at 144.

122. *See id.* at 209.

123. GRIFFIN, *supra* note 78, at 122.

124. CONNOR, *supra* note 13, at 142.

125. *In re* Urethane Antitrust Litig., 913 F. Supp. 2d 1145, 1156 (D. Kan. 2012) ("Mr. Stern and Mr. Bernstein would leave trade association meetings and conduct future pricing discussions at an off-site coffee shop so that the men could talk in confidence."); Cartel meetings in conjunction with otherwise lawful meetings. Comm'n Decision 03/437, art. 81, 2003 O.J. (L 153) 1, ¶ 101 (Case COMP/E-1/37.027—Zinc Phosphate) ("Over the period 1994 to 1998, there were two types of cartel meetings 'full group informal meetings' and producers' 'ad hoc meetings'. The cartel members also regularly met under other lawful auspices, such as 'technical CEFIC meetings'. Market sharing, prices fixing and customer allocation agreements were usually concluded during the 'full group informal meetings.'").

126. *See In re* Text Messaging Antitrust Litig., 630 F.3d 622, 628 (7th Cir. 2010) ("Of note is the allegation in the complaint that the defendants belonged to a trade association and exchanged price information directly at association meetings. This allegation identifies a practice, not illegal in itself, that facilitates price fixing that would be difficult for the authorities to detect.").

127. *See infra* Section III.C.4.

2. Camouflaging Collusive Pricing and Bidding

Smart cartel managers design their price-fixing activities to resemble mere price leadership, in which one firm independently raises price and other firms independently follow suit. In their secret cartel meetings in the early 2000s, EPDM manufacturers negotiated which conspirator would initiate each price increase and how its co-conspirators would respond in kind.[128] This is a classic cartel play, replicating how General Electric in the 1950s would announce a major price increase for turbogenerators after pre-arranging for its competitors to follow its lead.[129] Similarly, members of the lightning arrestor cartel negotiated "a firm agreement that GE would announce its increase January 26, 1959 to become effective February 16, 1959, and that all the defendants would then make identical increases."[130] More recently, in the 1990s international vitamins cartel, the conspirators:

> normally agreed that one producer should first 'announce' the increase, either in a trade journal or in direct communication with major customers. Once the price increase was announced by one cartel member, the others would generally follow suit. This way the concerted price increases could be passed off, if challenged, as the result of price leadership in an oligopolistic market.[131]

The vitamins conspirators magnified the illusion of randomness by rotating which firm would initiate each "independent" price increase.[132] Additionally, they prearranged the dates of their respective announcements.[133]

This basic strategy is common among price-fixing conspiracies. During cartel meetings, one member of the liquid choline chloride cartel would be tasked with alerting the relevant trade publication of their "unilateral" decision to hike prices, which the other members of the cartel would "independently" follow according to the script drafted at conspiratorial summits.[134] Members of the cartonboard cartel planned to misrepresent their price fixing as mere price leadership, which is sometimes described as oligopolistic interdependence, when questioned by authorities.[135] In short, purported "independent price leadership" is often coordinated by collusion.[136]

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128. *In re* Ethylene Propylene Diene Monomer (EPDM) Antitrust Litig., 681 F. Supp. 2d 141, 176 (D. Conn. 2009).

129. FULLER, *supra* note 31, at 55.

130. *Id*. at 71.

131. ROBERT C. MARSHALL & LESLIE M. MARX, THE ECONOMICS OF COLLUSION: CARTELS AND BIDDING RINGS 38 n.35 (2012).

132. CONNOR, *supra* note 13, at 317 ("The announcements about price increases were by prearrangement rotated among sellers to give the false impression of mere price leadership.").

133. First, *supra* note 40 at 715.

134. CONNOR, *supra* note 13, at 310 ("At the end of the Chicago meeting the conspirators decided to raise list prices by 4 to 5 cents per pound for liquid choline chloride and by 3 cents for dry product. This price increase of about 6% was to be effective on April 1, 1998. One of the companies was assigned to contact *Feedstuffs* magazine with the news.").

135. MARSHALL & MARX, *supra* note 131 at 52 n.66.

136. *See* United States v. Phelps Dodge Indus., Inc., 589 F. Supp. 1340, 1348 (S.D.N.Y. 1984) (discussing feigned price leadership in the market for specialized electrical cable).

Price fixers recognize that courts treat certain conduct as circumstantial evidence—called plus factors in the antitrust vernacular—of collusion.[137] So, antitrust violators structure their cartel behavior and pricing decisions with the explicit goal of not triggering these plus factors. For example, inter-competitor meetings are more probative of collusion when they are "followed shortly thereafter by parallel behavior that goes beyond what would be expected absent an agreement."[138] Some price-fixing conspiracies have sought to undermine this plus factor by negotiating delayed parallel price increases. For example, members of the vitamin A and vitamin E cartels would meet and agree to price increases *eight months* before they implemented them in order to eliminate any suspicious timing between their meetings and the price hikes.[139]

Bid rigging is a particularized form of illegal price fixing in which rival firms bidding on a series of contracts conspire to fix who will win each contract by secretly agreeing among themselves who will submit the winning bid and requiring the "losing" bidders to submit less attractive bids. For example, when the electrical equipment cartel decided that General Electric should win the bid on a Tennessee Valley Authority ("TVA") contract to supply a 500,000 kilowatt generator, the conspirators agreed that GE would bid $16,112,000, while Westinghouse would bid $16,225,000, which was "an amount high enough to give the appearance that the companies were competing with each other, but close enough in range so that TVA would think that these inflated prices were in the incontrovertible price range for this type of equipment."[140] This strategy was designed to make the collusively set price seem reasonable. In another heavy equipment cartel, the members would allot the winner, agree upon a base price for the winning bid, and then require the "losing" members "to submit bids higher than the allotee (5 percent higher for the next firm in sequence, 6 percent for the next, 7 percent for the next, and 0.5 percent for succeeding tenderers)."[141] Similarly, in the international uranium cartel, the conspirators would select a winner who would charge an "agreed-upon minimum price, while other companies quoted higher prices in order to create the appearance of competition."[142] This strategy is now standard fare for bid riggers.[143]

137. *See infra* Section III.C (discussing the plus-factor framework).

138. Stop & Shop Supermarket Co. v. Blue Cross & Blue Shield of R.I., 239 F. Supp. 2d 180, 187 (D.R.I. 2003).

139. CONNOR, *supra* note 13, at 281 ("Then after the anointed 'price leader' announced the new list prices, the others would pretend to follow an increase that had been preordained eight months earlier.").

140. FULLER, *supra* note 31, at 79.

141. Barbara Epstein & Richard S. Newfarmer, *Report on the International Electrical Association*, *in* CARTELS VOLUME I 74, 108–09 (Margaret C. Levenstein & Stephen W. Salant eds., 2007).

142. Ronald J. Bacigal, *An Empirical Case Study of Informal Alternative Dispute Resolution*, 4 OHIO ST. J. ON DISP. RESOL. 1, 9 (1988); Wood & Carrera, *supra* note 116, at 71–72.

143. City of Tuscaloosa v. Harcros Chems., Inc., 877 F. Supp. 1504, 1510 (N.D. Ala. 1995), *aff'd in part, vacated in part, rev'd in part*, 158 F.3d 548 (11th Cir. 1998) (describing allegation that "defendants fraudulently concealed their illegal conspiracy by submitting prearranged, complementary losing bids for the supply of repackaged chlorine, giving the illusion of free market competition"); Commission Decision 03/437, art. 81, 2003 O.J. (L 153) 1, ¶ 68, ¶ 96, ¶ 100 (Case COMP/E-1/37.027—Zinc Phosphate) (documenting zinc phosphate cartel rotated certain customers to create the illusion of competition).

To ensure that their bids seem random, bid riggers may toss coins to decide who would win a particular bid or, in the case of electrical equipment cartels, assign the various cartel members "phases of the moon" beforehand, which would be used to determine whether a company would be a low, medium, or high bid for a particular contract. For example, each conspirator could look up the phase of the moon for the day that the bids were due and, depending on their assigned phase, bid accordingly.[144] Such strategies successfully concealed the conspiracy for over a decade.

3. Buybacks and Intellectual Property Licensing as Subterfuge

To maintain a stable conspiracy, cartel ringleaders must devise a way to divide the illegal profits evenly. This generally requires a mechanism to compensate cartel members who have not received their allotted share of the conspiracy's profits.[145] Even before Congress enacted the Sherman Act, cartel members developed mechanisms to redistribute assets so that each member of the cartel sold the cartel allotment to which it was entitled.[146]

Many cartels develop enforcement mechanisms designed to detect and penalize cartel members who undercut the cartel price or sell more than their cartel allotment. Price fixers, however, need cover stories for their cartel enforcement mechanisms. Because cartel enforcement entails two distinct steps—monitoring and punishment—two separate cover stories are generally required, one for each step. Regarding monitoring, cartels need to come up with a seemingly legitimate excuse for why a group of competitors are sharing their sales and production data with each other.[147] This is often done through trade associations and billed as industry research.[148]

Detecting deviations from the cartel agreement means little, however, unless the cartel managers can balance the conspiracy's books. If a firm that sells more than its cartel allotment were allowed to retain these excess profits, cartel members would have insufficient incentive to abide by the cartel agreement. So, cartels have developed ways to transfer wealth from the over-selling cartelist to the under-selling cartelist. The most direct method for having over-sellers compensate under-sellers is a cash payment from the former to the latter. And some

144. FULLER, *supra* note 31, at 72.

145. THOMAS C. SCHELLING, THE STRATEGY OF CONFLICT 31–32 (1980) ("If duopolists, for example, divide markets in a way that maximizes their combined profits, some initial accrual of profits is thereby determined; any other division of the profits requires that one firm be able to compensate the other.").

146. *See, e.g.*, Peter Z. Grossman, *Why One Cartel Fails and Another Endures: The Joint Executive Committee and the Railroad Express*, *in* HOW CARTELS ENDURE AND HOW THEY FAIL: STUDIES OF INDUSTRIAL COLLUSION 111, 114 (Peter Z. Grossman ed., 2004) ("In the event one [member of the railroad cartel] exceeded its allotment it was required to transfer freight directly to the line that was below its market share.").

147. CONNOR, *supra* note 13, at 32.

148. *Id.*

cartels have employed such side payments.[149] While straightforward, such direct inter-competitor payments are suspicious and constitute evidence of collusion.[150]

Instead of relying on naked payments, many cartel leaders create mechanisms and cover stories to facilitate competitors transferring money to each other. For example, cartels may use inter-competitor sales—sometimes called buybacks—in which a firm that sold more than its cartel allotment purchases product from its co-conspirator who sold less than its cartel allotment.[151] Empirically, cartels often employ buybacks to conceal their wealth transfers and make them appear to be innocuous.[152] By disguising their book-balancing transactions as inter-competitor sales, the conspirators can camouflage their cartel enforcement mechanism.

Cartels may also use intellectual property ("IP") licensing as a way to disguise inter-competitor cash transfers as a legitimate business transaction. IP licenses make for a particularly attractive ruse because cash goes one direction, and nothing comes back from the recipient except a promise not to sue for infringement. This promise may be of little or no actual value, for instance, when the underlying IP is weak or the licensee was never likely to infringe the IP. Nevertheless, the market value of the IP license can be difficult to evaluate from the outside, which can make it hard to determine whether the cash transfer is a cartel enforcement device or a legitimate payment for a desired license.[153] Empirically, price-fixing cartels often imbed their illegal arrangements within facially harmless licensing agreements.[154] Econometric studies show that cartels that use patent cross-licensing agreements enjoy a higher probability of success.[155]

C. Cartel Document Polices: Forbid, Destroy, Hide, and Fabricate

Documents can be the downfall of a price-fixing conspiracy. A carelessly worded email or the handwritten transcription of a cartel conversation can expose the conspirators to the world, including their victims and antitrust authorities. To

149. Margaret Levenstein & Valerie Y. Suslow, *Contemporary International Cartels and Developing Countries: Economic Effects and Implications for Competition Policy*, 71 ANTITRUST L.J. 801, 835 (2004).

150. Margaret C. Levenstein & Valerie Y. Suslow, *Breaking Up Is Hard to Do: Determinants of Cartel Duration*, 54 J.L. & ECON. 455, 475–76 (2011) ("However, side payments leave a paper trail that increases the likelihood of antitrust prosecution."); Louis Kaplow, *An Economic Approach to Price Fixing*, 77 ANTITRUST L.J. 343, 394 (2011) ("Side payments are widely accepted as evidence of coordinated oligopolistic price elevation, for why else would a competitor make a payment to a rival for no consideration."); Jonathan B. Baker, *Mavericks, Mergers, and Exclusion: Proving Coordinated Competitive Effects Under the Antitrust Laws*, 77 N.Y.U. L. REV. 135, 164 (2002) (noting that side payments may "be difficult to negotiate and impossible to enforce given the risk that a prosecutor and court would infer an unlawful (even criminal) agreement to fix price").

151. Christopher R. Leslie, *Balancing the Conspiracy's Books: Inter-Competitor Sales and Price-Fixing Cartels*, 96 WASH. U.L. REV. 1, 14 (2018).

152. *Id.* at 19–23.

153. To test which hypothesis is most accurate would require examining the validity, scope, and desirability of the patent or other IP at issue, which is something that courts are generally loathed to do. *See* F.T.C. v. Actavis, Inc., 570 U.S. 136, 163 (2013).

154. *See, e.g.*, United States v. U.S. Gypsum Co., 333 U.S. 364, 371–72 (1948).

155. UTTON, *supra* note 35, at 33.

prevent this from happening, many cartel leaders try to manage the creation and maintenance of notes and records. Document manipulation is often part and parcel of the modern price-fixing cartel.

1. Avoiding Document Creation

A paper trail can lead to the exposure and collapse of a price-fixing conspiracy. Contemporaneous records of illegal collusion have an authenticity that may be more credible than even an eyewitness whose motives and memory may be challenged in front of the judge and jury. A co-conspirator's handwritten notes can provide particularly damning evidence of collusion.

Some price fixers make a point of having face-to-face price discussions and keeping no written records, such as when the members of the copper tube cartel negotiated their price and volume agreements only orally—sometimes in person and sometimes by phone.[156] In a more extreme measure, Standard Oil moved one of its employees tasked with illegally fixing prices for petroleum products to Standard's Los Angeles office so he could more easily conspire with Standard's competitors in person and not create a paper trail.[157] Similarly, members of the vitamins cartel reported their sensitive production data to each other verbally at in-person meetings to avoid creating and exchanging documents.[158] Early in its formation, one leader of the citric acid cartel cautioned co-conspirators "not to keep any written records of the meetings."[159] Likewise, in the international biotin cartel, the major players divided up the world market and allocated shares accordingly, but communicated all figures orally so that there would be no written record that could be used against the cartel members in the event of an antitrust investigation or litigation.[160]

Many cartels have formal rules that preclude their members from creating incriminating documents, or at least rules as formal as those of a clandestine conspiracy can be. It has long been the conventional wisdom among cartel members not to write down any aspects of the cartel agreement.[161] Cartel leaders exhort their members not to take notes at cartel meetings, and not to create documents memorializing inter-competitor agreements. In many cartels, "members were reminded at every meeting—'No notes leave the room.'"[162] For example, in the plumbing fixtures cartel, leaders reminded their cartel colleagues "not to allow incriminating memoranda to creep into their files . . . [and] not to throw

156. MARSHALL & MARX, *supra* note 131, at 50, n.63.

157. *In re* Coordinated Pretrial Proc. in Petroleum Prods. Antitrust Litig., 906 F.2d 432, 450 (9th Cir. 1990).

158. CONNOR, *supra* note 13, at 317.

159. JEPHCOTT, *supra* note 31, at 17–18 n.36.

160. CONNOR, *supra* note 13, at 302.

161. Harm Schröter, *Risk and Control in Multinational Enterprise: German Businesses in Scandinavia, 1918–1939*, 62 BUS. HIST. REV. 420, 438–39 (1988) ("[A]s a high-ranking IG Farben representative admitted, not to put agreements down in writing but to rely on oral negotiations instead.").

162. Griffin, *supra* note 78, at 119.

notes in the wastebasket."[163] The managers of the organic peroxides cartel—which fixed prices for three decades before being caught—employed a Swiss-based cartel consultant, which organized the secret meetings and "produced 'pink' and 'red' papers with the agreed market shares which could not be taken outside its premises."[164] The sensitive documents were printed on these bright colors to make it easier for the cartel managers to ensure that no one removed these documents from the cartel meeting room.[165]

Outside of collusive meetings, cartel managers may remind the participants to not memorialize their price-fixing activities in any written documents. For example, the leaders of the LCD panel cartel warned their members about the risk of antitrust prosecutions and "requested everybody to take care of security/confidentiality matters and to limit written communication."[166] The philosophy of most cartels is summed up by one member of the toys-and-games price-fixing conspiracy, who warned his partner in crime: "word to the wise, never put anything in writing, it's highly illegal and it could bite you in the arse!!!!"[167] Such advice is the standard rule for cartels, though usually articulated with less enthusiasm.

2. Destroying Incriminating Documents

Just as cartel leaders try to cajole or prevent their members from creating documents, many cartels also discourage document retention. Despite their best efforts to dissuade cartel members from creating inculpatory records, documentation of collusion nonetheless sometimes exists. In anticipation of such missteps, cartel leaders generally urge their members to regularly purge their files—both physical and electronic—of any evidence that could expose the cartel or be used against its members in criminal or private litigation.[168] Price fixers give assurances to each other that any documents they possess will be destroyed.[169]

Cartel managers make every effort to dispose of all documents, no matter how seemingly trivial, that may show competitors meeting with each other. For example, when mid-level executives of General Electric tried to substantiate their claims that their bosses had illegally engaged in bid rigging with rivals, they found that all internal records had been destroyed or secreted away, including

163. Allan T. Demaree, *How Judgment Came for the Plumbing Conspirators*, FORTUNE 96, 97–98 (Dec. 1969); Geis, *supra* note 77 at 143 ("Not to leave wastepaper, of which there was a lot, strewn around a room when leaving.").

164. JEPHCOTT, *supra* note 31, at 17–18 n.36; *see id.* ("A similar system of 'red' and 'pink' papers was used in the recent *Heat Stabilisers* cartel.").

165. Leslie M. Marx & Claudio Mezzetti, *Effects of Antitrust Leniency on Concealment Effort by Colluding Firms,* 2 J. ANTITRUST ENF'T 305, 309 n.13 (2014).

166. HARDING & EDWARDS, *supra* note 94, at 182 (quoting email of cartel member).

167. Andreas Stephan, *Cartel Laws Undermined: Corruption, Social Norms, and Collectivist Business Cultures*, 37 J.L. & SOC'Y 345, 359 (2010) (quoting *Agreements between Hasbro UK Ltd, Argos Ltd and Littlewoods Ltd Fixing the price of Hasbro Toys and Games* CA98/2/2003 [2003] UKCLR 553, para. 53).

168. *See, e.g.*, *In re* Urethane Antitrust Litig., 913 F.2d 1145, 1155 (D. Kan. 2012).

169. *Id.* at 1155–56 ("Mr. Stern gave Mr. Hankins a document containing pricing information after Mr. Hankins gave assurances that the document would be destroyed . . . .").

chauffeur records and dining hall records, as well as logbooks and correspondence files.[170] This wholesale destruction of documents made it difficult for insiders to prove collusion even though they knew for a fact that it had occurred.

In general, even when documents regarding price, market shares, or any reference to collusion are created for and shared at cartel meetings, these documents are destroyed once the discussions have ended.[171] For example, in the electronic equipment cartels, the conspirators would tear up and destroy all notes from their meetings discussing their bid-rigging plans against particular customers.[172] Members of those cartels "were required to destroy immediately any written communications about the rigging jobs at hand."[173] Similarly, although the members of the copper plumbing tubes cartel tried to limit their collusion to oral agreements, when written instructions were shared, the recipient "was reminded by phone to destroy the paper."[174] When the leaders of the vitamin cartel used coded spreadsheets at their illegal meetings, they nonetheless sought to destroy all of the documents after each meeting ended.[175] Historically, most illegal cartels have maintained quasi-official rules for their members to destroy all notes following their meetings.[176] Leaders of the multi-billion vitamins cartel, for instance, conducted internal audits to ensure that incriminating documents were appropriately destroyed.[177]

Sometimes the edict to destroy documents follows on the heels of a government antitrust instigation.[178] For example, after FBI agents raided the Illinois offices of ADM, the American member of the international lysine cartel, a Japanese member of the conspiracy ordered that all documents related to the conspiracy kept in Tokyo be destroyed.[179] Meanwhile, back at ADM, executives sequestered incriminating documents on a floor not targeted by the FBI's search warrant and then shredded these documents before the authorities could uncover them.[180]

170. FULLER, *supra* note 31, at 151–54.

171. *See, e.g.*, Canned Tuna Press Release, *supra* note 61 (noting canned tuna cartel's "measures to conceal their conspiratorial conduct, including . . . discouraging retention of documents concerning the conspiracy").

172. CHARLES A. BANE, THE ELECTRICAL EQUIPMENT CONSPIRACIES 152, 157, 282 (1973); *see also* FULLER, *supra* note 31, at 73 ("The conspirators were required to destroy immediately any written communications about the rigging jobs at hand.").

173. FULLER, *supra* note 31, at 73.

174. MARSHALL & MARX, *supra* note 131, at 50 n.63 (EC decision in *Copper plumbing tubes* at para. 129).

175. First, *supra* note 40, at 715.

176. *See, e.g.*, CONNOR, *supra* note 13, at 144, 317; *see also* THURMAN W. ARNOLD, THE BOTTLENECKS OF BUSINESS 210 (1940) ("An astonishingly large number of respectable businessmen will strip their files of incriminating documents.").

177. OECD DIRECTORATE FOR FIN., FISCAL & ENTER. AFFS. COMPETITION COMM., REPORT ON NATURE & IMPACT OF HARD CORE CARTELS AND SANCTIONS AGAINST CARTELS UNDER NATIONAL COMPETITION LAWS 8 (2002), http://www.oecd.org/dataoecd/16/20/2081831.pdf [https://perma.cc/WT6Z-V5QC].

178. *See, e.g.*, SCHWARTZMAN, *supra* note 48, at 86; New York *ex rel*. Spitzer v. Feldman, No. 01 Civ. 6691, 2003 WL 21576518, at *8 (S.D.N.Y. July 10, 2003) (one conspirator instructed another "to limit his record-keeping and discard the conspiracy's records.").

179. LIEBER, *supra* note 45, at 155–56; United States v. Andreas, 216 F.3d 645, 654 (7th Cir. 2000) ("The cartel met once more in Hong Kong before the FBI raided the offices of ADM in Decatur and Heartland Lysine in Chicago. These raids ended the cartel. Heartland Lysine immediately notified its home office in Japan of the search, and Ajinomoto began destroying evidence of the cartel housed in its Tokyo office.").

180. LIEBER, *supra* note 45, at 326–27.

Some cartelists have tried to hide evidence of their policies to destroy documents. For example, the members of the cement cartel had employed a policy of denoting incriminating letters as "'confidential – no copies made,' which the recipient was supposed to destroy."[181] But, because managers worried that these markings would look suspicious, they instructed their staff to instead use "a pencil note which can be attached to your regular report and which we will detach in this office and destroy."[182] Thus, not only do price fixers destroy cartel documents, they destroy the documents that document how they destroyed documents.

As modern business communications have shifted from paper to electronic form, many cartels have adapted their document-destruction policies. These can be as simple as the sellers of EPDM exchanging inter-competitor emails that instructed the recipient to "Pls destroy e-mail after reading."[183] But cartel policies can also be more sophisticated, as when the members of the gas insulated switchgear cartel employed code names and encrypted email, while maintaining a standard operating procedure that "senders should erase all files attributes; after sending an e-mail it should be destroyed; [and] receivers should download the attachments directly on to memory sticks rather than opening them."[184] Firms are particularly inclined to destroy incriminating emails when they are accused of violating antitrust laws.[185] These measures obfuscate both paper trails and electronic trails that may lead back to the conspirators.

3. Hiding Documents

Sometimes cartel members may disregard rules against notetaking and document retention.[186] Certain individuals participating in price-fixing conspiracies have a strong incentive to create—and conceal—contemporaneous notes that detail the cartel operations. Some may want to keep an accurate record of the cartel agreement and members' sales and price data in order to ensure cartel compliance and to resolve disputes.[187] Others may keep notes surreptitiously as an in-

181. FRITZ MACHLUP, THE BASING-POINT SYSTEM: AN ECONOMIC ANALYSIS OF A CONTROVERSIAL PRICING PRACTICE 19 n.14 (1949) (citing Brief for Respondent at 36–42, Aetna Portland Cement Co. v. F.T.C. (7th Cir. 1946)).

182. *Id*.

183. *In re* Ethylene Propylene Diene Monomer (EPDM) Antitrust Litig., 681 F. Supp. 2d 141, 174 (D. Conn. 2009); *see also In re* Capacitors Antitrust Litig., 106 F. Supp. 3d 1051, 1065 (N.D. Cal. 2015) (noting that inter-cartel emails among competitors "are alleged to have included the instruction, 'Once you read this email, please delete it.'").

184. JEPHCOTT, *supra* note 31, at 17–18 n.36.

185. GN Netcom, Inc. v. Plantronics, Inc., 930 F.3d 76, 83 (3d Cir. 2019) (explaining that an executive "deliberately deleted an unknown number of emails in response to 'pending [antitrust] litigation' and urged others to do the same").

186. *See* Leslie, *supra* note 27, at 1641–48.

187. JEPHCOTT, *supra* note 31, at 17; Cécile Aubert, Patrick Rey & William E. Kovacic, *The Impact of Leniency and Whistle-Blowing Programs on Cartels*, 24 INT'L J. INDUS. ORG. 1241, 1260 (2006) (explaining that cartel members take notes because cartel "agreements may be very complex, due to the variety of products and prices involved, and to the number of possible contingencies; limited memory may then call for keeping notes about the agreement").

surance policy so that they have something to give antitrust authorities in exchange for leniency should the cartel become unstable.[188] Whatever the reason, sometimes price-fixing conspirators do create and retain incriminating documents.[189]

Some conspirators may have thought that they could keep records of collusive meetings by labelling them as "confidential," secreting them away, and populating the documents with code names that would make them incomprehensible to outsiders.[190] In the lysine cartel, the employees of some companies often ignored the cartel rules regarding document creation and destruction by keeping diaries of this misconduct and drafting "detailed memorandums for their supervisors."[191] Similarly, in the vitamin B2 cartel, officials of one Asian firm recorded detailed minutes of their meetings with their European counterparts and kept these notes despite putting headings on them that stated: "Destroy after reading."[192]

Yet even when they keep incriminating documents, conspirators hide them in obscure locations, intended to be beyond the reach and vision of U.S. antitrust plaintiffs, both private and government. Some price-fixing conspirators store their cartel-related documents in more collusion-tolerant countries.[193] Indeed, nascent cartels may start their price-fixing activities in weak-antitrust countries, perfect their collusion there, and then expand the cartel into the American market.[194] Because European cartel members are generally fearful that competition law authorities will raid their offices in search of incriminating documents, cartel managers often stow any such documents offsite.[195] For instance, in the vitamins cartels, "[w]hen investigators were close to discovering business records about the conspiracies, the participants turned to storing cartel records in unlikely places beyond the reach of the authorities."[196] In another more clever example, spreadsheets showing market allocations were kept on computer disks that were

188. *See e.g.*, MASON, *supra* note 9 at 142 (describing a price fixer who "thought it wise to keep a record of [price-fixing] discussions in case of any unforeseen repercussions"); Douglas Frantz, *Secret Partners: The Unraveling of a Conspiracy; Private Files Fuel an Art Auction Inquiry*, N.Y. TIMES (Oct. 8, 2000), https://www.nytimes.com/2000/10/08/us/secret-partners-unraveling-conspiracy-private-files-fuel-art-auction-inquiry.html [https://perma.cc/YS7A-YCFE] (describing notes that were taken in the Christie's case that were handed over to the Department of Justice).

189. In the electrical equipment cartels of the 1950s and 1960s, a lack of trust led co-conspirators to keep "records and tabs on the other competitors in the cartel." FULLER, *supra* note 31, at 120.

190. *See* Bray v. Safeway Stores, Inc., 392 F. Supp. 851, 857 (N.D. Cal. 1975).

191. CONNOR, *supra* note 13, at 212.

192. *Id*. at 293.

193. GEORGE W. STOCKING & MYRON W. WATKINS, CARTELS OR COMPETITION?: THE ECONOMICS OF INTERNATIONAL CONTROLS BY BUSINESS AND GOVERNMENT 270 (1948) ("Cartel members generally negotiate their agreements in tolerant countries and keep the cartel records there. Hence, even when American firms take part in cartels, American public officials charged with antitrust enforcement have access to little primary information on cartel structure or operations. This increases the difficulty of establishing facts and reaching offenders.").

194. Christopher R. Leslie, *Foreign Price-Fixing Conspiracies*, 67 DUKE L.J. 557, 586 (2017).

195. CONNOR, *supra* note 13, at 285 ("Conspirators in Europe were careful not to leave incriminating documents at their business locations where a dawn raid might lead to their discovery.").

196. *Id*. at 317.

hidden in the eaves of the house of one of the conspirator's grandmother.[197] In short, even when cartel documents exist, cartel leaders generally bury, secrete, and otherwise conceal them.[198]

4. Falsifying Documents

In addition to eschewing documentation, destroying documents, and hiding them, cartel leaders make sure that any documents that do exist appear to exonerate the conspirators. When creating fake trade associations, price-fixing conspirators give their Potemkin federations all of the trappings of legitimacy by creating fake agendas and minutes for their collusive meetings.[199] For example, when the world's major manufacturers of lysine illegally conspired to fix the market price of this essential amino acid, they created a fake trade association and published a falsified agenda that contained such matters as animal rights and environmental issues.[200] The meeting's attendees discussed none of the subjects listed on the agenda.[201] The rivals addressed only one topic: fixing the price of lysine.[202] At trial, one member of the lysine cartel testified that the conspirators created the "fake agenda" to fool anyone who asked why the competitors were meeting together.[203]

Price-fixing conspirators also falsify the minutes of their inter-competitor meetings to strip them of incriminating details.[204] In the 1920s and 1930s sugar cartel, for example, one executive kept copious notes that memorialized the sugar refiners' illegal anticompetitive conduct, political maneuvers, and at least one act of perjury by another cartel member.[205] In addition, however, he also maintained sanitized "official minutes" for the sugar refiners' meetings.[206]

He presented these deceptive minutes as authentic, falsely claiming that he had destroyed all his other notes, which did, in fact, record the illegal activities

197. OECD DIRECTORATE, *supra* note 177, at 8.

198. *See, e.g.*, Alexander v. Nat'l Farmers Org., 687 F.2d 1173, 1205 (8th Cir. 1982) (antitrust defendant "engaged in a deliberate pattern of shuffling and hiding documents–to warehouses, homes or other locations specifically to avoid discovery").

199. CONNOR, *supra* note 13, at 11 ("Cartels frequently utilized industry trade associations as covers for their illegal meetings, prepared false agendas and false minutes, and took many other steps to hide their conspiracies.").

200. Griffin, *supra* note 78, at 144; LIEBER, *supra* note 45, at 146–47.

201. LIEBER, *supra* note 45, at 146–47.

202. *Id*.; CONNOR, *supra* note 13, at 211 ("[T]he meeting was dominated by price-fixing details and never covered the fake agenda items."); United States v. Andreas, 216 F.3d 645, 652 (7th Cir. 2000) ("To disguise the purpose of the meeting, the parties created a fake agenda, and later a fictitious lysine producers trade association, so they could meet and share information without raising the suspicions of customers or law enforcement agencies. According to the agenda, the group was to discuss such topics as animal rights and the environment. In reality, they discussed something much dearer to their hearts—the price of lysine.").

203. LIEBER, *supra* note 45 at 146–47.

204. CONNOR, *supra* note 13, at 11 ("Cartels frequently utilized industry trade associations as covers for their illegal meetings, prepared false agendas and false minutes, and took many other steps to hide their conspiracies.").

205. David Genesove & Wallace P. Mullin, *Rules, Communication, and Collusion: Narrative Evidence from the Sugar Institute Case*, 91 AM. ECON. REV. 379, 379–80 (2001).

206. *Id.* at 379.

of the cartel.[207] Similarly, upon hearing that their national competition authority was investigating them, the members of the Japanese consumer electronics cartel sought to change the names and places recorded on their internal documents.[208] More recently, the executives in the urethane cartel excluded references to their pricing discussion from their official reports to their superiors.[209]

When using trade association gatherings as their cover for collusive meetings, cartel members have little need to fabricate their travel documents. But without the disguise of a fake trade association, conspirators often forge bogus paperwork in order to conceal their illegal meetings. Price-fixing conspirators commonly falsify their travel records to and from cartel meetings, for example, by misrepresenting the details on their travel-expense reports, falsely claiming that their trips were to meet with customers or suppliers. When ADM executive Terry Wilson flew to Mexico City, he filled out his expense report to claim that he was visiting starch plants.[210] He wasn't. When Wilson traveled to Tokyo, his expense report stated that he was "meeting with companies interested in China joint ventures."[211] He wasn't. On both trips, Wilson was meeting with ADM's rivals to fix prices and allocate market volume of lysine.[212] Likewise, members of the liquid choline chloride ("LCC") cartel misrepresented their travel-expense reports to reflect meetings with customers when, in fact, they were meeting with their co-conspirators.[213] Or, for some conspiracies, the conspirators' travel expense reports would omit any references to the purpose of the trip.[214]

Conspirators also commonly misreport their travel destinations on their reimbursement forms. For example, when the president of one LCC manufacturer traveled to Illinois to collude with his rivals, he ordered his assistant to fill out paperwork stating that he had traveled to Tennessee.[215] Such bookkeeping tricks have long been tools of the price-fixing trade. Throughout the duration of electrical equipment cartel, executives routinely traveled to cartel meetings in one city but filled out their expense accounts to reflect travel to a different city an equivalent distance away.[216] Thus, if "a conspirator had to go from Pittsfield, Mass., to Pittsburgh, Pennsylvania for a secret meeting, he would find a city of equivalent distance, and mock up his expense account to make it look as if he had gone to, say, Washington, D.C."[217] In short, alleged price fixers falsify travel

207. *Id.*

208. SCHWARTZMAN, *supra* note 48, at 86.

209. *In re* Urethane Antitrust Litig., 913 F. Supp. 2d 1145, 1156 (D. Kan. 2012).

210. LIEBER, *supra* note 45, at 221.

211. *Id.* at 221.

212. *See id.*

213. CONNOR, *supra* note 13, at 310.

214. *See, e.g.*, *In re* Ethylene Propylene Diene Monomer (EPDM) Antitrust Litig., 681 F. Supp. 2d 141, 161 (D. Conn. 2009).

215. CONNOR, *supra* note 13, at 310.

216. FULLER, *supra* note 31, at 13 ("They made their expense accounts out for one city, and showed up in another an equivalent distance away.").

217. *Id.* at 81.

documents to create false alibis. Consequently, these documents should not be taken at face value.[218]

Even when not traveling far and wide, price-fixing conspirators falsify their expense reports,[219] often by excising the names of dining companions who are co-conspirators.[220] One Standard Oil employee who met with competitors to fix prices for petroleum products was instructed by his superior to omit the competitors' names from his lunch expense reports.[221] Similarly, the president of Immucor—a major manufacturer of blood reagent products—ordered his Director of Marketing to have lunch with the regional vice president of Immucor's main competitor in order to coordinate pricing, but to falsify her expense report by listing her boss, not her competitor, as her lunch companion.[222] Price fixers routinely employ such deceptions.[223]

In addition to falsifying expense reports, some cartel members rely on cash or use other ruses to conceal their secret meetings. For example, members of the graphite electrode cartel met in secret, paid in cash, and made "no explicit reference . . . to the meetings in expense claims."[224] Some price fixers pay for their collusive meeting expenses in cash and do not seek reimbursement from the company through any official channels.[225] For example, the organic peroxides cartel employed a third-party cartel consultant who "reimbursed the travel expenses of participants in order to avoid leaving any traces in the participants' expense records."[226] In some price-fixing conspiracies, members sought to prevent the creation of incriminating travel records by avoiding public transportation altogether. For example, Danish members of the pre-insulated pipe cartel eschewed flying on commercial airlines, taking private planes instead, in order to eliminate any evidence of their collusive excursions.[227] All of these efforts distort the written record, thereby protecting price-fixing conspirators.

Ultimately, these multi-tiered policies of minimizing document creation, destroying documents, hiding documents, and falsifying documents worked to prevent a paper trail from exposing the cartel.[228] Professor William Page de-

218. *See, e.g.*, *id*. at 156–57.

219. *See, e.g.*, *id.* at 81 ("On top of all this, the conspirators went to extreme lengths to cover up their tracks with falsified expense accounts.").

220. *See, e.g.*, *In re* Urethane Antitrust Litig., 913 F. Supp. 2d 1145, 1156 (D. Kan. 2012) ("Mr. Dhanis failed to list Messrs. Wood and Dineen on the expense report for a meal at which he made comments indicating that he may have been attempting to coordinate pricing . . . .").

221. *In re* Coordinated Pretrial Proc. in Petrol. Prods. Antitrust Litig., 906 F.2d 432, 450 (9th Cir. 1990).

222. *In re* Blood Reagents Antitrust Litig., 266 F. Supp. 3d 750, 759 (E.D. Pa. 2017).

223. *See, e.g.*, Supermarket of Marlinton, Inc. v. Meadow Gold Dairies, Inc., 71 F.3d 119, 121 (4th Cir. 1995) (One member of a dairy cartel "testified that he would fill out his expense accounts in such a manner that no one, including his co-workers . . . would know of his meetings with rival dairy officials.").

224. UTTON, *supra* note 35, at 56.

225. *See, e.g.*, JEPHCOTT, *supra* note 31, at 17–18 ("Such steps include . . . ensuring that travel and other expenses to reach a meeting are paid for in cash and are not claimed back from the company. . . .").

226. *Id*. at 17–18 n.36.

227. HARDING & EDWARDS, *supra* note 94, at 150.

228. CONNOR, *supra* note 13, at 32 ("Evidence that could help possible future prosecutions is destroyed or kept to an absolute minimum.").

scribed the strategy of price-fixing cartels that "by avoiding email and other durable media and hoping their coconspirators live by the ancient creed that if nobody talks, everybody walks."[229]

D. Denials and Lies

Price-fixing conspirators are, by definition, felons. So, it should come as no surprise that they are also liars. Like Fight Club,[230] it is rite of passage that when new members are brought into the fold of a price-fixing conspiracy, they are instructed to deny the cartel's existence.[231] For example, General Electric executives publicly denied participating in price fixing while the company was leading one of the largest criminal cartels of the 1950s and 1960s.[232] At the same time that General Electric's CEO was praising competition and free markets in a public speech, his top lieutenants were in a luxury hotel conspiring to fix prices in the multi-million-dollar market for low-voltage power circuit breakers.[233] The public pronouncements of price-fixing firms are often at odds with their private behavior. Price fixers issue press releases falsely denying their illegal activities.[234] Conspirators commit to their mendacity ahead of time, agreeing that they will lie and deny their collusion should anyone inquire.[235]

Price fixers lie about the reason for their parallel price increases, blaming price hikes on higher input costs. For example, members of the canned tuna cartel—including such household names as StarKist, Bumble Bee, and Chicken of the Sea—concealed their illegal price fixing by falsely claiming that their parallel price hikes were caused by increased costs for fuel and fish.[236] Similarly, manufacturers accused of fixing the prices of interior doors "often blamed their price increases on rising input costs. Those representations were materially false, as input costs were decreasing and inflation rates were low."[237] In addition to falsely claiming higher input costs, the members of the vitamins cartel also blamed government regulations and foreign exchange rates for the parallel prices

229. William Page, *Direct Evidence of a Sherman Act Agreement*, 83 ANTITRUST L. J. 201, 207 (2020).

230. FIGHT CLUB (Fox 2000 Pictures 1999) ("The first rule of Fight Club is: you do not talk about Fight Club. The second rule of Fight Club is: you do not talk about Fight Club!").

231. *See, e.g.*, Ohio Valley Elec. Corp. v. Gen. Elec. Co., 244 F. Supp. 914, 931–32 (S.D.N.Y. 1965) (noting that managers of the electrical equipment cartel "instructed newcomers to the conspiracy not to divulge its existence."); *see also* HARDING & EDWARDS, *supra* note 94, at 178 (noting that leaders of the LCD panels cartel instructed the attendants of one cartel meeting: "Do not talk about this meeting, not even to colleagues – keep a low profile.").

232. FULLER, *supra* note 31, at 52.

233. *See id*. at 35–36.

234. CONNOR, *supra* note 13, at 351 (discussing false press releases by lysine manufacturers).

235. *See* David Barboza, *Tearing Down the Façade of 'Vitamins Inc.'* N.Y. TIMES (Oct. 10, 1999), https://www.nytimes.com/1999/10/10/business/tearing-down-the-facade-of-vitamins-inc.html [https://perma.cc/WUC3-6DTU]; *In re* Urethane Antitrust Litig., 913 F. Supp. 2d 1145, 1156 (D. Kan. 2012). In the urethane price-fixing case, after one Dow executive told a co-worker about his incriminating conversations with rivals, he then warned her that if she "told anyone about their conversation, he would deny it and call her a liar." *Id.* at 1153.

236. *In re* Packaged Seafood Prods. Antitrust Litig., No. 15-MD-2670 JLS, 2017 WL 35571, at *15–16 (S.D. Cal. Jan. 3, 2017).

237. *In re* Interior Molded Doors Antitrust Litig., No. 3:18-cv-0071-JAG, 2019 WL 4478734, at *2 (E.D. Va. Sept. 18, 2019).

increases that were actually caused by collusion.[238] Such lies are a common tactic to distract consumers from the real reason they are paying more.[239] Cartels often coordinate how they will lie to justify their price increases so that every firms will tell the same lie in order "to avoid generating buyer resistance or arousing suspicion of illegal activity."[240]

Price fixers lie to their own lawyers. Many large firms have antitrust compliance programs in which antitrust attorneys—either in-house counsel or outside experts—teach executives about antitrust law and what conduct is prohibited. Although antitrust law does have some gray areas, price fixing is not among them. Antitrust counsel, both in-house and outside, may invest significant energy into locating illegal collusive activity within their firms and clients.[241] If the attorneys detect antitrust violations before the government does, they can stop them and request amnesty in exchange for exposing the cartel.[242] Many price fixers, however, would rather continue their profitable collusion than seek leniency for their antitrust violations.[243]

Antitrust conspirators, consequently, work hard to conceal their crimes from their own attorneys. According to General Electric's own CEO, at a public speech in 1961 at the University of Chicago, the executives fixing prices for several expensive items of electrical equipment "went to great lengths to conceal their activities from those charged with assuring compliance with the Company's Directive Policy" against price fixing.[244] Members of the electrical equipment conspiracy knew that "the rule of the conspirators was to never let the engineers or the lawyers know anything about it, especially the lawyers."[245] Similarly, members of the vitamins cartel provided misleading information to their in-house counsel who were trying to uncover antitrust violations within the firms.[246]

Some price-fixing executives try to avoid their company's lawyers.[247] When the world's two major auction houses, Christie's and Sotheby's, illegally conspired to impose non-negotiable commissions on their clients, Sotheby's CEO, Dede Brooks, assiduously avoided the outside antitrust attorney brought

238. CONNOR, *supra* note 13, at 329–30.

239. *See* MARSHALL & MARX, *supra* note 131, at 38 & n.36 (collecting examples); *see, e.g.*, Pro Slab, Inc. v. Argos USA LLC, No. 2:17-cv-3185, at *14 (D.S.C. Sept. 19, 2019) (Plaintiffs alleged that "Defendants falsely attributed price increases and fuel surcharges to changes in input costs"); Commission Decision COMP/E-1/37.027—Zinc phosphate, 2003 O.J. (L 153) 1, ¶ 106 (EU) (noting now members of the zinc phosphate cartel falsely blamed price hikes on higher freight costs).

240. MARSHALL & MARX, *supra* note 131, at 115–16.

241. Griffin, *supra* note 78, at 117 ("But counsel also should take a very close look at the purpose of association meetings, personally attend association meetings, and ask hard questions about what's going on there. Counsel also may want to consider the possibility that agendas and minutes of association or committee meetings are fictitious, and being used as a cover for illicit conduct.").

242. *See infra* Section V.D (discussing antitrust amnesty).

243. Marx & Mezzetti, *supra* note 165, at 17 ("We find that typically cartels engage in more concealment effort directed at lowering the probability that an internal investigation uncovers sufficient evidence to support a leniency application if the market being cartelized is more profitable, fines for antitrust violation are higher, or leniency benefits are greater.").

244. Ohio Valley Elec. Corp. v. Gen. Elec., 244 F. Supp. 914, 932 (S.D.N.Y. 1965).

245. FULLER, *supra* note 31, at 120–21.

246. CONNOR, *supra* note 13, at 317.

247. *See* Leslie, *supra* note 27, at 1680.

in by Sotheby's in-house counsel because she did not want to answer any questions about her collusive meetings with her counterpart at Christie's, Christopher Davidge.[248] Davidge, on the other hand, met with Christie's in-house and outside antitrust counsel, and he lied to them, dishonestly insisting that he had not conspired with Dede Brooks.[249] Brooks eventually followed Davidge's example of lying to lawyers, including hiring her personal friend to be Sotheby's new in-house general counsel and assuring him that, despite an ongoing antitrust investigation, she had never conspired with Davidge, a total lie.[250] Brooks and Davidge succeeded in fooling their respective attorneys.[251]

Antitrust compliance programs often fail in the face of lying by price fixers.[252] Antitrust compliance programs—which include antitrust counseling by in-house attorneys and outside experts—do not prevent high-level executives from fixing prices and lying about it to authorities. Former Deputy Assistant Attorney General for Criminal Enforcement in the Antitrust Division of the U.S. Department of Justice James M. Griffin has noted that price-fixing "cartels typically involve senior executives at firms—executives who have received extensive antitrust compliance counseling, and who often have significant responsibilities in the firm's antitrust compliance programs."[253] In the vitamin cartel, for example, as the top executives of Hoffmann-La Roche were working with their attorneys to plead guilty and negotiate a plea bargain for participating in the citric acid conspiracy, senior executives were simultaneously operating and concealing another, even larger, international price-fixing cartel.[254] Similarly, when Christie's circulated its antitrust compliance policy for its employees to sign, many did so even though they believed that Sotheby's and Christie's were illegally colluding.[255] They did not report their suspicions about their boss, CEO Christopher Davidge, who also signed the antitrust compliance policy while simultaneously colluding with his counterpart at Sotheby's.[256]

Price fixers sometimes use elaborate charades to fool their own antitrust attorneys. To prevent any innocent (or intentional) exchange of information that could violate antitrust laws, the general counsel of one firm made sure to attend a meeting between one of his firm's top executives and a major competitor to

248. Leslie, *supra* note 102, at 5.

249. *Id*.

250. HARDING & EDWARDS, *supra* note 94, at 170 ("While both Davidge and Brooks were clearly aware of the illegality of their actions through their own secretiveness, both were increasingly bare-faced in their denials in response to any concerned enquiries from general counsel within both firms.").

251. *Id.* at 171.

252. Griffin, *supra* note 78 at 120 ("For example, consider the impressive, yet unsuccessful, antitrust compliance efforts of the general counsel of a corporation we recently prosecuted for its participation in an international cartel.").

253. *Id*. at 119.

254. *Id*. ("[T]hose executives orchestrated false statements to enforcement authorities, took steps to further conceal the firm's illegal activities, and continued to lead the world's other producers in a global cartel–actions which will end up costing the firm billions of dollars in fines and damages."); *see also* UTTON, *supra* note 35, at 48 ("At the time the company was under investigation for its role in the citric acid conspiracy but denied any involvement in a conspiracy to fix the prices of vitamins.").

255. Leslie, *supra* note 102, at 5.

256. *Id.*

discuss exchanging technical information.[257] James Griffin, former Deputy Assistant Attorney General for Criminal Enforcement in the DOJ's Antitrust Division, recounted that the general counsel

> was certain that this way there could be no chance conversation between the company executive and his competitor, and the general counsel would be a witness to everything said. . . . And the general counsel must have taken some comfort when he, the executive, and the executive from the competitor firm greeted one another at the start of the meeting and the two executives introduced themselves to each other, exchanged business cards, and engaged in small talk about their careers and families that indicated that the two had never met each other before.[258]

Unbeknownst to the general counsel, the whole scene had been staged to fool him. The two executives—pretending to meet for the first time in front of the general counsel—had, in fact, been dining together, socializing, playing golf, and illegally conspiring to fix prices for years.[259] Griffin reported that "other employees at the company knew of this relationship and were instructed to keep the general counsel in the dark by referring to the competitor executive by a code name when he called the office and the general counsel was around."[260] In a less elaborate charade, the executives running the auction house price-fixing conspiracy invited their lawyers to inter-competitor conferences to monitor what information was shared at these legitimate meetings, but they held secret meetings outside of their respective lawyers' earshot whenever they wanted to violate antitrust laws.[261] Because of these tactics, even if a firm's lawyers affirmatively try to investigate and impede any price fixing within the firm, their efforts are for naught when price-fixing executives successfully conceal their crimes.[262]

Not content to lie only to their own attorneys, price fixers also lie to government attorneys and investigators. Leaders of the various vitamins cartels, for instance, provided false testimony to government investigators in order "to stymie investigations."[263] Conspirators often orchestrate what lies they will collectively tell government enforcement officials, which makes it harder to uncover collusion.[264] For example, when the DOJ began its criminal investigation into price fixing within the publication paper industry, the conspirators developed a "joint story" whereby they would lie and "tell law enforcement officials that in their conversations in 2002 and 2003 they discussed railroad fees, timber swaps, and the Finnish Paper Engineers Association," when in reality their conversations focused on price fixing.[265]

257. Griffin, *supra* note 78, at 120–21.
258. *Id.*
259. *Id*.
260. *Id*.
261. Leslie, *supra* note 102, at 5.
262. *See* CONNOR, *supra* note 13, at 238.
263. *Id*. at 152, 317.
264. Griffin, *supra* note 78, at 119.
265. *In re* Publ'n Paper Antitrust Litig., 690 F.3d 51, 59 (2d Cir. 2012).

Price fixers also lie under oath.[266] For example, one senior executive at grocery giant A&P who participated in the mid-1970s meat cartel "went so far as to deny even meeting representatives of other retail chains under any circumstances—a denial that withered when confronted by photographic evidence to the contrary."[267] Even when individuals testify about their firm's collusion, they may not truthfully recount all of the details in order to avoid personal liability, including prison time.[268]

Price fixers often deny their collusion until authorities have an irrefutable case and then they may try to strike a plea bargain. For example, ADM executives lied about participating in the international lysine cartel even after being presented with audio tapes of their illegal collusion and being offered sweetheart deals in exchange for cooperation.[269] ADM Executives repeatedly told government investigators that the company never conspired with its rivals to fix the price of lysine—that is, until its cartel partners pled guilty to fixing prices with ADM and provided documents and witnesses against ADM.[270] As Michael Utton notes, ADM's "top officials had lied to the prosecutors and the company only admitted any guilt when its position became untenable."[271]

After ADM was confronted with irrefutable evidence of their its price fixing, it tried to strike a deal. But it had nothing of value to offer regarding the lysine cartel, as its coconspirators had already pled guilty. So, ADM tipped off government officials about collusion in the markets for certain vitamins, including vitamin B2 and biotin.[272] Investigators pursued this tip by interviewing Dr. Kuno Sommer,[273] the head of marketing in the vitamins and fine chemicals division at Roche, which had entered a cooperation agreement with the government as part of its plea deal regarding its major role in the international citric acid cartel.

Sommer lied to federal investigators and denied the existence of the vitamin cartel, which by that point had illegally overcharged customers by billions of dollars. Sommer lied to the federal agents because he had previously met with other senior executives at Roche and created a game plan that "if Sommer was asked about Roche's participation in a vitamins cartel, Sommer would lie and deny that such a cartel existed."[274] Sommer lied despite the fact that his lies constituted a federal crime[275] and could trigger the DOJ revoking its deal with Roche

266. *See, e.g.*, Genesove & Mullin, *supra* note 205, at 379–80.

267. Bray v. Safeway Stores, Inc., 392 F. Supp. 851, 857 (N.D. Cal. 1975).

268. LOUIS KAPLOW, COMPETITION POLICY AND PRICE FIXING 299–300 (2013).

269. CONNOR, *supra* note 13, at 216.

270. *See id.* at 217, 351–57.

271. UTTON, *supra* note 35, at 54.

272. CONNOR, *supra* note 13, at 320.

273. *Id.*

274. MARSHALL & MARX, *supra* note 131, at 47 n.59 (quoting Barboza, *supra* note 235); CONNOR, *supra* note 13, at 286 ("Sommer denied that Roche was involved in any such illegal activity. Later it came to light that Sommer had prearranged with others at Roche to cover up the vitamin cartels' existence."). Sommer's lies "impeded FBI's investigation considerably." *Id.*

275. CONNOR, *supra* note 13, at 285–86.

over the citric acid cartel.[276] But Sommer lied nonetheless, because Sommer was a price fixer, and price fixers lie.

E. Known Unknowns and Unknown Unknowns

Most price-fixing conspiracies are never detected and never punished; their victims are never compensated. Studies suggest that only between ten percent and seventeen percent of price-fixing conspiracies are detected, but the high end of that range is probably generous.[277] Unfortunately, it is impossible to know how many illegal price-fixing cartels go undetected precisely because they are undetected. But what evidence does exist "suggests that the probability of detection is quite low."[278]

Of course, many price-fixing cartels are discovered, including several hundred international price-fixing conspiracies in the past three decades. Some major cartels are exposed through dumb luck, such as when an environmental organization received an anonymous package filled with documents detailing the existence of the illegal (and secret) international uranium cartel.[279] Other cartels are discovered because of sheer incompetence, as when eleven companies who were part of a bid-rigging ring for electric transformers all charged exactly $1,404.15 on their losing bids.[280] In another sealed-bid auction for a TVA contract for conductor cable, seven companies submitted the exact same losing bid: $198,438.24.[281] Sealed-bid auctions, in which competitors do not know each other's bids, should not result in identical bids by the losing bidders.[282] Yet in other sealed-bid auctions, members of the various electrical equipment cartels all bid the same net *delivered* price, even though all bidders were supplying the same hardware but shipping from vastly varying distances, which should necessarily result in different net delivered prices.[283] Even less subtle, members of the conspiracy to manipulate foreign exchange benchmark rates coordinated their efforts through internet chatrooms named "The Cartel" and "One Team, One Dream."[284] Although they did not expect outsiders to learn of their chatroom discussions, once discovered, their naming conventions seemed brazen and almost confessional.

276. *Id.* at 361.

277. KAPLOW, *supra* note 268 at 251.

278. *Id.*

279. TAYLOR & YOKELL, *supra* note 30, at xv; *see also In re* Coordinated Pretrial Proc. in Petrol. Prod. Antitrust Litig., 782 F. Supp. 487, 491–92 (C.D. Cal. 1991) (explaining that states learned of price fixing by oil companies through anonymous informant).

280. FULLER, *supra* note 31, at 38.

281. *Id.* at 9–10; *see also id.* at 38–39 (on a sealed-bids contract for 4,200 insulators, all eight losing companies bid an identical $12,936).

282. *Id.* at 9.

283. *Id.* at 26.

284. *In re* Commodity Exch., Inc., Gold Futures & Options Trading Litig., 328 F. Supp. 3d 217, 228–29 (S.D.N.Y. 2018).

Most known cartels, however, are exposed as a result of the DOJ's antitrust amnesty program. In 1993, the DOJ's Antitrust Division announced a new, revised Corporate Leniency Policy, which made amnesty automatic, instead of merely discretionary, for the first member of the cartel to reveal the price-fixing conspiracy to federal prosecutors.[285] Although only the first confessor would receive this automatic amnesty, subsequent confessors would receive significant discounts off their criminal fines based on their order of confession.[286] Every year, the program generated dozens of confessions and convictions.[287] It also generated evidence; in addition to eyewitness testimony, when a cartel member seeks leniency and cooperates with the government, the DOJ can sometimes secretly film subsequent conspiratorial meetings, as happened in the marine hose cartel and the lysine cartel.[288] Much of this evidence can be used by private plaintiffs in follow-on litigation.

From those price-fixing cartels that have been exposed and studied, we know that conspirators use code names, falsify documents, meet clandestinely, create fake trade associations with fake agendas, and destroy physical evidence of their collusion.[289] Cartel managers and members pursue many strategies to hide their crimes. Ultimately, price-fixing conspirators may invest more time and effort on developing and implementing methods to conceal their cartel than they spend on actually fixing prices and allocating market shares. This is not surprising. Effective concealment is necessary both to extend the duration of the cartel and to ensure that conspirators are not caught and held accountable, either through private lawsuits or criminal prosecutions.

The concealment methods discussed in Part III were common with illegal cartels that have been caught and prosecuted. But they may not be the whole story. The most successful price-fixing conspiracies are the ones that have never been discovered. These still-secret cartels may be using novel (and more successful) concealment methods that antitrust enforcers cannot yet imagine. This makes cartel concealment difficult to study.[290]

Ultimately, most price-fixing conspiracies go undetected. America's antitrust regime should be developing better ways to discover, dismantle, and discipline these cartels. Regrettably, Part IV explains how antitrust decisions by federal courts facilitate the concealment of illegal collusion.

285. Gary R. Spratling, *Detection and Deterrence: Rewarding Informants for Reporting Violations*, 69 GEO. WASH. L. REV. 798, 803 (2001).

286. *Id.*

287. *Id.* at 800–02.

288. *See* Philip Hoult, *Up at Dawn*, 5 IN-HOUSE PERSP. 17, 17 (2009).

289. *In re* Vitamins Antitrust Litig., No. MISC 99-197, 2000 WL 1475705, at *3 (D.D.C. May 9, 2000); FULLER, *supra* note 31, at 13 (discussing concealment methods of electrical equipment cartels).

290. Genesove & Mullin, *supra* note 205, at 380.

IV. HOW COURTS REWARD THE CONCEALMENT OF PRICE FIXING

Despite the efforts that price-fixing conspirators take to conceal their collusion, a cartel's victims may acquire circumstantial evidence of the conspiracy and bring antitrust litigation seeking compensation for the cartel overcharges. Although Congress enacted the Sherman Act and later amendments in order to facilitate such private lawsuits and to hold price fixers accountable, federal courts have made it unreasonably difficult for antitrust plaintiffs to prevail on price-fixing claims. For example, despite the fact that direct evidence of collusion is rarely available, federal judges have made it harder to prove collusion through circumstantial evidence by isolating individual pieces of evidence,[291] by effectively requiring direct evidence,[292] and by holding that when evidence is in equipoise, price-fixing defendants are entitled to summary judgment.[293] Most importantly for our purposes, federal courts have crafted a series of antitrust rules that encourage and reward the concealment conduct detailed in Part III. This Part explains how.

A. Improper Deference to Defendants' Concealment Methods

Federal judges are often too trusting of price-fixing defendants. Executives' protestations of innocence are afforded undue credibility. Their documents are erroneously treated as inherently accurate and comprehensive. Their inability to explain their suspicious conduct is written off as innocent memory gaps. Because judges do not fully understand how price-fixing conspiracies conceal their collusion, price-fixing defendants receive judicial deference to which they are not entitled.

1. Rewarding Denial

Despite the fact that price fixers reflexively deny their collusion, several courts have attached significant probative value to such denials. For example, in *Lamb's Patio Theatre, Inc. v. Universal Film Exchanges, Inc.*,[294] the Seventh Circuit held that when price-fixing defendants deny fixing prices, the plaintiffs must "produce significant probative evidence by affidavit or deposition that conspiracy existed if summary judgment [is] to be avoided."[295] This court's language is curious because the phrase "significant probative evidence by affidavit or deposition" suggests that plaintiffs need a co-conspirator's confession in order to survive summary judgment. That is not the standard. Plaintiffs need only create a genuine issue of material fact, which can be based on circumstantial evidence.[296] Nonetheless, *Lamb's* has proved influential, as courts have relied on *Lamb's* for the proposition that a defendant's denial of price fixing "*raises the*

291. *See infra* Section IV.A.1.
292. *See infra* Section IV.B.
293. *See infra* Section IV.C.
294. 582 F.2d 1068 (7th Cir. 1978).
295. *Id.* at 1070.
296. FED. R. CIV. P. 56(a).

plaintiffs' burden to show 'significant probative evidence' of a conspiracy."[297] Other courts considering defendants' summary judgment motions on price-fixing claims have held that "sworn denials of the defendants may be sufficient to shift the burden of proof back to the plaintiff."[298] This burden shifting is often dispositive. Given this additional ill-defined burden, it is perhaps not surprising that courts rely extensively on defendants' denials of price fixing in granting them summary judgment.[299]

Rewarding defendants' denials of price fixing by increasing the plaintiffs' burdens is inappropriate. Because both innocent and guilty firms will equally deny collusion when sued, such denials do not help distinguish between defendants who have illegally fixed prices and those who have not. Given the extreme concealment measures that cartels undertake, denials of price fixing should have no evidentiary value. Such denial is literally the easiest, lowest-cost form of concealment. After a group of firms has created code names, a fake trade association, false travel documents, and a policy for destroying incriminating evidence, it is hardly surprising that when asked—by the very people their evasive measures were designed to fool—whether they have illegally fixed prices, these firms answer in the negative. For courts to convert that denial into heightened burdens for antitrust plaintiffs essentially rewards price fixers for their deceit.

2. Deferring to Defendants' Documents

Courts often defer to the written notes and agendas of inter-competitor meetings, suggesting that an absence of references to price-related subjects or explicit illegal collusion in such documents somehow proves that the rivals did not conspire. Several antitrust opinions illustrate this point. For example, in *In re Dairy Farmers of America, Inc.*,[300] when granting summary judgment to defendants sued for fixing the price of cheese, an Illinois district court emphasized that the written agenda for the dairy farmers trade association did "not mention . . . price levels."[301] Similarly, in *Rosefielde v. Falcon Jet Corp.*,[302] a New Jersey

297. City of Moundridge v. Exxon Mobil Corp., 429 F. Supp. 2d 117, 131 (D.D.C. 2006) (emphasis added) (citation omitted).

298. Rosefielde v. Falcon Jet Corp., 701 F. Supp. 1053, 1060–61 (D.N.J. 1988) (collecting cases).

299. *See, e.g.*, Kreuzer v. Am. Acad. of Periodontology, 735 F.2d 1479, 1488 (D.C. Cir. 1984) ("[T]he defendant may deny the existence of a conspiracy and offer an innocent explanation of the questioned conduct. If this explanation is plausible and more logical than a theory of concerted action, then a conspiracy may not be found."); Hall v. United Air Lines, Inc., 296 F. Supp. 2d 652, 665–66 (E.D.N.C. 2003), *aff'd sub nom*. Hall v. Am. Airlines, Inc., 118 F. App'x 680 (4th Cir. 2004); Reserve Supply Corp. v. Owens-Corning Fiberglas Corp., 799 F. Supp. 840, 843 (N.D. Ill. 1990), *aff'd*, 971 F.2d 37 (7th Cir. 1992) (noting defendants' "sworn denials"); *In re* High Fructose Corn Syrup Antitrust Litig., 156 F. Supp. 2d 1017, 1039–40 (C.D. Ill. 2001); Rosefielde v. Falcon Jet Corp., 701 F. Supp. 1053, 1058 (D.N.J. 1988); Weit v. Cont'l Ill. Nat. Bank & Tr. Co. of Chi., 478 F. Supp. 285, 296 (N.D. Ill. 1979), *aff'd*, 641 F.2d 457 (7th Cir. 1981); *see also* ABA ANTITRUST SECTION, PROOF OF CONSPIRACY UNDER FEDERAL ANTITRUST LAWS 197 (2010) ("The Fourth Circuit has considered affidavits from the defendants simply denying the allegations of conspiracy to be strong support for not inferring the existence of a conspiracy.").

300. *In re Dairy Farmers of America, Inc., Cheese Antitrust Litigation*, 60 F. Supp. 3d 914, 958 (N.D. Ill. 2014), *aff'd sub nom*. *In re* Dairy Farmers of Am., Inc., 801 F.3d 758 (7th Cir. 2015).

301. *Id*.

302. 701 F. Supp. 1053 (D.N.J. 1988).

district court granted summary judgment to defendants accused of conspiring to fix prices for business jets and to prevent their resale. Although the plaintiffs proffered evidence of a high level of inter-competitor communications, which the court acknowledged as a plus factor, the court then drained these meetings of their probative value because the defendants' notes of their meetings did not memorialize an illegal agreement to fix prices.[303]

Finally, in *Ross v. American Express Co.*,[304] the plaintiffs sued several major banks for conspiring to impose arbitration clauses with class action waivers on their customers, a clear violation of Section 1 of the Sherman Act.[305] Despite the fact that the alleged conspirators were instructed to bring copies of their arbitration clauses to their inter-competitor meetings and all of the defendants ended up eventually imposing similar arbitration clauses with class action waivers, the New York district court deprived the meetings of their probative value because "notes and agendas from the meetings indicate that education on legal developments on arbitration and 'legislative updates' were significant aspects of each meeting" and there was "no evidence indicating what, if anything was done with" the shared arbitration clauses.[306] The court seemed to believe that the meetings were necessarily innocent because the defendants' notes and agendas did not memorialize the defendants' collusion. This absolution of the defendants' conduct, which was affirmed by the Second Circuit, is particularly troubling given that the district court ultimately found that the defendants "*had an agreement* . . . to establish class-action-barring arbitration as an industry norm."[307] That is literally the violation of the Sherman Act that the court held nonexistent because none of the defendants' notes memorialized an agreement to impose arbitration clauses with class action waivers.[308]

All these opinions committed a version of the same mistake: treating defendants' documents as accurate and comprehensive. But this ignores the fact that actual conspirators often falsify documents.[309] Consequently, in *Dairy Farmers*,[310] the fact that defendants did not memorialize in writing an intention to discuss pricing does not prove that they did not have such discussions. Even in noncollusive meetings, written agendas are rarely exhaustive of what topics were actually discussed at a gathering. Likewise, the *Rosefielde* court deferred to the defendants' meeting notes without considering that actual conspiracies often prohibit the taking of incriminating notes, require the destruction of such notes, or both.[311] Finally, the *Ross* court assumed that the defendants' documents accurately reflected everything that the competitors discussed, even though it

303. *Id.* at 1074.
304. 35 F. Supp. 3d 407 (S.D.N.Y. 2014).
305. Christopher R. Leslie, *Conspiracy to Arbitrate*, 96 N.C. L. REV. 381, 401–05 (2017).
306. *Ross*, 35 F. Supp. 3d at 445.
307. *Id.* at 452.
308. Leslie, *supra* note 305, at 446–48.
309. *See supra* Section III.C.4.
310. *In re* Dairy Farmers of Am., Inc. Cheese Antitrust Litig., 60 F.Supp.3d 914 (N.D. Ill. 2014).
311. Rosefielde v. Falcon Jet Corp., 701 F. Supp. 1053, 1074 (D.N.J. 1988).

acknowledged that the meetings had the intent and result of creating an agreement among the competitors to impose anti-consumer arbitration clauses on all customers.[312] But more importantly, all of these courts ignored the fact that some antitrust conspiracies create fake agendas or otherwise falsify the documentation of inter-competitor meetings.[313] In sum, courts grant summary judgment to price-fixing defendants based on the assumption that internal documents are true and accurate,[314] despite the fact that such documents can be easily falsified, and often are.[315]

3. Excusing Amnesia and the Absence of Notes

Understanding the standard operating procedures of illegal cartels sheds light on the significance of an absence of notes. Some cartels have explicit rules that forbid a meeting's attendees from taking any notes.[316] Price-fixing meetings often have "no agendas, no minutes, and no customer representatives present."[317] The absence of notes is suspicious because for legitimate business meetings, one would expect participants to create a record of their conversation, including any agreements (formal or informal) and any to-do lists of follow-up tasks. Thus, it is probative when attendees of inter-competitor meetings have not made any post-meeting memoranda either for their own files or to report the contents of the meeting to their superiors—or their inferiors for that matter. It seems odd that executives would attend such a meeting and nobody at their home institutions would be interested in what happened. For all of the time and resources that go into arranging and holding a meeting among high-level executives of competing firms, it is highly suspicious when no one remembers attending the meeting and when no one took or retained any notes. Those are more likely the features of a meeting where illegal collusion took place rather than legitimate business negotiations or dealings.

In light of concealment practices common among price-fixing conspiracies, an absence of certain types of evidence should—under some circumstances—be considered circumstantial evidence that is probative of collusion. Courts, however, generally do not appreciate the evidence-erasure methods of illegal cartels. For example, in *In re Text Messaging Antitrust Litigation*,[318] when the plaintiffs pointed to the defendants' inter-competitor meetings as an important plus factor and "argue[d] that notes and/or minutes from these meetings should have been kept but were not," the court rejected the plaintiffs' argument because they "pro-

312. Ross v. Am. Express Co., 35 F. Supp. 3d 407, 419 (S.D.N.Y. 2014).

313. *See supra* Section III.C.4.

314. *In re* Baby Food Antitrust Litig., 166 F.3d 112, 132 (3d Cir. 1999).

315. *See supra* Section III.C.4.

316. *See supra* Section III.C.1.

317. CONNOR, *supra* note 13, at 144. *See, e.g.*, Case COMP/E-1/37.027—Zinc Phosphate, Comm'n Decision, 2003 O.J. (L 153) 1, ¶ 253 ("In the present case the participants in the cartel went to considerable lengths to conceal their unlawful conduct. Virtually all documentary traces of the activities of the cartel were suppressed: no minutes, records, lists of participants or invitations were maintained.").

318. 46 F. Supp. 3d 788, 806 (N.D. Ill. 2014), *aff'd*, 782 F.3d 867 (7th Cir. 2015).

vided no evidence, however, that any actual collusion occurred at these meetings."[319] The court missed the entire point: providing documentary evidence that "actual collusion occurred at these meetings" is essentially impossible when nobody took or retained any notes. The absence of any notes or minutes from a series of inter-competitor meetings *is* circumstantial evidence of collusion.

Some courts have found nothing suspicious about the fact that not a single one of the competitors at a particular meeting remembered *anything* about that meeting, including who attended and what was discussed. For example, in *Ross*, the court drew no inferences from the fact that "[c]ontemporaneous notes survive from only 7 of the 28 meetings" held among competing banks that were alleged to have conspired to impose similar anti-consumer mandatory arbitration clauses on their customers.[320] The court wrote off the defendants' inability to explain what transpired at their inter-competitor meetings as mere "memory gaps."[321] These memory lapses did not prevent defendants from denying that they had discussed their respective arbitration clauses at these meetings. These claims seem incredible given that on a July 2001 inter-competitor conference call—for which there were no attendance lists, notes, or memos—the defendants denied even discussing arbitration,[322] despite the fact that "the designated passcode for the conference call was 'ARBITRATION.'"[323] The court ultimately deprived this evidence of its probative value and ruled in favor of the defendants. This was a mistake because the defendants' inability to explain suspicious conduct is probative of collusion.[324]

B. Dismissing Price-Fixing Claims in the Shadow of Concealment

Issues of concealment are particularly important in the post-*Twombly* era. In *Twombly*, the Supreme Court increased the plaintiff's burden to survive a motion to dismiss.[325] Several courts have interpreted *Twombly* as holding that "to allege an agreement between antitrust co-conspirators, the complaint must allege facts such as a 'specific time, place, or person involved in the alleged conspiracies' to give a defendant seeking to respond to allegations of a conspiracy an idea of where to begin."[326] The Ninth Circuit in *Kendall v. Visa*, for example, dismissed an antitrust conspiracy complaint because it did "not answer the basic questions: who, did what, to whom (or with whom), where, and when?"[327] This

319. *Id*.

320. Ross v. Am. Express Co., 35 F. Supp. 3d 407, 450 (S.D.N.Y. 2014).

321. *Id*. at 452 ("The memory gaps of a few witnesses do not transmogrify an honest lack of recollection into a conspiracy.").

322. *Id*. at 426.

323. *Id*.

324. AREEDA & HERBERT HOVENKAMP, ANTITRUST LAW: AN ANALYSIS OF ANTITRUST PRINCIPLES AND THEIR APPLICATION ¶ 1417c (4th ed. 2018) ("Suppose that each defendant testifies that a meeting occurred but that she cannot remember what transpired. Here, there is the factual question of whether the witnesses are truthful.").

325. Bell Atl. Corp. v. Twombly, 550 U.S. 544, 556 (2007).

326. Kendall v. Visa U.S.A., Inc., 518 F.3d 1042, 1047 (9th Cir. 2008) (citing *Twombly,* 550 U.S. at 565 n.10).

327. *Id.* at 1048.

approach imposes an unreasonable pleading burden on antitrust plaintiffs and leads to improper dismissals. For example, a split panel of the Ninth Circuit affirmed dismissal of a price-fixing complaint in *In re Musical Instruments & Equipment Antitrust Litigation*,[328] in which the plaintiffs claimed that Guitar Center, several guitar manufacturers, and their trade association (the National Association of Music Merchants ("NAMM")) had conspired to raise prices through minimum-advertised-price policies ("MAP policies") "that fixed the minimum price at which any retailer could advertise the manufacturers' guitars and guitar amplifiers."[329] The plaintiff's complaint explained how the defendants used NAMM meetings to exchange price information and coordinate pricing strategies.[330] In addition, the plaintiffs pled that the defendants had a common motive to conspire, engaged in actions against each company's individual self-interest, adopted "substantially similar MAP policies," and that the FTC had investigated and settled allegations of "price fixing in the music-products industry, specifically at NAMM-sponsored events."[331] The majority nonetheless affirmed dismissal because the plaintiffs did "not plead facts in answer to the district court's questions: 'who is alleged to have conspired with whom, what exactly they agreed to, and how the alleged conspiracy was organized and carried out.'"[332]

Unfortunately, the Ninth Circuit's interpretation of *Twombly* is not an outlier. For example, the Sixth Circuit, too, has held that "[t]o survive a motion to dismiss, these allegations must be specific enough to establish the relevant 'who, what, where, when, how or why.'"[333] The Third Circuit has interpreted *Twombly* as holding that a complaint which "mentioned no specific time, place, or person involved in the alleged conspiracies" is deficient because it did not allege who "supposedly agreed, or when and where the illicit agreement took place."[334] Other antitrust opinions have also emphasized the location and timing of the alleged collusion, as when the Ninth Circuit affirmed dismissal of a price-fixing claim because the "allegations fail to explain where and when the alleged collusive activity among the defendants occurred, as needed to make out a plausible Section 1 claim."[335] These demands for specific details at the pleading stage are now common.[336]

328. 798 F.3d 1186, 1189 (9th Cir. 2015).

329. *Id*. at 1189–90.

330. *Id.* at 1190.

331. *Id*. at 1199–1200 (Pregerson, J., dissenting).

332. *Id.* at 1195 (majority opinion).

333. Carrier Corp. v. Outokumpu Oyj, 673 F.3d 430, 445 (6th Cir. 2012) (citing Total Benefits Planning Agency, Inc. v. Anthem Blue Cross & Blue Shield, 552 F.3d 430, 437 (6th Cir. 2008)).

334. McCullough v. Zimmer, Inc., 382 F. App'x 225, 230 (3d Cir. 2010) (quoting Bell Atl. Corp. v. Twombly, 550 U.S. 544, 565 n.10 (2007)).

335. Bona Fide Conglomerate, Inc. v. SourceAmerica, 691 F. App'x 389, 390 (9th Cir. 2017).

336. Cayman Expl. Corp. v. United Gas Pipe Line Co., 873 F.2d 1357, 1361 (10th Cir. 1989) (complaint did not allege horizontal price-fixing claim where plaintiff "did not identify the alleged conspirators, when or how they functioned or the nature and extent of [defendant's] participation in the alleged conspiracy"); Kelsey K. v. NFL Enters., LLC, 254 F. Supp. 3d 1140, 1144 (N.D. Cal. 2017), *aff'd*, 757 F. App'x 524 (9th Cir. 2018); Yellow Page Sols., Inc. v. Bell Atl. Yellow Pages Co., No. 00 CIV. 5663, 2001 WL 1468168, at *14

These opinions fail to consider how cartel concealment methods can prevent the victims of illegal price fixing from being able to answer these questions without full discovery. How can antitrust plaintiffs know *who* within each cartel firm negotiated the collusive agreements when price-fixing conspiracies use aliases and codenames, when they falsify documents, when individuals use pay phones or burner phones and check into hotels under fake names, when the attendees of their meetings are kept secret, and when some of the individual conspirators do not meet with their co-conspirators?[337] How can antitrust plaintiffs plead *when* conspiratorial meetings happened when some price-fixing conspiracies operate as sleeper cells that agree to price hikes eight months before implementing them,[338] or when the price-fixing meetings were camouflaged as trade association meetings, some of which may be legitimate and others conspiratorial?[339] How can plaintiffs know *where* the collusion happened when the locations of cartel meetings are kept secret, and when the co-conspirators create fake travel documents to indicate that they were never in the city in which the cartel meeting occurred?[340] A private plaintiff may be able to answer these questions when their lawsuit follows on the heels of a prior successful government prosecution, in which witnesses with plea deals provided direct evidence of the conspiracy and its details. But absent that scenario, it will be practically impossible for private plaintiffs to answer these questions, especially before full discovery has been completed. Courts should apply the *Twombly* dismissal standard in light of the fact that defendants take extraordinary efforts to conceal their price-fixing activities.

Federal courts dismiss price-fixing claims even when there is indisputable proof that the defendants have illegally colluded, albeit in foreign markets. In *In re Elevator Antitrust Litigation*,[341] the Second Circuit affirmed dismissal of an antitrust complaint in which the plaintiffs accused elevator firms of fixing the prices of elevator sales and maintenance for their American customers. The plaintiffs described how the four defendants controlled 75% of the market, met frequently at trade association meetings, and employed "standard price lists and contracts" with "similar language and terms,"[342] and how the defendants invoiced both their U.S. and European customers "through the same inter-company accounting system."[343] Moreover, the plaintiffs showed that the defendants had illegally fixed prices in the European market.[344] The district judge held that the

(S.D.N.Y. Nov. 19, 2001) ("Once again, plaintiffs do not allege when or where any unlawful agreement was made, or by whom, or why the parties would enter this agreement.").

337. *See supra* Section III.A.

338. *See supra* note 139.

339. *See supra* Section III.B.1.

340. *See supra* notes 215–18.

341. *In re* Elevator Antitrust Litig., 502 F.3d 47, 50 (2d Cir. 2007).

342. *In re* Elevator Antitrust Litig., No. 04-CV-1178(TPG), 2006 WL 1470994, at *2 (S.D.N.Y. May 30, 2006), *aff'd*, 502 F.3d 47 (2d Cir. 2007).

343. *Id.* at *7.

344. *Id.* (alteration in original). Such foreign price-fixing conspiracies are strong evidence that increasing parallel prices in the U.S. market are the product of collusion for many reasons. *See* Leslie, *supra* note 194, at 591–96.

complaint "lacks the anomalous behavior, which the court in *Twombly* found to be a strong indicia of conspiracy."[345] The judge did not explain why the defendants' proven price fixing in Europe coupled with standardized pricing and contract terms, as well as frequent meetings through trade associations and a cooperative invoicing system, did not collectively constitute "anomalous behavior."

After the district court dismissed the complaint without leave to replead, the Second Circuit affirmed, asserting that the plaintiffs had not sufficiently alleged "facts linking transactions in Europe to transactions and [anticompetitive] effects here" in the American market and, thus, the "plaintiffs' conclusory allegations do not 'nudge [their] claims across the line from conceivable to plausible.'"[346] Both the district judge and appellate panel failed to recognize that the link between the proven European conspiracy and the alleged American conspiracy was the fact that *the same* corporate defendants were engaging in *the same* conduct involving *the same* product and maintenance billed through "*the same* inter-company accounting system."[347] That is linkage enough, but the specificity that the judges demanded could be met only by precisely the type of communications that price-fixing conspirators conceal through the use of trade associations and common agents, as these defendants had used and as hundreds of actual proven price-fixing conspirators have used. When reading the complaint with an appreciation of cartel concealment methods, the plaintiffs' allegations were sufficient to warrant full discovery.

Given the realities of cartel concealment, many courts require too many specific allegations for plaintiffs' price-fixing claims to survive a motion to dismiss.[348] For example, the court in *In re Hawaiian & Guamanian Cabotage Antitrust Litigation*[349] distinguished between "the inclusion of specific allegations concerning time, place, and person versus general allusions to 'secret meetings,' 'communications,' or 'agreements,'" finding the latter wanting.[350] The court dismissed the price-fixing complaint because the plaintiffs did "not identify any specific communications or contracts."[351] But "specific contracts" would constitute direct evidence of agreement,[352] a standard almost impossible to meet in light of the concealment measures taken by price fixers. Moreover, antitrust

345. 2006 WL 1470994, at *10.

346. *In re* Elevator Antitrust Litig., 502 F.3d at 51–52 (quoting Bell Atl. Corp. v. Twombly, 127 S. Ct. 1955, 1974 (2007)).

347. *In re* Elevator Antitrust Litig., 2006 WL 1470994, at *7 (emphasis added).

348. *In re* Generic Pharm. Pricing Antitrust Litig., 338 F. Supp. 3d 404, 439 (E.D. Pa. 2018); *In re* Processed Egg Prod. Antitrust Litig., 821 F.Supp.2d 709, 720 (E.D. Pa. 2011).

349. 647 F. Supp. 2d 1250, 1256–57 (W.D. Wash. 2009).

350. *Id.* Many courts have interpreted *Twombly* as not requiring such demanding detail. *See, e.g.*, *In re* Fresh & Process Potatoes Antitrust Litig., 834 F. Supp. 2d 1141, 1163 n.13 (D. Idaho 2011) ("Many courts have rejected such arguments (including district courts within the Ninth Circuit), concluding that the Supreme Court did not impose the elaborate 'who-what-where-when' pleading requirement defendants insisted upon.") (collecting cases).

351. *In re Hawaiian & Guamanian Cabotage Antitrust Litig*., 647 F. Supp. 2d at 1259.

352. *See* Christopher R. Leslie, *The Decline and Fall of Circumstantial Evidence in Antitrust Law*, 69 AM. U. L. REV. 1713, 1736 (2020).

plaintiffs do not need direct evidence to prove their case at trial, let alone to plead their complaint.

Moreover, even when plaintiffs plead with specificity, courts often dismiss price-fixing conspiracy claims under the *Twombly* standard. In *Mayor & City Council of Baltimore, Md. v. Citigroup, Inc.*,[353] the Second Circuit affirmed dismissal of a price-fixing lawsuit because the plaintiffs only alleged two specific emails whose contents could be interpreted as demonstrating an awareness of underlying collusion.[354] The opinion raises more questions than it answers, including: How many specific communications do antitrust plaintiffs need to plead to survive dismissal? And how can plaintiffs legally obtain this multitude of internal communications without court-ordered discovery?

The *Twombly* majority emphasized the costs of discovery in antitrust cases to justify its decision to make it harder for antitrust plaintiffs to survive motions for dismissal.[355] This is ironic because, historically, one of the main reasons that antitrust discovery is so expensive is that price fixers undertake such clever and sometimes extreme measures to conceal their antitrust violations.[356] The reasoning of *Twombly* essentially encourages price fixers to conceal their crimes in a way that renders antitrust discovery "too costly." By increasing the costs of discovery, price-fixing defendants can more easily get cases against them dismissed before any meaningful discovery takes place. But, of course, most plaintiffs cannot uncover the price fixing without that discovery. Thus, courts have created a vicious cycle: price fixers' concealment measures necessitate more extensive and more expensive discovery and courts use this high expense to justify dismissing price-fixing claims without full discovery, thus rewarding price fixers writ large for their concealment schemes.

C. Cartel Concealment Methods at Summary Judgment

Even when antitrust plaintiffs survive motions to dismiss, they inevitably have a second, higher mountain to climb: the defendants' predictable motion for summary judgment. This Section illustrates how courts often fail to recognize cartel concealment methods and, thus, too quickly grant summary judgment to price-fixing defendants.

When evaluating summary judgment motions, judges should be mindful that price-fixing conspirators generally negotiate both how they restrict competition and how they will conceal their illegal collusion. Economists Robert Marshall and Leslie Marx have explained that "cartel members know the value of stealth as well as the cost of nonstealthy conduct. Cartels try to make their actions

353. 709 F.3d 129 (2d Cir. 2013).

354. *Id*. at 139–40.

355. Bell Atl. Corp. v. Twombly, 550 U.S. 544, 558–59 (2007).

356. *See, e.g.*, Ohio Valley Elec. Corp. v. Gen. Elec. Co., 244 F. Supp. 914, 932 (S.D.N.Y. 1965) (The CEO of GE stated that "It took eighteen months of government investigation, including access to competitive information, and more than 500 witnesses appearing before four separate Grand Juries to uncover the facts. Certainly, there is no excuse for such deception.").

look indistinguishable from noncollusive conduct."[357] Because price-fixing conspirators actively conceal their crime, private plaintiffs rarely possess direct evidence of collusion. Concealment requires private plaintiffs to prove collusion through inferences.[358]

Because direct evidence of collusion is rarely available, private plaintiffs must rely on circumstantial evidence.[359] Antitrust law employs a two-stage process for proving collusive agreements through circumstantial evidence.[360] First, the plaintiff shows the defendants engaged in parallel pricing (or other parallel conduct), referred to as "conscious parallelism." Parallelism is probative of collusion[361] but not alone enough to prove it[362] because prices can move concurrently in a competitive market,[363] as when input costs increase or decrease. Second, the plaintiffs must show that the parallel conduct is likely the product of collusion by presenting plus factors, which is evidence of "economic actions and outcomes that are largely inconsistent with unilateral conduct but largely consistent with explicitly coordinated action."[364] The presence of plus factors, "when viewed in conjunction with the parallel acts, can serve to allow a factfinder to infer a conspiracy."[365]

The fact that price-fixing conspirators develop elaborate schemes to conceal their crimes and that price-fixing defendants generally lie about their activities should inform how courts treat price-fixing claims at the summary judgment stage. Unfortunately, as explained in Section IV.A, courts grant defendants summary judgment by crediting the defendants' denials, the defendants' documents, and even the defendants' failure to explain their suspicious conduct. This Section explains how, when considering price-fixing defendants' summary judgment motions and evaluating the plaintiffs' evidence of plus factors, courts both undervalue and overlook the concealment mechanisms that price-fixing conspiracies employ.

1. Feigned Price Leadership

Price-fixing conspirators' concealment efforts can distort both steps of the circumstantial-evidence framework for inferring collusive agreements. With respect to the first component, conscious parallelism, courts often minimize the

357. MARSHALL & MARX, *supra* note 131, at 23.

358. *In re* Keurig Green Mountain Single-Serve Coffee Antitrust Litig., 383 F. Supp. 3d 187, 242 (S.D.N.Y. 2019) (citing *In re* Elec. Books Antitrust Litig., 859 F. Supp. 2d 671, 681 (S.D.N.Y. 2012)).

359. *See* Leslie, *supra* note 352, at 1714; *see also In re* Se. Milk Antitrust Litig., 801 F. Supp. 2d 705, 714 (E.D. Tenn. 2011) ("In conspiracy cases, '[t]he element of agreement, . . . is nearly always established by circumstantial evidence, as conspirators seldom make records of their illegal agreements.'") (quoting United States v. Short, 671 F.2d 178, 182 (6th Cir. 1982)).

360. *In re* Flat Glass Antitrust Litig., 385 F.3d 350, 360 n.11 (3d Cir. 2004).

361. *In re* Baby Food Antitrust Litig., 166 F.3d 112, 122 (3d Cir. 1999) ("Thus, when two or more competitors in such a market act separately but in parallel fashion in their pricing decisions, this may provide probative evidence of the existence of an understanding by the competitors to fix prices.").

362. *In re* Chocolate Confectionary Antitrust Litig., 801 F.3d 383, 398 (3d Cir. 2015).

363. *In re* Graphics Processing Units Antitrust Litig., 527 F. Supp. 2d 1011, 1022 (N.D. Cal. 2007).

364. *In re* Musical Instruments & Equip. Antitrust Litig., 798 F.3d 1186, 1194 (9th Cir. 2015).

365. Apex Oil Co. v. DiMauro, 822 F.2d 246, 253–54 (2d Cir. 1987).

probative value of parallel price increases by characterizing them as "mere" price leadership.[366] For example, the court in *In re Domestic Drywall Antitrust Litigation*[367] reasoned that "[d]efendants are correct that the Court must not rely on mere price followership activity because price followership is expected in oligopolistic markets."[368] Courts routinely grant summary judgment to price-fixing defendants by asserting that the plaintiffs' evidence of parallelism merely demonstrates price leadership, which is legal.[369] Indeed, the Eighth Circuit in *Blomkest Fertilizer, Inc. v. Potash Corp. of Saskatchewan*[370] granted summary judgment despite the presence of numerous plus factors by asserting that with "price leadership . . . [in an] oligopolistic industry, it would have been ridiculous for the remaining companies to not also raise their prices in a parallel fashion."[371] Such reasoning depletes all of the probative value from parallel price increases; this protects price-fixing conspiracies from antitrust liability. While parallel price increases might occur because of price leadership, they might also result from collusion, and the point of the plus-factor analysis is to use all of the circumstantial evidence, viewed in context, to determine whether the defendants in the particular case engaged in legal price leadership or illegal price fixing. Merely declaring that the defendants' parallel price increases resulted from price leadership ignores the plaintiff's circumstantial evidence of collusion.

This judicial rush to summary judgment under the banner of price leadership is misguided because it fails to appreciate how actual price fixers make their illegal collusion resemble legal price leadership. Cartel members negotiate which conspirator will announce a price increase and when its co-conspirators will follow, sometimes at a predetermined temporal interval that will not make the parallel price increases seem coordinated.[372] Members of the vitamin cartel were sufficiently shrewd and patient that they negotiated their collusive price hikes, including who would act as the price leader, eight months ahead of time.[373] Because price fixers take efforts to disguise their collusion, distinguishing between legal price leadership and illegal price fixing can be difficult. Consequently, courts should not so readily defer to defendants' assertion of price leadership. Instead, they should give appropriate weight to the plaintiffs' proffered plus factors. The remainder of Part III shows how courts minimize the significance of some plus factors by miscomprehending cartel concealment methods.

366. Superior Offshore Int'l, Inc. v. Bristow Grp., Inc., 490 F. App'x 492, 499–500 (3d Cir. 2012) ("Alternatively, given the concentration of the helicopter-services market at issue here, such price increases could have just as easily been the result of 'price leadership' as of price fixing.").

367. 163 F. Supp. 3d 175 (E.D. Pa. 2016).

368. *Id*. at 231.

369. *See, e.g*., *In re Musical Instruments & Equip. Antitrust Litig*., 798 F.3d at 1195; Williamson Oil Co. v. Philip Morris USA, 346 F.3d 1287, 1317 (11th Cir. 2003).

370. 203 F.3d 1028 (8th Cir. 2000).

371. *Id*. at 1034.

372. *See supra* notes 126–34; *see also* ARTHUR ROBERT BURNS, THE DECLINE OF COMPETITION: A STUDY OF THE EVOLUTION OF AMERICAN INDUSTRY 95–96 (1936) (explaining how early twentieth-century petroleum industry coordinated to make Standard Oil the price leaders that others would follow).

373. *See* CONNOR, *supra* note 13, at 281.

2. Trade Associations

Because rival firms must communicate with each other to initiate, manage, and enforce a price-fixing conspiracy, courts treat inter-competitor communications as evidence that is probative of collusion.[374] Many courts, however, minimize the importance of this evidence by failing to appreciate how conspirators disguise their cartel communications. For example, many courts downplay the significance of inter-competitor communications at meetings and social functions.[375] This is troubling because many conspiracies use these opportunities to have collusive conversations.[376]

One of the most common ways in which price fixers attempt to conceal their illegal collusion is by using a trade association as a cover. Despite the fact that price-fixing ringleaders have long used trade associations as a core part of their illegal activity, courts are often incredibly deferential toward defendants' inter-competitor meetings held at trade association functions. For example, in *In re Citric Acid*, the Ninth Circuit found nothing suspicious about citric manufacturers exchanging their price information because such "is standard fare for trade associations."[377] The court ignored the fact that four of the five major citric acid manufacturers had already pled guilty to criminal price fixing and had used the trade association to "play a key-facilitating role in the conspiracy" and to "provide a convenient cover for illegal price-fixing discussions."[378] Still, the Ninth Circuit affirmed summary judgment for the one major citric acid manufacturer that charged the same prices as the admitted felons, but claimed not to have conspired with them. This judicial deference to trade association is common.[379]

Even though the economic literature shows between one-third and more than one-half of studied cartels have been "organized and maintained by trade associations,"[380] most federal circuits have failed to understand the role that trade associations play in concealing price-fixing conspiracies. Consequently, judges improperly view trade association activities as inherently legitimate. For example, the Sixth Circuit has speculated that antitrust defendants' "presence at such trade meetings is more likely explained by their lawful, free-market behavior."[381] The Eleventh Circuit has opined "participation in trade organizations provides

374. *See, e.g.*, Blomkest Fertilizer, Inc. v. Potash Corp. of Saskatchewan, 203 F.3d 1028, 1033 (8th Cir. 2000); SD3, LLC v. Black & Decker (U.S.) Inc., 801 F.3d 412, 432 (4th Cir. 2015); Hyland v. HomeServices of Am., Inc., 771 F.3d 310, 320 (6th Cir. 2014).

375. *See In re* Text Messaging Antitrust Litig., 46 F. Supp. 3d 788, 806 (N.D. Ill. 2014).

376. *See supra* note 102.

377. *In re* Citric Acid Litig., 191 F.3d 1090, 1098 (9th Cir. 1999).

378. CONNOR, *supra* note 13, at 202.

379. *See, e.g.*, Consol. Metal Prods., Inc. v. Am. Petroleum Inst., 846 F.2d 284, 297 (5th Cir. 1988); *see also In re* Hawaiian & Guamanian Cabotage Antitrust Litig., 647 F. Supp. 2d 1250, 1257 (W.D. Wash. 2009) ("Attendance at industry shows and events, however, 'is presumed legitimate and is not a basis from which to infer a conspiracy, without more.'").

380. Margaret C. Levenstein & Valerie Y. Suslow, *What Determines Cartel Success?*, 44 J. ECON. LITERATURE 43, 60–61 (2006).

381. *In re* Travel Agent Comm'n Antitrust Litig., 583 F.3d 896, 911 (6th Cir. 2009).

no indication of conspiracy."[382] Perhaps more troubling, an en banc Eighth Circuit held that defendants' "common membership in trade associations and their publication of price lists to customers . . . is not probative of collusion as a matter of law."[383] Finally, the Second Circuit has suggested when the defendants' conduct simply "resembles a trade association"—such as by including "other industries and outside counsel" at some meetings—then this "cuts against any inference that an express agreement" existed among the defendants to illegally collude.[384]

These opinions are naïve. Given the role that trade associations often play in both the formation, management, and concealment of illegal price-fixing conspiracies, courts should be more reticent to view trade association activities as inherently innocent, let alone exculpatory. At a minimum, judges should allow significant discovery from trade associations when plaintiffs plead that collusion was facilitated through an association.[385]

3. Unexplained Document Transfers

In a competitive market, firms regard their pricing plans as closely guarded secrets. In contrast, cartel members sometimes share their proprietary pricing documents with each other in order to facilitate their cartel planning and to monitor each other. Consequently, courts treat firms' possession of their rivals' confidential price-related documents as a plus factor.[386]

In analyzing this plus factor, however, some federal courts have suggested that a price-fixing defendant's possession of its rivals' confidential materials is not probative of collusion *unless* the plaintiff also shows *how* the confidential documents were transmitted from one defendant to another. For example, the Third Circuit has sapped this plus factor of its probative value by reasoning that the "plaintiffs pointed to a few competitors' memos in sales files, but there was no evidence of how the documents got there."[387] In *In re Chocolate Confectionary Antitrust Litigation*,[388] the plaintiffs presented evidence that the defendants had engaged in parallel pricing in a concentrated market characterized by several plus factors, including defendant Hershey's possession of rivals' confidential pricing documents.[389] The court devalued this evidence because the plaintiffs had "no direct or strong circumstantial evidence that the information came from Hershey's competitors . . . ."[390] The court gave no indication how an antitrust plaintiff could prove the chain of custody of the defendants' internal documents.

382. Am. Dental Ass'n v. Cigna Corp., 605 F.3d 1283, 1295 (11th Cir. 2010).

383. Blomkest Fertilizer, Inc. v. Potash Corp. of Saskatchewan, 203 F.3d 1028, 1038 (8th Cir. 2000).

384. Ross v. Am. Express Co., 35 F. Supp. 3d 407, 445 (S.D.N.Y. 2014).

385. *See* Christopher R. Leslie, *The Role of Trade Associations in Illegal Price-Fixing Conspiracies* (forthcoming).

386. *See, e.g.*, *In re* Bulk Popcorn Antitrust Litig., 783 F. Supp. 1194, 1196 (D. Minn. 1991).

387. *In re* Flat Glass Antitrust Litig., 385 F.3d 350, 368 (3d Cir. 2004) (discussing *In re* Baby Food Antitrust Litig., 166 F.3d 112, 126 (3d Cir. 1999)).

388. 801 F.3d 383, 391 (3d Cir. 2015).

389. *Id*. at 407–08.

390. *Id*. at 408

Similarly, in *In re Baby Food Antitrust Litigation*,[391] the plaintiffs proffered evidence that the defendants' parallel price increases resulted from collusion. In particular, the defendants' employees exchanged information regarding planned price increases and there were an "assortment of memoranda found in the files of the defendants concerning advance prices of competition."[392] The court, however, seemed unconcerned that the defendants could not explain the movement of sensitive documents across competing firms. The court deprived "the defendants' possession of documents that contained competitor pricing information in advance of any public announcements" of probative value even though "the defendants provided *no explanation* as to how they obtained" some of the information.[393] The Third Circuit reasoned that "[e]ven for the advance information from *unexplained sources*, we noted that 'it makes common sense to obtain as much information as possible of the pricing policies and marketing strategies of one's competitors.'"[394] The court neglected to recognize that it also makes "common sense" that a firm would know the provenance of such documents. Thus, this lack of explanation is both counterintuitive and probative of collusion.

Not only did the judges seem unphased by the defendants' inability to explain how they acquired their rivals' sensitive documents, they penalized the plaintiffs for not being able to prove how the defendants acquired an alleged co-conspirator's documents.[395] Some courts, such as the Ninth Circuit, have implied that putting this burden on plaintiffs is necessary because assigning probative value to rivals' possession of each other's confidential documents could "deter[] competitors from obtaining information about other companies' actual retail prices, even through legitimate means."[396] Such judicial fretting is unwarranted because competitive firms can easily keep records of how they secured this sensitive information. In contrast, an antitrust plaintiff cannot generally prove how a price-fixing defendant obtained its rivals' documents.

Ultimately, these antitrust opinions impose upon plaintiffs an unrealistically high burden of proof, one that is uninformed by the realities of cartel behavior and cartel concealment. The judges failed to consider how price-fixing conspirators transfer documents to each other surreptitiously, using plain envelopes and covert meetings. The fact that a price-fixing defendant claims to have no idea how it obtained a rival's highly confidential, proprietary pricing plans is far more consistent with collusion than competition. To deprive that circumstantial evidence of its probative value fails to recognize the inherent improbability of any plaintiff being able to show the chain of custody of damning evidence. Opinions such as *Chocolate* and *Baby Food* strengthen the cartelist's hand in

391. 166 F.3d at 115.

392. *Id.* at 126.

393. *In re* Chocolate Confectionary Antitrust Litig., 801 F.3d at 408 (citing *In re Baby Food Antitrust Litig.*, 166 F.3d at 126) (emphasis added).

394. *Id.*

395. *In re* Flat Glass Antitrust Litig., 385 F.3d 350, 368 (3d Cir. 2004); *In re* Citric Acid Litig., 191 F.3d 1090, 1103 (9th Cir. 1999).

396. *In re* Coordinated Pretrial Procs. in Petroleum Prod. Antitrust Litig., 906 F.2d 432, 455 (9th Cir. 1990).

court and can make it unreasonably difficult for plaintiffs to present their price-fixing case to a jury.

4. Shared Consultants and Conduits

Although some courts recognize that cartel members sometimes communicate through conduits,[397] other courts fail to appreciate how price fixers may avoid direct communications by using third-party intermediaries. Two lawsuits stemming from the same alleged price-fixing conspiracy illustrate the point. In 2010, a group of purchasers brought a class action in federal court in Maryland against manufacturers of titanium dioxide, a commodity whose sales were measured in billions of dollars.[398] Valspar, a paint manufacturer which purchased more than $1.25 billion worth of titanium dioxide during the period of the alleged conspiracy, opted out of the class action and pursued its own antitrust lawsuit in Delaware district court.[399] The Maryland judge presiding over the class action credited the class members' proffered plus factors, including the defendants' use of a common consultant to coordinate their pricing—a consultant who advocated raising prices and who "reassured producers about other firms' willingness to increase prices."[400] After the judge denied the defendants' motion for summary judgment, the defendants paid $163.5 million to settle the litigation before trial.[401]

In contrast, the Delaware district court belittled the plaintiff's evidence, including the inter-competitor communications through that same industry consultant. The district judge first asserted that it "defies common sense to suggest that there is no non-collusive purpose to retain consultants."[402] Of course, the plaintiff neither advanced such an argument nor needed to do so; the plaintiff merely needed to show that the defendants' use of the same consultant could facilitate collusion, especially when that consultant relayed pricing plans from one firm to its competitor. Further, the Delaware judge asserted that "to the extent that the consultants did help one competitor gather information on another, this is certainly within a firm's unilateral self-interest."[403] The judge's reasoning does not recognize that illegally colluding with rivals to fix prices is itself in each "firm's unilateral self-interest." That's why firms collude. In a split decision, the Third Circuit affirmed summary judgment for the defendants, asserting that ri-

397. *See In re* Domestic Drywall Antitrust Litig., 300 F.R.D. 234, 243 (E.D. Pa. 2014) ("Use of a third party to facilitate a price-fixing conspiracy is not alien to antitrust law.").

398. *In re* Titanium Dioxide Antitrust Litig., 959 F. Supp. 2d 799, 818 (D. Md. 2013).

399. Valspar Corp. v. E.I. du Pont de Nemours & Co., 152 F. Supp. 3d 234 (D. Del. 2016), *aff'd sub nom*. Valspar Corp. v. E.I. Du Pont De Nemours & Co., 873 F.3d 185 (3d Cir. 2017).

400. William H. Page, *Pleading, Discovery, and Proof of Sherman Act Agreements: Harmonizing* Twombly *and* Matsushita, 82 ANTITRUST L.J. 123, 154 (2018) (citing *In re Titanium Dioxide Antitrust Litig.*, 959 F. Supp. 2d at 813).

401. *In re* Titanium Dioxide Antitrust Litig., No. 10-CV-00318, 2013 WL 6577029, at *1 (D. Md. Dec. 13, 2013).

402. *Valspar Corp*, 152 F. Supp. 3d at 251.

403. *Id*.

vals' exchange of pricing plans through an industry consultant was "not probative of conspiracy."[404] The dissenting judge, Chief District Judge Stengel, sitting by designation, explained how the "majority downplay[ed] the role of this key 'industry consultant'" who "was used as a vehicle to carry out the suppliers' collusive agreement."[405] Most importantly, the dissenting judge recognized how cartel members can use these industry consultants to collude without the members themselves meeting. He noted, for example, evidence suggesting that the defendants "may have used [the consultant] to implement a 'common plan' to fix prices 'even though no meetings, conversations, or exchanged documents are shown' between" them.[406] Judge Stengel understood the link between common consultants and cartel concealment. Many judges do not.

Not only do courts often not appreciate how cartels may use a shared consultant to facilitate inter-firm communications even though this is a common cartel tactic; some courts treat this familiar cartel tactic as exculpatory. For example, in *Williamson Oil Co., Inc. v. Philip Morris USA*,[407] the plaintiffs argued that the multiple parallel price increases undertaken by cigarette manufacturers were facilitated by the defendants "exchanging sales data through a common consultant, Management Science Associates ("MSA")," which enabled them "to ensure that all were adhering to their allocation programs and to detect and punish . . . 'defections from an industry understanding on price.'"[408] The Eleventh Circuit improperly held that this inter-competitor exchange of information was not a plus factor at all because the firms saved money by sharing "the financial burden of gathering sales and market share data" and each firm had to share its own data in order to get access to its competitors' data.[409] Ironically, the court's attempt to explain how the sharing of data through a common consultant is benign simply described the process of collusion. After all, the foundation of cartel monitoring is exactly this reciprocity in which every firm provides its data to the conspiracy's designated agent in exchange for its co-conspirators doing the same.[410]

Unfortunately, the Third and Eleventh Circuits are not alone in misunderstanding how price-fixing cartels use third-party conduits in order to collude without direct communication. For example, the Second Circuit in *Mayor and City Council of Baltimore v. Citigroup, Inc.*[411] "turn[ed] the conduit theory on its head by suggesting the use of conduits *undercuts* evidence of a direct agreement between defendants."[412] The Second Circuit reasoned that if two parties were conspiring to violate antitrust laws, they "would not have had to rely on

404. *Valspar*, 873 F.3d at 199.
405. *Id*. at 214 (Stengel, J., dissenting).
406. *Id*.
407. 346 F.3d 1287, 1291 (11th Cir. 2003).
408. *Id*. at 1295–96.
409. *Id*. at 1313.
410. Leslie, *supra* note 33, at 611–15.
411. 709 F.3d 129, 131 (2d Cir. 2013).
412. *In re* Domestic Drywall Antitrust Litig., 163 F. Supp. 3d 175, 244 n.52 (E.D. Pa. 2016) (declaring itself "unpersuaded by the [Second Circuit's] reasoning") (emphasis in original).

third parties" to exchange information.[413] The court did not understand that actual price fixers "rely on third parties" to relay messages in order to conceal their collusion. Ultimately, in a boon to price fixers, the court thus converted surreptitious inter-competitor communications into evidence of innocence.

Too many judges appear unaware that actual price-fixing conspirators do, in fact, use third-party conduits to exchange pricing information.[414] Consequently, many courts give insufficient weight to price-fixing defendants' sharing of consultants.[415] And a cartel concealment method is rewarded.

5. Document Destruction

One of the most common ways that price-fixing conspiracies conceal their collusion is by destroying incriminating documents. In theory, document destruction should have legal significance both as a plus factor and as a basis for spoliation sanctions. Courts, however, are often keen to interpret a price-fixing defendant's destruction of evidence as innocent even when circumstances indicate that the erasure was intentional and designed to conceal the contents of the documents. In *In re Text Messaging Antitrust Litigation*,[416] for example, the Seventh Circuit considered a district court's grant of summary judgment to telecom companies that had been accused of fixing the prices of text messaging services. As part of their evidence of conspiracy, the plaintiffs presented a pair emails that one T-Mobile executive, Adrian Hurditch, had sent to his colleague, Lisa Roddy. In the first email, Hurditch observed that "raising messaging pricing again is nothing more than a price gouge on consumers" because there was no increase in costs to justify the industry-wide increase in rates.[417] More importantly, in his second email four months later, Hurditch wrote Roddy that "at the end of the day we know there is no higher cost associated with messaging. The move [the latest price increase by T–Mobile] was colusive [*sic*] and opportunistic."[418] Hurditch asked Roddy to permanently delete the preceding chain of emails, which both executives did. In ruling against spoliation sanctions, the judge conceded that the "plaintiffs have shown that T–Mobile's employees likely deleted the e-mail(s) intentionally and that they did so for the purpose of concealing the e-mail's contents," but ruled against allowing any negative inference from the document destruction because "plaintiffs have not shown that the missing content from the Hurditch–Roddy e-mail exchange would be adverse to T–Mobile."[419] The

413. *Citigroup, Inc.*, 709 F.3d at 139.

414. *See supra* notes 96–101.

415. *In re* Late Fee & Over-Limit Fee Litig., 528 F. Supp. 2d 953, 963 (N.D. Cal. 2007), *aff'd*, 741 F.3d 1022 (9th Cir. 2014) (denying probative value to defendants' "relationships with third-party processors and consultants that did business with many industry participants … [which] provided opportunities for them to communicate and agree to fix prices").

416. 782 F.3d 867, 869 (7th Cir. 2015).

417. *Id*. at 872.

418. *Id*.

419. *In re* Text Messaging Antitrust Litig., 46 F. Supp. 3d 788, 799 (N.D. Ill. 2014).

court's reasoning is viciously circular: How can antitrust plaintiffs prove the contents of destroyed documents when the defendants destroyed these documents specifically to conceal their contents?

The Seventh Circuit affirmed summary judgment for the defendants in an opinion by Judge Richard Posner that went to great lengths to diminish the probative value of both Hurdtich's message calling the industry's price increases collusive and his request to delete the preceding chain of messages. Posner hypothesized that Hurditch's desire to destroy the emails was "consistent with his not wanting to be detected by his superiors criticizing their management of the company."[420] Posner further held that the plaintiffs were not entitled to a jury instruction about drawing negative inferences from the email deletion because "there is no evidence that Hurditch was involved in, or had heard about, any conspiracy."[421] That is incorrect on its face: the evidence that Hurditch had "heard about" a conspiracy is his message describing the price increase as collusive. The absence of other evidence can be explained by the defendant's employees affirmatively destroying it to prevent its disclosure. As the Eighth Circuit explained decades earlier, "the relevance of and resulting prejudice from destruction of documents cannot be clearly ascertained because the documents no longer exist."[422]

Posner then asserted that Hurditch and Roddy's destruction of evidence was not probative because T–Mobile's Record Retention Guidelines did not require the employees to retain their correspondence. Such reasoning is deeply flawed. The fact that document destruction does not violate the price-fixing defendant's self-created record-retention policy in no way drains document destruction of its probative value. Most price-fixing firms have document destruction policies.[423]

Finally, Posner speculated that the deleted emails must not evince a conspiracy because if they did, then Hurditch would have also destroyed the email referring to the industry price increase as "collusive." Posner asked rhetorically, "if T–Mobile destroyed emails that would have revealed a conspiracy with its competitors, why didn't it destroy the 'smoking gun' email—the 'colusive' *[sic]* email?"[424] But this reasoning applies equally to Posner's rationalization of the emails: if Hurditch destroyed the previous emails solely because he didn't want his bosses to see him criticizing them, why didn't he also destroy the "colusive" email, which also disparaged his bosses? The reason why the "colusive" email survived under either scenario, of course, is that Hurditch overlooked it. This is not surprising; price fixers sometimes make mistakes and do not successfully destroy or hide all incriminating documents.[425]

Ultimately, the *Text Messaging* opinion illustrates a few fundamental problems with how courts approach the issue of document destruction in price-fixing

420. *In re Text Messaging Antitrust Litig.*, 782 F.3d at 873.
421. *Id*. at 873.
422. Alexander v. Nat'l Farmers Org., 687 F.2d 1173, 1205 (8th Cir. 1982).
423. *See supra* Section III.C.2.
424. *In re Text Messaging Antitrust Litig.*, 782 F.3d at 873.
425. KAPLOW, *supra* note 268 at 301.

cases. First, courts often do not appreciate the role of document destruction in cartel concealment and, thus, deprive it of its full probative value. Second, Posner weighed the evidence at summary judgment and decided who he personally thought was telling the truth, demonstrating how judges sometimes fail to restrain themselves from engaging in factfinding when deciding dispositive pretrial motions. Third, despite the fact that the court was obligated to read the evidence in the light most favorable to the plaintiff as the nonmoving party, Posner gave every benefit of the doubt to the defendants. The opinion effectively shifted the burden of proof to the plaintiffs in a manner that rewards price-fixing defendants who destroy documents.

6. Inter-Competitor Sales

Inter-competitor sales, also called buybacks, are circumstantial evidence of collusion because price-fixing conspirators often use them to conceal the transfer of money across cartel members.[426] Some courts, however, do not recognize the cartel-stabilizing and cartel-concealing properties of buybacks. The district court and the Third Circuit in *Valspar*, for example, afforded much weight to the possibility that the inter-competitor sales among titanium dioxide manufacturers may have taken place pursuant to a cross-licensing agreement.[427] The judges seemed to think that because cross-licensing agreements are legal, the presence of inter-competitor sales is necessarily innocuous if they take place in the context of such licenses. By failing to appreciate how buybacks are a common method used by cartels to hide their enforcement mechanism, the *Valspar* opinions accepted as true the less likely explanation for inter-competitor sales, that they are a component of an unexceptional patent license.[428] Moreover, the judges seemed unaware that collusive firms sometimes use IP licensing relationships as a cover for their illegal meetings and money transfers.[429]

In a different fashion, the Seventh Circuit also misapprehended the significance of inter-competitor sales. The plaintiffs in *Kleen Products LLC v. Georgia-Pacific LLC*[430] accused manufacturers of containerboard of fixing prices. After showing parallel price increases, the plaintiffs proffered evidence of several plus factors, such as inelastic demand, high barriers to entry, and a concentrated market, [431] as well as a high volume of inter-competitor telephone calls and meet-

426. *See* Leslie, *supra* note 1521, at 19–23.

427. Valspar Corp. v. E.I. Du Pont De Nemours & Co., 152 F. Supp. 3d 234, 244 (D. Del. 2016), *aff'd sub nom*. Valspar Corp. v. E.I. Du Pont De Nemours & Co., 873 F.3d 185, 201 (3d Cir. 2017). *See id*. at 201.

428. Leslie, *supra* note 151, at 30–32 (explaining why the inclusion of inter-competitor sales in a patent license is unusual).

429. MARSHALL & MARX, *supra* note 131, at 129 ("Patent licensing, cross-licensing, and patent pools have been an ongoing source of concern for antitrust authorities because they provide ideal cover for communication and interfirm transfers by colluding firms as well as establishing artificial entry barriers and facilitating monitoring."); *see also* STOCKING & WATKINS, *supra* note 13, at 405 (discussing the dyestuffs cartel's use of patent licenses and intercompany sales to facilitate their price collusion).

430. 910 F.3d 927, 932 (7th Cir. 2018).

431. *Id*. at 931.

ings before price hikes were made. The plaintiffs also presented evidence of employee "statements [that] support[ed] the inference that a coordinated plan was in place," including how "a Weyerhaeuser employee wrote that he 'made up a bunch' of information in a report about what was learned from customers about competition," as a way to obfuscate the true source of information, his rivals.[432] This reads like a form of cartel concealment. In addition to these attempts at concealment, the defendants also engaged in inter-competitor sales. Far from understanding how price-fixing conspiracies employ such sales to enforce their cartel agreement, the Seventh Circuit judges reasoned that the plaintiffs' evidence of frequent communications among defendants before price increases was not indicative of collusion "given the amount of trading that was taking place among the firms."[433] Instead of treating inter-competitor sales as a cartel concealment method, the judges used these sales to discount the plus factor of inter-competitor communications.

The Seventh Circuit conceded that the plaintiffs "may be right that the containerboard industry got savvier at hiding its antitrust violations,"[434] but the court nonetheless discounted the significance of the plaintiffs' evidence of cartel concealment methods. Ultimately, the court affirmed summary judgment for the defendants, chastising the plaintiffs for "offering 'no more than a plausible interpretation' of the defendants' anticompetitive conduct."[435] Yet, that is all that plaintiffs have to do to survive summary judgment. In short, although inter-competitor sales are properly considered an important plus factor because cartels use them to conceal their collusion,[436] the Seventh Circuit treated these sales as exculpatory.

Both the Third and Seventh Circuit erred by affirming summary judgment for the price-fixing defendants without meaningfully considering how price fixers use inter-competitor sales to conceal their inter-cartel payments.[437] It is the jury's function to determine whether the defendant's alleged reason for purchasing products from its rival is true and not a pretext asserted by the defendant to make its cartel conduct seem legitimate.

7. Bilateral Meetings

Despite the fact that participation in an illegal cartel through bilateral meetings is a common method of concealment,[438] courts often fail to appreciate the subtle ways that a firm may collude and elude detection. For example, in *In re Citric Acid*, the plaintiffs brought a price-fixing claim against the five major citric acid manufacturers, four of which had already pled guilty to criminal price

432. *Id*. at 932.

433. *Id*. at 939.

434. *Id*. at 941.

435. *Id.* (quoting *In re* Text Messaging Antitrust Litig., 782 F.3d 867, 876 (7th Cir. 2015)).

436. Leslie, *supra* note 151, at 11–23 (explaining why inter-competitor sales are probative of collusion).

437. This is particularly true given the abundance of other plus factors proffered by the plaintiffs in both *Valspar Corp. v. I.E. Du Pont*, 152 F. Supp. 3d 234, 244 (D. Del. 2016), *aff'd* 873 F.3d 185, 201 (3d Cir. 2017) and *Kleen Products v. Georgia-Pacific LLC*, 910 F.3d 927 (7th Cir. 2018).

438. *See supra* notes 86–94.

fixing.[439] The fifth firm, Cargill, maintained its innocence despite charging the same prices and attending the same trade association meetings as the convicted price fixers.[440] The trial court granted Cargill summary judgment, emphasizing that the president of one of the co-conspirators testified that no Cargill employees were present at the conspiratorial meetings that he attended.[441] The court seemed unaware that cartel members sometimes remain one step removed from the all-hands-on-deck conspiracy meetings and instead rely on bilateral meetings. To illustrate this possibility, the plaintiff proffered evidence that a Cargill executive had pricing discussions with Barrie Cox, his counterpart at ADM—which admittedly belonged to the illegal citric acid cartel—and that after these price discussions, Cargill priced just like the convicted price-fixing firms did.[442] The Ninth Circuit, however, disparaged this evidence "because it still requires an inference that the price discussions were conspiratorial in nature."[443] How pricing discussions with a price-fixing conspirator could be nonconspiratorial, the court did not explain. Instead, the Ninth Circuit affirmed summary judgment, concluding that "there is no more than a scintilla of evidence that Cargill was a participant in the citric acid conspiracy."[444]

The Ninth Circuit erred. In 1996, pursuant to an immunity deal, Cox informed the FBI that he had over a dozen discussions about raising price and rigging bids with his counterpart at Cargill, William Gruber.[445] Cox promised to reduce ADM's output and to "go along" with Cargill's planned price increases.[446] Economist John Connor reports that Cargill and ADM apparently had a bilateral price-fixing agreement that ran parallel to the broader citric acid cartel.[447] Cargill's collusion was illegal. Moreover, Cargill's side conspiracy with ADM would necessarily stabilize the entire citric acid conspiracy and would create similar economic effects as Cargill being at the table with all of the co-conspirators. In short, the evidence suggests Cargill illegally conspired with the convicted firms of the citric acid cartel even if some of the conspirators were unaware.[448] Because the Ninth Circuit did not understand the dynamics of cartel concealment, Cargill evaded hundreds of millions of dollars in antitrust liability.

439. *In re* Citric Acid Litig., 996 F. Supp. 951 (N.D. Cal. 1998).

440. *Id.* at 953.

441. *Id.* at 955. The district court disregarded the fact that when the other co-conspirators, who had already pled guilty to price fixing, were "asked whether Cargill was involved in the conspiracy," they invoked their Fifth Amendment right against self-incrimination. *Id.* at 961.

442. *In re* Citric Acid Litig., 191 F.3d 1090, 1104–05 (9th Cir. 1999).

443. *Id.*

444. *Id.* at 1106.

445. CONNOR, *supra* note 13, at 147–48.

446. *Id*.

447. *Id*.

448. The Cargill episode presents another reason why sworn depositions denying price fixing should not shift the burden of proof to plaintiffs: not all employees or executives know about the price-fixing activities of their company. Executives could be telling their personal truth when they assert that their company has not engaged in price fixing, but they could be ignorant of ongoing price fixing. Moreover, each price-fixing firm has an incentive to have out-of-the-loop employees give depositions denying price fixing because employees would be telling the truth as they know it.

8. Summary

Price-fixing conspirators generally put great thought into how to create and manage their criminal enterprise while making their actions and interactions appear to be legitimate activities by competitive firms. Cartel participants develop cover stories—some simple, some elaborate—to create the illusion of benign business dealings. Many courts accept these stories as fact at the summary judgment stage. Yet, just because an innocent explanation is offered does not mean it is true. The fact that price-fixing cartels conceal their collusion is precisely why courts must rely on plus factors to infer price-fixing conspiracies.[449] It is ironic and tragic, then, that courts undermine these plus factors by assuming that price-fixing defendants have nothing to hide.

Federal judges too often assume that price-fixing defendants are telling the truth and take them at their word. This approach is flawed for two important reasons, one legal and one factual. As a matter of law, when the defendant moves for summary judgment, the evidence should be examined in the light most favorable to the non-moving party, the plaintiff.[450] Yet, judges routinely reject plaintiffs' perfectly plausible theories of the case and instead accept the defendants' explanations for their suspicious conduct and then grant them summary judgment. While a jury would be free to reject the plaintiff's interpretation of the evidence, a judge should not reject a plaintiff's plausible interpretation at the summary judgment stage. As a factual matter, any judicial approach that automatically credits defendants' arguments is flawed because, empirically, price-fixing defendants lie.[451] They construct subterfuges to provide innocent rationalizations for their cartel conduct. When judges ignore this empirical fact and misapply the legal standard by accepting the movant's explanation, they inappropriately grant summary judgment to price-fixing defendants.

Judicial decisions that provide price fixers with added confidence that their concealment efforts will be rewarded in litigation have the effect of undermining deterrence of price fixing. Antitrust opinions that ignore or underestimate the role and magnitude of cartel concealment efforts have the effect of encouraging price-fixing activity. An ill-conceived grant of summary judgment denies compensation to the specific plaintiffs in that case who were victims of illegal collusion and permits price fixers to retain their ill-gotten gains. And, beyond the negative effects regarding the parties in any particular litigation, flawed opinions embolden nascent and would-be price fixers to maximize their profitability by engaging in collusion coupled with concealment.

449. N. Am. Soccer League, LLC v. U.S. Soccer Fed'n, Inc., 883 F.3d 32, 39 (2d Cir. 2018) ("Rarely do co-conspirators plainly state their purpose. As a result, courts often must evaluate circumstantial evidence of a conspiracy by weighing 'plus factors, which, when viewed in conjunction with the parallel acts, can serve to allow a fact-finder to infer a conspiracy.'") (quoting United States v. Apple, Inc., 791 F.3d 290, 315 (2d Cir. 2015)).

450. Anderson v. Liberty Lobby, 477 U.S. 242, 255 (1986).

451. *See supra* Section III.D.

V. FIXING ANTITRUST

Federal courts need to interpret antitrust rules in a manner that exposes and penalizes price-fixing conspiracies. Too often, federal judges defer to the denials and cover stories offered by price-fixing defendants. And, again too often, courts apply the standards for evaluating motions to dismiss and motions for summary judgment in a manner that rewards and reinforces the concealment efforts routinely employed by price-fixing conspirators. This Part explains how courts should approach the legal issues involved in price-fixing litigation in light of the concealment efforts routinely undertaken by cartel members.

A. Cartel Concealment as Strong Circumstantial Evidence of Collusion

Most courts properly regard cartel concealment efforts as evidence of illegal collusion. For example, several antitrust opinions treat the holding of secret meetings as a plus factor,[452] as well as the use of payphones and prepaid phone cards.[453] Other courts state that falsifying expense reports "raises an inference of conspiracy."[454] Similarly, registering for conference rooms with false names and instructing rivals to destroy inter-competitor communications indicates collusion.[455] As the Fourth Circuit has explained, when rival manufacturers enter "a mutual agreement not to 'leave a paper trail,'" these attempts "to hide their actions could suggest that the defendants knew their actions 'would attract antitrust scrutiny.'"[456] Whether the defendants used code names, met secretly, falsified documents, maintained no-writing policies, or destroyed incriminating notes, all of these actions are individually and collectively indicative of collusion.

While these opinions are correct, the probative value of concealment measures is far greater than some courts have recognized. In a widely respected article, Professors William E. Kovacic, Robert C. Marshall, Leslie M. Marx, and Halbert L. White created the concept of "super plus factors," which they define as "plus factors, or groups of plus factors, that lead to a strong inference of explicit collusion"[457] or "actions or conduct . . . that are highly unlikely to occur in the absence of a collusive agreement."[458] The presence of super plus factors

452. *See, e.g.*, *In re* Urethane Antitrust Litig., 913 F. Supp. 2d 1145, 1155–57 (D. Kan. 2012) (recognizing the defendants' efforts to conceal their communications as a plus factor); *In re* Polyurethane Foam Antitrust Litig., 152 F. Supp. 3d 968, 984 (N.D. Ohio 2015) ("[D]irect and secret price discussion between competitors is more probative of a conspiracy than are indirect and public communications, ostensibly undertaken by the conspiring competitors to 'signal' to one another."); *In re* Ethylene Propylene Diene Monomer (EPDM) Antitrust Litig., 681 F. Supp. 2d 141, 176 (D. Conn. 2009); *see also* KAPLOW, *supra* note 268 at 103–04 ("Evidence of secret communications between the firms about future pricing … might give rise to a presumption of price fixing. . . .").

453. *In re Urethane Antitrust Litig.*, 913 F. Supp. 2d at 1164.

454. *In re* Blood Reagents Antitrust Litig., 266 F. Supp. 3d 750, 776–78 (E.D. Pa. 2017).

455. *In re Ethylene Propylene Diene Monomer (EPDM)*, 681 F. Supp. 2d at 174.

456. SD3, LLC v. Black & Decker (U.S.) Inc., 801 F.3d 412, 432 (4th Cir. 2015).

457. William E. Kovacic, Robert C. Marshall, Leslie M. Marx & Halbert L. White, *Plus Factors and Agreement in Antitrust Law*, 110 MICH. L. REV. 393, 396–97 (2011).

458. *Id*. at 420.

counsels against summary judgment and in favor of liability. Although the authors do not discuss concealment as a super plus factor, it meets the criteria for this elevated status. Concealment efforts are highly inconsistent with legitimate business conduct and, thus, create a "strong inference" of collusion. Aboveboard business transactions do not usually involve false names, secret meetings with rivals, or falsified documents, such as travel and expense reports. If the plaintiffs can show that the defendants engaged in parallel conduct and that one or more defendants undertook suspicious concealment actions, then courts should require very few additional plus factors before allowing the plaintiffs' price-fixing claims to proceed to a jury trial.

Beyond the super plus factor designation, courts should treat concealment as a plus factor multiplier. The Supreme Court has long mandated lower courts to consider a plaintiff's evidence collectively and holistically.[459] This means that courts should analyze a bundle of plus factors in context with each other. Evidence of concealment measures significantly increases the probative value of other plus factors. For example, inter-competitor sales—a classic form of cartel enforcement[460]—are significantly more suspicious if the parties also attempt to conceal their business meetings.[461] Similarly, inter-competitor meetings are far more indicative of collusion if the rivals falsified their travel records to make it appear that the meetings never occurred.

Furthermore, unlike other plus factors, the concealment plus factor explains *why* other evidence of price fixing may be sparse, even if the defendants actually conspired for a significant period of time. When cartel leaders employ active concealment measures, such as encrypted emails and document destruction, whatever evidence survives takes on greater significance. For example, the defendants' concealment actions can explain why the contents of any meeting minutes are not incriminating, because price fixers do not take incriminating notes and, if they do, they do a fairly good job of destroying or hiding such evidence of their collusion. Other plus factors do not have this characteristic of explaining the dearth of other plus factors. Thus, concealment is a uniquely powerful plus factor, whose presence should alleviate the need for an excessive number of additional plus factors.

Finally, when cartel members actively conceal their communications, this demonstrates the speakers' awareness of the impropriety of the communications. Discussing the international lysine cartel, for instance, John Connor observed that "[p]erhaps the best evidence that the group was aware . . . that they were violating the antitrust laws showed up in their consistent efforts to hide their activities from the antitrust authorities."[462] In fining brewers $370 million for fixing the price of beer, the European Commission noted that the brewers "knew what they were doing was illegal . . . because they tried to avoid detection by

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

460. *See generally* Leslie, *supra* note 151.

461. *See* Christopher R. Leslie, *The Probative Synergy of Plus Factors in Price-Fixing Litigation*, 115 NW. U. L. REV. 1581 (2021) (explaining interaction of plus factors, including concealment methods).

462. CONNOR, *supra* note 13, at 211.

using code names and abbreviations to refer to the meetings held in hotels and restaurants."[463] Similarly, by using "'unsigned memoranda' on plain paper without letterheads" and destroying incriminating documents, executives colluding in the cement industry showed they were at least apprehensive that they were breaking the law.[464] Analyzing a range of recent price-fixing conspiracies, Connor observed that "[k]nowing that they were breaking the law, they used fake identities, phony agendas, code words, and other spooky techniques to hide the true nature of their joint venture."[465] Concealment efforts are evidence of both guilt and awareness of guilt that, when coupled with parallel conduct, counsel strongly in favor of the plaintiff's case reaching a jury.[466]

In sum, concealment efforts should be given significant weight as a plus factor. A consensus exists among economists who study cartels that concealment is correlated with collusion.[467] Judges need to draw even stronger inferences of collusion from defendants' concealment efforts than they currently do.

B. Evaluating Motions to Dismiss in Light of Cartel Concealment Methods

A better appreciation of the concealment efforts undertaken by price-fixing cartels should inform how judges approach motions to dismiss. Section IV.B explained how some courts require too much evidence and are too quick to dismiss price-fixing claims. The question remains, however, what *should* a plaintiff have to plead in order to have a price-fixing claim survive a motion to dismiss? This quantum of evidence cannot be meaningfully defined in the abstract. Context is critical. In particular, when judges rule on dismissal motions, they should consider all of the concealment measures that actual price-fixing conspirators make to conceal their collusion. Because cartel participants effectively suppress and destroy evidence of their conspiracy, plaintiffs are generally unlikely to possess compelling evidence of collusion even when price fixing has occurred for several years or decades. Recognizing this fact should make judges less eager to dismiss price-fixing claims. At a minimum, if there is any evidence of active cartel concealment, the plaintiff should be entitled to full discovery. Acts of concealment "raise a plausible inference of an unlawful agreement to restrain trade,"[468] which

463. *EU fines brewers $370M in price fixing probe*, NBC NEWS (Apr. 18, 2007, 11:37 AM), http://www.nbcnews.com/id/18176660/ns/business-world_business/t/eu-fines-brewers-m-price-fixing-probe/#.XiJiZi-OIakw [https://perma.cc/WCH9-63J2].

464. MACHLUP, *supra* note 181, at 19 n.14 (citing Brief for Respondent at 36–42, Aetna Portland Cement Co. v. FTC, 157 F.2d 533 (7th Cir. 1946)) ("The practice of 'unsigned memoranda' on plain paper without letterheads, the advice of using the telephone instead of putting 'anything like this in writing,' and other indications of the destruction of possible evidence of collusion are proofs of the apprehensions which businessmen have had concerning the legality of their 'competitive' conduct.").

465. CONNOR, *supra* note 13, at 2.

466. *See In re* Polyurethane Foam Antitrust Litig., 152 F. Supp. 3d 968, 984 (N.D. Ohio 2015) ("A direct and secret price discussion between competitors is more probative of a conspiracy than are indirect and public communications, ostensibly undertaken by the conspiring competitors to 'signal' to one another.").

467. *In re* Urethane Antitrust Litig., 768 F.3d 1245, 1264 (10th Cir. 2014) ("[E]xpert econometrician told the jury that 'economists associate secrecy with collusion.'").

468. Erie Cnty. v. Morton Salt, Inc., 702 F.3d 860, 869 (6th Cir. 2012).

should be sufficient for a price-fixing complaint to survive dismissal. The pleading standard must be permissive in order to achieve the goals of antitrust law.[469]

The *Twombly* test may be defensible as articulated, but not as applied by some courts. Federal courts have interpreted *Twombly* in different ways. Some courts construe footnote ten of *Twombly* as requiring that price-fixing plaintiffs plead the myriad details of the conspiracy with specificity.[470] Other courts have deemed footnote ten of *Twombly* to be dicta that does not control the standards for dismissal of price-fixing claims.[471] Understanding the breadth and depth of cartel concealment methods suggests that the second approach is superior. As an initial matter, the *Twombly* opinion never required antitrust plaintiff bringing price-fixing claims based on conscious parallelism and plus factors to answer the questions of "who, what, when and where" in their complaints.[472]

Antitrust plaintiffs bringing plausible price-fixing claims need full and meaningful discovery. It is unreasonable for price-fixing defendants to "criticize the lack of details [in a plaintiff's complaint because] . . . when a conspiracy is secret such details will not be available without discovery, and thus cannot be required at the pleading stage."[473] Limited discovery is generally insufficient given the measures that price fixers take to conceal their conspiracy. Judge Pregerson, in dissent in *Musical Instruments*,[474] explained, "[b]ecause plaintiffs have not been afforded an opportunity to discover these confidential and proprietary policies, it is unfair to require this level of specificity at the pleading stage."[475] Courts should be reticent to require too much evidence for antitrust plaintiffs to survive a motion to dismiss and secure full discovery; the evidence that some courts require is actively concealed by the conspirators.

While some courts worry about discovery costs in antitrust litigation, lost in these concerns is the link between discovery and deterrence. Price fixing is detrimental to consumers and to the economy, with harms measured in the billions of dollars. Antitrust law tries to create meaningful deterrence of price fixing activity and to ensure that victims of illegal cartels receive compensation. Discovery may be costly; but, if judges do not allow discovery on price-fixing claims, there will be little deterrence of actual price-fixing conspirators who can fix prices confident that they will not be held accountable so long as no member

469. *In re* Plasma–Derivative Protein Therapies Antitrust Litig., 764 F. Supp. 2d 991, 1002 n.10 (N.D. Ill. 2011) ("If private plaintiffs, who do not have access to inside information, are to pursue violations of the law, the pleading standard must take into account the fact that a complaint will ordinarily be limited to allegations pieced together from publicly available data.").

470. Kendall v. Visa U.S.A., Inc., 518 F.3d 1042, 1047 (9th Cir. 2008) (interpreting *Twombly* as requiring allegations of "facts such as a 'specific time, place, or person involved in the alleged conspiracies'") (quoting Bell Atlantic Corp. v. Twombly, 550 U.S. 544, 565 n. 10 (2007)).

471. *See, e.g.*, Starr v. Sony BMG Music Ent., 592 F.3d 314, 325 (2d Cir. 2010).

472. *In re* Packaged Ice Antitrust Litig., 723 F. Supp. 2d 987, 1005 (E.D. Mich. 2010) ("Defendants argue that Plaintiffs' [complaint] must fail at the pleading stage because it lacks the 'who, what, when and where' allegedly required by *Twombly* . . . . *Twombly* imposed no such requirement."); Page, *supra* note 400, at 141 n.98 (collecting cases).

473. *In re* Broiler Chicken Antitrust Litig., 290 F. Supp. 3d 772, 788 (N.D. Ill. 2017).

474. *See supra* notes 328–32 and accompanying text (discussing facts of *In re Musical Instruments*).

475. *In re* Musical Instruments & Equip. Antitrust Litig., 798 F.3d 1186, 1199 (9th Cir. 2015) (Pregerson, J., dissenting).

of the cartel exposes the conspiracy to government prosecutors. If the standards for dismissals are too pro-defendant, more firms will find it cost beneficial to collude instead of to compete.

Courts need not overrule or circumvent the *Twombly* standard in order to permit meritorious price-fixing claims. The issue is how much does the plaintiff need to plead in order to show that her claim is plausible. The plausibility of a price-fixing claim can be established with parallel price increases by the defendants accompanied by a few plus factors. That should be enough for a plaintiff to reach discovery. An antitrust plaintiff should not have to prove that she does not need discovery in order to get discovery.

C. Viewing Summary Judgment Through the Lens of Cartel Concealment

When adjudicating summary judgment motions, courts should bear in mind that actual price fixers orchestrate the concealment of their collusion. At a minimum, courts should not grant summary judgment to defendants who have engaged in parallel conduct and have employed any of the concealment methods outlined in Part III. The fact that the defendants "have denied entering into any price-fixing agreements" should generally prove "unavailing, as the evidence must be viewed in plaintiffs' favor at summary judgment."[476] Price-fixing defendants are often unreliable narrators and they fabricate evidence to create a patina of truthfulness to support their deceptions.[477] Consequently, courts considering summary judgment motions should not automatically defer to documents generated by defendants and treat them as either authentic or accurate, because price-fixing conspirators falsify trade association agendas and minutes, travel and expense reports, and notes from cartel conferences in order to make their illegal meetings appear legitimate.[478] Despite this, some judges instinctively and uncritically accept defendant-proffered documents as full and accurate depictions of what transpired.[479]

The judicial dynamics of summary judgment are driven by the fear that inferences about defendants' actions will result in false positives, in which noncolluding firms are improperly found liable for price fixing. Ironically, it is the fact that price-fixing conspirators engage in such extensive concealment measures that necessitates factfinders drawing inferences from circumstantial evidence.[480] Courts reasonably want to protect against false inferences. When

476. *In re* Urethane Antitrust Litig., 913 F. Supp. 2d 1145, 1156 (D. Kan. 2012). Similarly, defendants' denial of price fixing should not warrant dismissal of a price-fixing claim. *See In re* Propranolol Antitrust Litig., No. 16-CV-09901 (JSR), 2017 WL 1287515, at *7 (S.D.N.Y. Apr. 6, 2017) (noting that "defendants' self-serving statements are insufficient to render plaintiffs' allegations of price fixing implausible at this stage of the litigation.").

477. *See supra* Part III.

478. *See supra* notes Section III.C.4.

479. *See supra* Section IV.A.2.

480. KAPLOW, supra note 268, at 247 ("The more firms hide their behavior or communicate in code, the more a factfinder will need to make conjectures about what actually transpired. These phenomena, in turn, raise the possibility of false positives and accompanying chilling effects."); *In re* Broiler Chicken Antitrust Litig., 290

courts defer to defendants' denials, however, they equally protect both the innocent and the guilty because all firms deny price-fixing activity. Antitrust rules, both procedural and substantive, should help separate the innocent from the guilty, protecting the former but not the latter. The current treatment of denials by price-fixing defendants fails to perform this fundamental task.

Some courts are so focused on the risk of false positives that they seem unaware of the high costs and high likelihood of false negatives. False negatives entail significant consumer harm, as victims of price-fixing conspiracies are unable to recover for the illegal overcharges they paid. Despite these harms, which measure in the billions of dollars, false negatives are increasingly likely as courts fail to appreciate the various forms of cartel concealment. In contrast to the largely theoretical harms of false positives, false negatives cause quantifiable harms to millions of consumers and can undermine long-term deterrence of illegal collusion.

A proper balance between the risk of false positives and the risk of false negatives needs to be struck. Antitrust plaintiffs must present evidence of collusion, but the quantum of evidence should be reasonable. In particular, that required quantum of evidence should take into account that actual price-fixing conspirators do a fairly good job of concealing their conspiracies. Judges should not overlook the possibility of cartel concealment, as the opinions in Section IV.C did; instead, judges should draw appropriate inferences against defendants when plaintiffs provide evidence of concealment. Judges should recognize that when the defendants have engaged in affirmative efforts to conceal their activities, such as those described in Part III, there is little risk of a false positive. Innocent firms do not engage in this type of activity.

If plaintiffs present evidence of parallel conduct and plus factors, then they should be able to test the veracity of the defendants' explanations in front of the jury, who can observe and evaluate the plausibility and consistency of the witnesses' testimony, the timbre of their speech, and the clues of their body language. Colorable price-fixing claims should be adjudicated in trials "where witnesses have been subject to cross-examination and the fact finder has had the opportunity to assess the demeanor and credibility of witnesses."[481] The opinions discussed in Section IV.C show how courts often grant summary judgment on price-fixing claims without ever observing the actual defendants and other witnesses. This omission is critical because, again, price fixers lie.[482] Assessing witness credibility is a job for the jury. Defendants' denials and explanations should not be afforded weight at summary judgment;[483] instead, the jury should evaluate the credibility of the defendants' witnesses. Jurors bring their common sense and

F. Supp. 3d 772, 804 (N.D. Ill. 2017) ("A price fixing conspiracy would be expected to leave little publicly available evidence of its existence. Price fixing conspiracies are therefore often inferred from context.").

481. Edward D. Cavanagh, Matsushita *at Thirty: Has the Pendulum Swung Too Far in Favor of Summary Judgment?*, 82 ANTITRUST L.J. 81, 115–16 (2018).

482. *See supra* Section III.D.

483. *In re* Urethane Antitrust Litig., 913 F. Supp. 2d 1145, 1154 (D. Kan. 2012).

real-world experience to the jury room, and this informs their deliberations. Jurors, however, cannot bring their skills to bear if courts improperly grant summary judgment because judges do not recognize cartel concealment methods.

D. Reinvigorating Leniency

Beyond improving the way courts evaluate circumstantial evidence of price fixing, one of the best ways to overcome the problem of cartel concealment is to reward people who supply direct evidence of illegal collusion. This is precisely what the DOJ Antitrust Division's Corporate Leniency Policy does by granting amnesty to the first price-fixing conspirator to expose an illegal cartel. The program has been the biggest generator of criminal price-fixing prosecutions because it "works to break the code of silence among cartel members."[484] Criminal prosecutions based on leniency applications provide private plaintiffs with their best hope of getting direct evidence of illegal collusion. Most of the largest private settlements in price-fixing lawsuits came on the heels of successful criminal prosecutions. These include the nine-figure settlements against the conspirators that fixed prices for art auctions, marine hoses, citric acid, and a wide range of vitamins.

Although the program has been a notable success, applications have gone down as of late, in part because price-fixing prosecutions reached historic lows during the Trump Administration.[485] This is problematic because, as Lisa Phelan, the former chief of national criminal enforcement at the DOJ Antitrust Division, has explained, "The more and longer DOJ does not look to be aggressively prosecuting [price fixing], the less incentive there is to rush in for leniency."[486] In order to overcome the largely successful concealment efforts of price-fixing conspiracies, the DOJ should reinvigorate its antitrust amnesty program. For example, the DOJ could expand eligibility for leniency. As currently formulated, cartel ringleaders are not eligible for leniency.[487] That is a mistake. Cartel members confess their crime in exchange for leniency because they are afraid that the conspiracy is about to be caught and they want to reduce their exposure to criminal liability and treble damages.[488] If no member of the cartel thinks that the conspiracy is about to be exposed, then no conspirator has a sufficient incentive to

484. Joe Chen & Joseph E. Harrington Jr., *The Impact of the Corporate Leniency Program on Cartel Formation and the Cartel Price Path*, *in* THE POLITICAL ECONOMY OF ANTITRUST 59, 78 (Vivek Ghosal & John Stennek eds., Elsevier 1st ed. 2007).

485. Kadhim Shubber, *Price-Fixing Prosecutions Under Trump Are at a Historic Low for Third Year*, LA TIMES (Nov. 6, 2019, 5:00 AM), https://www.latimes.com/business/story/2019-11-06/price-fixing-prosecutions-at-historic-low-for-third-straight-year [https://perma.cc/XA26-AQBP].

486. *Id*.

487. Antitrust Div., Dep't of Justice, Corporate Leniency Policy (Aug. 10, 1993), www.usdoj.gov/atr/public/guidelines/0091.pdf [https://perma.cc/5UFR-64FZ].

488. The first confessor is liable for only single damages on their sales. *See* Christopher R. Leslie, *Judgment-Sharing Agreements*, 58 DUKE L.J. 747, 781–82 (2009).

reveal the conspiracy and apply for antitrust amnesty.[489] Every member would be better off allowing the price fixing to continue.

Distrust fuels the race to confess in exchange for leniency.[490] If the cartel members trust each other not to confess, the cartel will be stable. No member will race to expose the cartel because no member is worried that one of her cartel partners is about to defect and that she needs to beat them to the punch. Ineligibility for amnesty makes cartel ringleaders perfectly trustworthy because they have no incentive to reveal the cartel—they get no benefit from doing so. This has a cartel-stabilizing effect. In contrast, making ringleaders eligible for leniency increases the likelihood that both ringleaders and down-the-line cartel members may feel distrust at some point, panic, and reveal the cartel to prosecutors, trading evidence of collusion for leniency.[491]

Amnesty alone, however, may not be sufficient to induce cartel insiders into unmasking an illegal conspiracy. Amnesty from prosecution is not a compelling incentive for individuals convinced that they are not going to be prosecuted anyway. If cartel participants believe that their conspiracy is unlikely to be exposed, silence remains their best strategy.

In order to make cartel exposure cost-beneficial, government officials should consider paying individuals to share their evidence of price-fixing conspiracies.[492] Bounties, whether in the form of qui tam actions, direct payments, or otherwise, may be necessary to encourage individuals with inside information about price-fixing conspiracies. Louis Kaplow has explained that "if the prosecution is rendered essentially impossible without informants, and if prospective informants know this, informants would be harder to come by. Offering rewards rather than mere leniency or immunity could help overcome this problem and, in any event, has significant appeal in light of difficulties in detection."[493] The prospect of a bounty provides all individuals with a meaningful incentive to create and retain incriminating documents, despite cartel policies against doing so. This can provide private plaintiffs with the necessary evidence to prevail in follow-on litigation.

But the bounty must be generous, because employees may be reticent to undermine their professional friendships and long-term employment prospects by turning on—and turning in—their employer.[494] When sufficiently substantial, the lure of bounties can destabilize a cartel.[495] If employees within a price-fixing firm are eligible for significant bounties, then they have a substantial incentive

489. Christopher R. Leslie, *Antitrust Amnesty, Game Theory, and Cartel Stability*, 31 J. CORP. L. 453, 457 (2006).

490. *Id*. at 470.

491. *Id*. at 478. Furthermore, if ringleaders are ineligible for leniency, then the cartel membership could "pursue the strategy of maintaining all hard evidence related to the cartel at the headquarters of that firm," which would reduce the likelihood of any other cartel member having documents that they can exchange for leniency. Marx & Mezzetti, *supra* note 165, at 322.

492. *See* William E. Kovacic, *Private Monitoring and Antitrust Enforcement: Paying Informants to Reveal Cartels*, 69 GEO. WASH. L. REV. 766, 792–97 (2001).

493. KAPLOW, *supra* note 268, at 373 n.15.

494. Leslie, *supra* note 27, at 1669.

495. *Id*.

to expose the cartel even if the conspiracy is stable and co-conspirators trust each other.[496] Foreign experience suggests that adding a bounty component to antitrust leniency programs can improve cartel exposure.[497] Properly implemented, a bounty system could help overcome the problem of cartel concealment.

VI. CONCLUSION

Congress intended antitrust law, especially private treble-damage lawsuits, to serve three functions: deterrence, compensation, and disgorgement of ill-gotten gains.[498] Unfortunately, the depth, variety, and persistence of cartel concealment mechanisms threatens to prevent the realization of all of these congressional goals. When private plaintiffs cannot survive motions to dismiss or for summary judgment because federal judges are demanding that plaintiffs present the precise evidence that the defendants are successfully hiding, the victims of price-fixing conspiracies are denied compensation for their antitrust injuries and the conspirators are allowed to retain the ill-gotten gains from their illegal collusion. Deterrence is undermined as rivals recognize that successful concealment can render price fixing highly profitable.

Despite this, as price-fixing conspiracies develop more sophisticated methods of concealing their crime, many federal courts are making it harder to hold cartels accountable for the injuries they inflict on their customers. Judges do so by requiring an unrealistic and unreasonable amount of evidence to survive motions to dismiss and motions for summary judgment. Judges often improperly reward denials of price fixing and credit defendants' explanations of suspicious conduct as true. And they sometimes fail to recognize cartel concealment methods and decline to properly penalize the destruction of evidence by price-fixing defendants. All of these actions inure to the benefit of actual price fixers and come close to immunizing them against private liability.

Federal judges should better appreciate the affirmative steps that price-fixing conspirators take to conceal their cartel operations and to make their criminal conduct appear benign. Price fixing is not a casual conspiracy. Business executives invest great effort into camouflaging their crimes from the outside world. Antitrust law should ensure that these cartel concealment endeavors are not encouraged. The threat of treble damages cannot deter illegal collusion if courts reward the concealment efforts of cartels by effectively blocking jury trials for price-fixing claims. When price fixers are confident that their concealment measures will either protect them from discovery or immunize them from antitrust liability, would-be antitrust violators are emboldened, and consumers suffer. If, however, courts better recognize and draw appropriate inferences from cartel concealment methods, then antitrust law can serve the functions that Congress intended.

496. Leslie, *supra* note 33, at 655 ("[R]egardless of whether a cartel member fears cartel exposure, she will experience a net gain if she is paid to expose the cartel.").

497. D. Daniel Sokol, *Cartels, Corporate Compliance, and What Practitioners Really Think About Enforcement*, 78 ANTITRUST L.J. 201, 222 (2012) (discussing Korean antitrust policy).

498. William Beaumont Hosp. v. Fed. Ins. Co., 552 F. App'x 494, 498 (6th Cir. 2014).